



JUN 10 2010

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

**Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # S-1141
Project # S-1093662**

Dear Mr. Gruber:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Chevron USA, Inc. Cymric Oilfield, CA. Chevron proposes to retrofit, limit the fuel sulfur content for, or make dormant steam generators for compliance with Rule 4320.

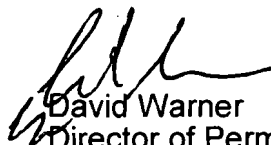
After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the Authorities to Construct will be issued to the facility with Certificates of Conformity. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit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

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

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,



David Warner
Director of Permit Services

Enclosures

c: Kris Rickards, Permit Services

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



JUN 10 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-1093662**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Chevron USA, Inc. Cymric Oilfield, CA, which has been issued a Title V permit. Chevron USA, Inc. is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. Chevron proposes to retrofit, limit the fuel sulfur content for, or make dormant steam generators for compliance with Rule 4320.

Enclosed is the engineering evaluation of this application, along with the current Title V permit, and proposed Authorities to Construct # S-1141-44-30, '-44-31, '-45-30, '-45-31, '-46-30, '-46-31, '-52-33, '-52-34, '-52-35, '-53-31, '-53-32, '-61-30, '-61-31, '-520-8, '-526-9, '-526-10, '-528-10, '-528-11, '-529-13, and '-529-14 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.

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Mr. Gerardo C. Rios
Page 2

Thank you for your cooperation in this matter.

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David Warner
Director of Permit Services

Enclosures
c: Kris Rickards, Permit Services



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

JUN 1 0 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-1093662

Dear Mr. Tollstrup:

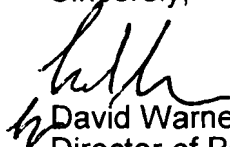
Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Chevron USA, Inc. Cymric Oilfield, CA. Chevron proposes to retrofit, limit the fuel sulfur content for, or make dormant steam generators for compliance with Rule 4320.

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

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,


David Warner
Director of Permit Services

Enclosures

c: Kris Rickards, Permit Services

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed issuance of Authority To Construct to Chevron USA, Inc. for its crude oil and natural gas production operations Cymric Oilfield, California. Chevron proposes to retrofit, limit the fuel sulfur content for, or make dormant steam generators for compliance with Rule 4320.

The analysis of the regulatory basis for these proposed actions, Project #S-1093662, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.**

San Joaquin Valley Air Pollution Control District Authority to Construct

Modify Steam Generators for Rule 4320 Compliance

Facility Name: Chevron USA, Inc. Date: April 28, 2010
Mailing Address: PO Box 1392 Engineer: Kris Rickards
Bakersfield, CA 93302 Lead Engineer: Rich Karrs
Contact Person: John Gruber RWK 5-14-10
Telephone: 661-654-7038
Application #(s): S-1141-44-30, '-44-31, '-45-30, '-45-31, '-46-30, '-46-31, '-52-33, '-52-34,
'-52-35, '-53-31, '-53-32, '-61-30, '-61-31, '-520-8, '-526-9, '-526-10,
'-528-10, '-528-11, '-529-13, and '-529-14
Project #: S-1093662
Deemed Complete: 03/05/10 revised proposal

I. PROPOSAL

Chevron USA, Inc (hereafter referred to as CUSA) requests Authorities to Construct (ATCs) for the modification of ten 62.5 MMBTU/hr natural-gas-fired steam generators in its Heavy Oil Western Stationary Source in the Cymric Oilfield of Kern County. CUSA has requested ATCs for these units with the following compliance options to meet District Rule 4320 requirements:

- Install low-NO_x burner, upgrade air/fuel train components as necessary, limit NO_x emissions to 9 and 12 ppmv @ 3% O₂ (dual limit for TEOR/TVC fired units), and limit fuel gas sulfur content to 5 gr-S/100 dscf
- Pay NO_x emissions fee and limit fuel gas sulfur content to 5 gr-S/100 dscf
- Designate as non-compliant dormant

CUSA intends to comply with NO_x requirements of Rule 4320 by paying annual emission fees as allowed in Rule 4320 section 5.1.2. The proposed ATCs are solely an optional form of compliance.

There will not be an increase in potential emissions of any pollutant as a result of this project. Modification of the NO_x emission limits, limiting the sulfur, replacing the burners, and replacing or modifying the air fuel train components are proposed solely to comply with District Rule 4320 requirements. Since there is a change to the method of operation of the steam generators replacing components these changes are modifications pursuant to District Rule 2201, *New and Modified Stationary Source Review Rule*.

Chevron USA, Inc. received their Title V Permit on 11/30/01. This modification can be classified as a Title V significant modification pursuant to Rule 2520, Section 3.29, 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. Chevron USA, Inc. must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

See Appendix A: Permits to Operate (PTOs) and Implemented Authorities to Construct

II. APPLICABLE RULES

- Rule 1081 Source Sampling (12/16/93)
- Rule 2201 New and Modified Stationary Source Review Rule (9/21/06)
- Rule 2520 Federally Mandated Operating Permits (6/21/01)
- Rule 4001 New Source Performance Standards (NSPS) -- 40 CFR Part 60 Subpart Dc -- **exemption for natural gas fuel**
- Rule 4101 Visible Emissions (2/17/05)
- Rule 4102 Nuisance (12/17/92)
- Rule 4201 Particulate Matter Concentration (12/17/92)
- Rule 4301 Fuel Burning Equipment (12/17/92)
- Rule 4304 Equipment Tuning Procedures for Boilers, Steam Generators, and Process Heaters (8/19/95) – **not applicable** – Use Alternate Monitoring Plan
- Rule 4305 Boilers, Steam Generators, and Process Heaters – Phase 2 (8/21/03)
- Rule 4306 Boilers, Steam Generators, and Process Heaters – Phase 3 (10/16/08)
- Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process heaters Greater than 5.0 MMBTU/hr (10/16/08)
- Rule 4351 Boilers, Steam Generators, and Process Heaters – Phase 1 (8/21/03)
- Rule 4405 Oxides of Nitrogen Emissions from Existing Steam Generators Used in Thermally Enhanced Oil Recovery – Central and Western Kern County Fields (12/17/92) – **not applicable** – steam generator is not an existing steam generator
- Rule 4406 Sulfur Compounds from Oil-Field Steam Generators – Kern County (12/17/92)– **not applicable** – steam generator is not an existing steam generator
- Rule 4801 Sulfur Compounds (12/17/92)
- CH&SC Section 41700 Health Risk Assessment
- CH&SC Section 42301.6 School Notice
- Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
- California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. PROJECT LOCATION

Units may be operated at various locations throughout the Cymric Oil Field in CUSA's Heavy Oil Western Stationary Source as shown in the following table. No location is located within 1,000 feet of the outer boundary of any K-12 school. Therefore, pursuant to CH&SC 42301.6, California Health and Safety Code (School Notice), public notification is not required for location near a school.

Unit	Site Location	Primary Location			Alternate Locations		
		¼ Section	Township	Range	¼ Section	Township	Range
S-1141-44	6Z Steam Plant	NE22	31S	22E	SE35 SW36 31 1 19 20 SW6	29S 29S 29S 30S 30S 30S 30S	21E 21E 22E 21E 22E 22E 22E
S-1141-45	6Z Steam Plant	NE22	31S	22E	SE35 SW36 31 1 19 20 SW6	29S 29S 29S 30S 30S 30S 30S	21E 21E 22E 21E 22E 22E 22E
S-1141-46	1Y S Steam Plant	22	31S	22E	SE35 SW36 31 SW6 1 17 21 22 26 27	29S 29S 29S 30S 30S 31S 31S 31S 31S 31S	21E 21E 22E 22E 21E 22E 22E 22E 22E 22E
S-1141-52	Not Assigned	NE22	31S	22E	SE35 SW36 31 1 19 20 SW6 W7 SE8	29S 29S 29S 30S 30S 30S 30S 30S 30S	21E 21E 22E 21E 22E 22E 22E 22E 22E
S-1141-53	1Y S Steam Plant	22	31S	22E	SE35 SW36 31 SW6 1	29S 29S 29S 30S 30S	21E 21E 22E 22E 21E
S-1141-61	1Y S Steam Plant	22	31S	22E	SE35 SW36 31 SW6 1	29S 29S 29S 30S 30S	21E 21E 22E 22E 21E
S-1141-520	8Z Steam Plant	NW21	31S	22E	All	All	All

Unit	Site Location	Primary Location		Alternate Locations			
		¼ Section	Township	Range	¼ Section	Township	Range
S-1141-526	Steam Plant 6	SW23	31S	22E	SE35	29S	21E
					SW36	29S	21E
					31	29S	22E
					SW6	30S	22E
					1	30S	21E
22	31S	22E					
S-1141-528	Steam Plant 10	SW23	31S	22E	SE35	29S	21E
					SW36	29S	21E
					31	29S	22E
					SW6	30S	22E
					1	30S	21E
22	31S	22E					
S-1141-529	Steam Plant 9	SW23	31S	22E	SE35	29S	21E
					SW36	29S	21E
					31	29S	22E
					SW6	30S	22E
					1	30S	21E

IV. PROCESS DESCRIPTION

Chevron operates equipment for the production of crude oil and natural gas. In thermally enhanced oil recovery (TEOR), natural gas is combusted in steam generators to produce steam for injection into heavy crude oil bearing strata via injection wells to reduce the viscosity of the crude oil, thereby facilitating thermally enhanced oil production.

The steam generators are used to steam TEOR wells and are permitted to burn TEOR gas as part of a vapor recovery system. The facility currently does not operate steam generator S-1141-52 and proposes to make the steam generator a non-compliant dormant unit. Additionally, steam generator S-1141-52 may be modified to an active unit complying with either the standard or staged enhanced schedule of Rule 4320.

The steam generators currently have permitted limits at 15 ppmv NO_x @ 3% O₂. The units will be modified by replacing the burners with North American Ultra Low NO_x burners with Flue Gas Recirculation (FGR). In addition, some piping modifications to the radiant and/or convection sections, air intake, fuel train components, and blower motor upgrade may be performed to increase efficiency. Documentation on similar North American Ultra Low NO_x burners permitted in other projects show similar modifications will meet 7 ppmv NO_x @ 3% O₂, particularly when combined with FGR (see also Manufacturer Guarantee in Appendix B).

In order to comply with District Rule 4320 NO_x requirements, the applicant proposed to implement the staged enhanced schedule option in Table 1. The staged enhanced schedule with dual NO_x limits is proposed for when the unit is fired on either <50% or >50% by volume PUC quality gas. This results in limits of 12 ppmv @ 3% O₂ (burning <50% PUC gas) and 9 ppmv @ 3% O₂ (burning >50% PUC gas).

The applicant proposes to comply with the Particulate Matter Control requirement of Section 5.4 by applying a 5 gr/100 scf sulfur fuel content limit on the TEOR-fueled generators and fire

generator S-1141-520 on gas limited to 1 gr-S/100 dscf. In addition, the applicant proposes using monthly Alternate Monitoring Scheme A (District Policy SSP 1105) with a portable analyzer. Therefore, these units meet the requirements of Rule 4320.

The maximum operating schedule used for Potential to Emit calculation is 24 hr/day and 365 days per year.

V. EQUIPMENT LISTING

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

ATC #	Implemented ATC Equipment Description
S-1141-52-24	DORMANT EMISSION UNIT: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #100 (SN 81-37469-2, NB 1056, DIS 39545-88) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN BURNER, O2 CONTROLLER, SO2 SCRUBBER, AND VAPOR PIPING FROM TEOR AND TVC SYSTEMS
S-1141-52-29	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #108 (SN 81-37469-2, NB 1056, DIS 39545-88) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER AND O2 CONTROLLER: AUTHORIZE OPERATION IN W HALF OF SECTION 7 AND SE QUARTER OF SECTION 8, T30S, R22E
S-1141-520-6	MODIFICATION OF 62.5 MMBTU/HR GAS-FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR N.B. #973 WITH NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER, FGR AND O2 MONITOR/CONTROLLER: ADD ADDITIONAL APPROVED OPERATING LOCATIONS, CONVERT RADIANT SECTION TO SPLIT FLOW DESIGN AND REPLACE CONVECTION SECTION

PTO #	PTO Equipment Description
S-1141-44-27	62.5 MMBTU/HR NATURAL/TEOR/TVC GAS-FIRED STRUTHERS STEAM GENERATOR #106 (SN81-37398-9, NB 661, DIS 12462) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER AND VAPOR PIPING FROM TEOR SYSTEMS AND STATION 2-22 TANKS
S-1141-45-27	62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #93 (SN 81-37398-10, NB 1003, DIS 12463-82) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER, AND VAPOR PIPING FROM TEOR AND TVC SYSTEMS
S-1141-46-26	62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #103 (DIS 41754-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS
S-1141-52-24	DORMANT EMISSION UNIT: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #100 (SN 81-37469-2, NB 1056, DIS 39545-88) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN BURNER, O2 CONTROLLER, SO2 SCRUBBER, AND VAPOR PIPING FROM TEOR AND TVC SYSTEMS
S-1141-53-27	62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #104 (DIS 41755-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS
S-1141-61-26	62.5 MMBTU/HR NATURAL GAS/TEOR/TVC GAS FIRED STRUTHERS STEAM GENERATOR #105 (DIS 41756-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS

PTO #	PTO Equipment Description
S-1141-520-5	62.5 MMBTU/HR GAS-FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR N.B. #973 WITH NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER, FGR AND O2 MONITOR/CONTROLLER
S-1141-526-6	62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR #100 N.B.#980 WITH NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER, AND FGR WITH BLOWER MOTOR AND VARIABLE SPEED DRIVE (VSD)
S-1141-528-7	62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED C.E. NATCO STEAM GENERATOR (#101) WITH NORTH AMERICAN GLE MAGNA-FLAME LOW NOX BURNER, FGR, AND O2 CONTROLLER
S-1141-529-11	62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED C.E. NATCO STEAM GENERATOR N.B. #9769 WITH A NORTH AMERICAN, MODEL MAGNA FLAME GLE, ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION

Proposed Modification Equipment Description (see ATCs in Appendix C)

ATC #	Staged Enhanced Schedule ATC Equipment Description
S-1141-44-30	MODIFICATION OF 62.5 MMBTU/HR NATURAL/TEOR/TVC GAS-FIRED STRUTHERS STEAM GENERATOR #106 (DIS 41757-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER APPROVED FOR VARIOUS LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100SCF) OF RULE 4320
S-1141-45-30	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #107 (DIS 41762-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320
S-1141-46-30	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #103 (DIS 41754-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320
S-1141-52-33	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #108 (DIS 39545-88) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER AND O2 CONTROLLER - AUTHORIZED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320
S-1141-53-31	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #104 (DIS 41755-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320

ATC #	Staged Enhanced Schedule ATC Equipment Description
S-1141-61-30	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR/TVC GAS FIRED STRUTHERS STEAM GENERATOR #105 (DIS 41756-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320
S-1141-520-8	MODIFICATION OF 62.5 MMBTU/HR GAS-FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR #110 N.B. #973 WITH NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER, FGR AND O2 MONITOR/CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX STAGED ENHANCED SCHEDULE (9 PPM) AND LIMIT FUEL SULFUR CONTENT FOR RULE 4320
S-1141-526-9	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR #100 N.B.#980 WITH NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, FGR, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320
S-1141-528-10	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED C.E. NATCO STEAM GENERATOR (#101) WITH NORTH AMERICAN GLE MAGNA-FLAME LOW NOX BURNER, FGR, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320
S-1141-529-13	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED C.E. NATCO STEAM GENERATOR #102 (N.B. #9769) WITH A NORTH AMERICAN, MODEL MAGNA FLAME GLE, ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320

ATC #	SOx Control Only ATC Equipment Description
S-1141-44-31	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR/TVC GAS-FIRED STRUTHERS STEAM GENERATOR #106 (DIS 41757-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE
S-1141-45-31	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #107 (DIS 41762-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE
S-1141-46-31	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #103 (DIS 41754-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE

ATC #	SOx Control Only ATC Equipment Description
S-1141-52-34	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #108 (DIS 39545-88) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER AND O2 CONTROLLER - AUTHORIZED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE BURNER, FGR, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH RULE 4306 NOX LIMITS (15 PPM) AND RULE 4320 SOX LIMITS (5 GR-S/100 SCF)
S-1141-53-32	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #104 (DIS 41755-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE
S-1141-61-31	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR/TVC GAS FIRED STRUTHERS STEAM GENERATOR #105 (DIS 41756-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE
S-1141-526-10	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR #100 N.B.#980 WITH NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER, AND FGR WITH BLOWER MOTOR AND VARIABLE SPEED DRIVE (VSD): LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE
S-1141-528-11	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED C.E. NATCO STEAM GENERATOR (#101) WITH NORTH AMERICAN GLE MAGNA-FLAME LOW NOX BURNER, FGR, AND O2 CONTROLLER: LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE
S-1141-529-14	MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED C.E. NATCO STEAM GENERATOR #102 (N.B. #9769) WITH A NORTH AMERICAN, MODEL MAGNA FLAME GLE, ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE

ATC #	Dormant ATC Equipment Description
S-1141-52-35	MODIFICATION OF DORMANT EMISSION UNIT: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #100 (SN 81-37469-2, NB 1056, DIS 39545-88) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN BURNER, O2 CONTROLLER, SO2 SCRUBBER, AND VAPOR PIPING FROM TEOR AND TVC SYSTEMS: MAKE NON-COMPLIANT DORMANT EMISSIONS UNIT FOR RULE 4320

*DEU ATC based on current PTO S-1141-52-24

Post-Project Equipment Description

PTO #	Staged Enhanced Schedule PTO Equipment Description
S-1141-44-30	62.5 MMBTU/HR NATURAL/TEOR/TVC GAS-FIRED STRUTHERS STEAM GENERATOR #106 (DIS 41757-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER APPROVED FOR VARIOUS LOCATIONS
S-1141-45-30	62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #107 (DIS 41762-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS

PTO #	Staged Enhanced Schedule PTO Equipment Description
S-1141-46-30	62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #103 (DIS 41754-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS
S-1141-52-33	62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #108 (DIS 39545-88) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER AND O2 CONTROLLER - AUTHORIZED FOR VARIOUS SPECIFIED LOCATIONS
S-1141-53-31	62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #104 (DIS 41755-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS
S-1141-61-30	62.5 MMBTU/HR NATURAL GAS/TEOR/TVC GAS FIRED STRUTHERS STEAM GENERATOR #105 (DIS 41756-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS
S-1141-520-8	62.5 MMBTU/HR GAS-FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR #110 N.B. #973 WITH NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER, FGR AND O2 MONITOR/CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS
S-1141-526-9	62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR #100 N.B.#980 WITH NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, FGR, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS
S-1141-528-10	62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED C.E. NATCO STEAM GENERATOR (#101) WITH NORTH AMERICAN GLE MAGNA-FLAME LOW NOX BURNER, FGR, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS
S-1141-529-13	62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED C.E. NATCO STEAM GENERATOR #102 (N.B. #9769) WITH A NORTH AMERICAN, MODEL MAGNA FLAME GLE, ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION - APPROVED FOR VARIOUS SPECIFIED LOCATIONS

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

Emissions from natural gas-fired steam generators include NO_x, SO_x, PM₁₀, CO, VOC, and PM₁₀. Per the applicant the steam generators are either already equipped or will install an Ultra low-NO_x burner and upgrade blower, FGR, air intake, and fuel train. Documentation on North American Magna-Flame Ultra Low NO_x burners (see also Manufacturer Guarantee in Appendix B) show it can meet less than 7 ppmv NO_x, particularly when combined with FGR.

Therefore, the steam generators will be compliant with District Rule 4320.

See Appendix B: Manufacturer Guarantee

VII. GENERAL CALCULATIONS

A. Assumptions

- The maximum operating schedule is 24 hours per day
- The unit is fired on TEOR/natural gas
- Annual pre-project potential to emit is calculated based on 8,760 hours of operation per year

- Natural Gas Heating Value: 1,000 Btu/scf (District Practice)
- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B)
- There will be no change in PM₁₀, CO, or VOC emissions as a result of this project
- There will be no change in NO_x emissions for units complying with the NO_x fee pay option of Rule 4320
- Daily NO_x emissions will be based on the Rule 4305 limit of 30 ppmv to account for startups and shutdowns (District Practice)
- Daily CO emissions will be calculated at 25 ppmv @ 3% O₂ without accounting for start-up and shutdown (applicant states that steady state operation results in very low emissions that offset increased start-up and shutdown emissions)

B. Emission Factors

Pre-Project Emission Factors

ATCs S-1141-52-33 (NO_x/SO_x) and '-52-34 (SO_x only) use '-52-29 as a base document. ATC S-1141-52-35 (non-Compliant for Rules 4306 and 4320) uses '-52-24 as a base document. Therefore, both S-1141-52-24 and '-52-29 will be listed in the following table.

Pre-project emission factors are listed in the tables below for the steam generators:

Permit Units	Pollutant	Pre-Project Emission Factors		Source
S-1141-44, 45, 46, 52-29, 53, 61, 520, 526, 528, 529	NO _x	0.018 lb-NO _x /MMBtu	15 ppmvd NO _x (@ 3% O ₂)	Current Permit
S-1141-52-24	NO _x	0.036 lb-NO _x /MMBtu	30 ppmvd NO _x (@ 3% O ₂)	Current Permit
S-1141-44, 45, 46, 52-29, 53, 61	SO _x	0.0473 lb-SO _x /MMBtu	17 gr S/100 scf	Current Permit
S-1141-52-24	SO _x	0.04 lb-SO _x /MMBtu	--	Current Permit
S-1141-520	SO _x	0.00285 lb-SO _x /MMBtu	1 gr S/100 scf	Current Permit
S-1141-526, 528	SO _x	0.6 lb-SO _x /MMBtu	210 gr S/100 scf	Current Permit
S-1141-529	SO _x	0.035 lb-SO _x /MMBtu	12 gr S/100 scf	Current Permit
All Units	CO	0.0185 lb-CO/MMBtu	25 ppmvd CO (@ 3% O ₂)	Current Permit

Permit Units	Pollutant	Start-up/Shutdown Emission Factors		Source
All Units	NO _x	0.1 lb-NO _x /MMBtu	--	Current Permit
All Units	CO	0.084 lb-CO/MMBtu	--	Current Permit

Post Project Emission Factors

Post project emission factors are listed in the tables below for the steam generators:

Permit Units	Pollutant	Post Project Emission Factors		Source
S-1141-44-30, '-45-30, '-46-30, '-52-33, '-53-31, '-61-30, '-526-9, '-528-10, '-529-13	NO _x	0.014 lb-NO _x /MMBtu	12 ppmvd NO _x (@ 3% O ₂)	Rule 4320 Staged Enhanced Schedule C.3
S-1141-52-35	NO _x	0.036 lb-NO _x /MMBtu	30 ppmvd NO _x (@ 3% O ₂)	Current Permit (Rules 4306 and 4320 non-compliant)
S-1141-520-8	NO _x	0.011 lb-NO _x /MMBtu	9 ppmvd NO _x (@ 3% O ₂)	Rule 4320 Staged Enhanced Schedule C.2.b
S-1141-44, '-45, '-46, '-52, '-53, '-61, '-526, '-528, '-529	SO _x	0.0143 lb-SO _x /MMBtu	5 gr S/100 scf	Rule 4320 Limit 5.4.1.2
S-1141-520-8	SO _x	0.00285 lb-SO _x /MMBtu	1 gr S/100 scf	Current Permit

*All other emission factors remain unchanged (including the pre-project NO_x factors for the SO_x only modifications where CUSA will pay fees).

C. Calculations

1. Pre-Project Potential to Emit (PE1)

ATCs S-1141-52-33 (NO_x/SO_x) and '-52-34 (SO_x only) use '-52-29 as a base document. ATC S-1141-52-35 (non-Compliant for Rules 4306 and 4320) uses '-52-24 as a base document. Therefore, both S-1141-52-24 and '-52-29 will be listed in the following table.

CO emissions are calculated as 0.0185 lb/MMBtu x 62.5 MMBtu/hr x 24 hours/day or 8,760 hours/year. This results in 27.8 lb-CO/day and 10,129 lb-CO/year including start-ups and shutdowns.

Daily NO_x emissions are calculated as follows (using the Rule 4305 limit):

$$62.5 \text{ (MMBtu/hr)} \times 24 \text{ (hours/day)} \times 0.036 \text{ (lb-NO}_x\text{/MMBtu)} = 54.0 \text{ lb-NO}_x\text{/day}$$

Daily SO_x emissions are calculated as follows:

$$62.5 \text{ (MMBtu/hr)} \times 24 \text{ (hours/day)} \times \text{EF1 (lb-NO}_x\text{/MMBtu)} = \text{X lb-SO}_x\text{/day}$$

Annual NO_x and SO_x emissions are calculated as follows:

$$\text{PE (lb/yr)} = 62.5 \text{ (MMBtu/hr)} \times \text{EF1 (lb/MMBtu)} \times 8,760 \text{ (hr/yr)}$$

Pre Project Potential to Emit (PE1)				
Daily PE (lb/day)			Annual PE (lb/yr)	
Permit Unit	NO _x	SO _x	NO _x	SO _x
S-1141-44	54.0	71.0	9,965	25,897
S-1141-45	54.0	71.0	9,965	25,897
S-1141-46	54.0	71.0	9,965	25,897
S-1141-52-24	54.0	60.0	19,710	21,900
S-1141-52-29	54.0	71.0	9,855	25,897
S-1141-53	54.0	71.0	9,965	25,897
S-1141-61	54.0	71.0	9,965	25,897
S-1141-520	54.0	4.3	9,965	1,560
S-1141-526	54.0	900.0	9,965	328,500
S-1141-528	54.0	900.0	9,965	328,500
S-1141-529	54.0	52.5	9,965	19,163

2. Post-Project Potential to Emit (PE2)

The post-project potential to emit for the steam generators are calculated as follows and summarized in the following table:

CO emissions are calculated the same as pre-project and result in 27.8 lb-CO/day and 10,129 lb-CO/year including start-ups and shutdowns.

Daily NO_x emissions are calculated as follows (using the Rule 4305 limit):

$$62.5 \text{ (MMBtu/hr)} \times 24 \text{ (hours/day)} \times 0.036 \text{ (lb-NO}_x\text{/MMBtu)} = 54.0 \text{ lb-NO}_x\text{/day}$$

Daily SO_x emissions are calculated as follows:

$$62.5 \text{ (MMBtu/hr)} \times 24 \text{ (hours/day)} \times \text{EF}_2 \text{ (lb-SO}_x\text{/MMBtu)} = X \text{ lb-SO}_x\text{/day}$$

Annual NO_x and SO_x emissions are calculated as follows:

$$\text{PE (lb/yr)} = 62.5 \text{ (MMBtu/hr)} \times \text{EF}_2 \text{ (lb/MMBtu)} \times 8,760 \text{ (hr/yr)}$$

Rule 4320 Staged Enhanced Schedule Initial Limit Post Project Potential to Emit (PE2)				
Daily PE (lb/day)			Annual PE (lb/yr)	
Permit Unit	NO _x	SO _x	NO _x	SO _x
S-1141-44-30	54.0	21.5	7,665	7,829
S-1141-45-30	54.0	21.5	7,665	7,829
S-1141-46-30	54.0	21.5	7,665	7,829
S-1141-52-33	54.0	21.5	7,665	7,829
S-1141-53-31	54.0	21.5	7,665	7,829
S-1141-61-30	54.0	21.5	7,665	7,829
S-1141-520-8	54.0	4.3	6,023	1,560
S-1141-526-9	54.0	21.5	7,665	7,829
S-1141-528-10	54.0	21.5	7,665	7,829
S-1141-529-13	54.0	21.5	7,665	7,829

Rule 4320 SO_x Control Only Post Project Potential to Emit (PE2)				
Daily PE (lb/day)			Annual PE (lb/yr)	
Permit Unit	NO _x	SO _x	NO _x	SO _x
S-1141-44-31	54.0	21.5	9,965	7,829
S-1141-45-31	54.0	21.5	9,965	7,829
S-1141-46-31	54.0	21.5	9,965	7,829
S-1141-52-34	54.0	21.5	9,855	7,829
S-1141-53-32	54.0	21.5	9,965	7,829
S-1141-61-31	54.0	21.5	9,965	7,829
S-1141-526-10	54.0	21.5	9,965	7,829
S-1141-528-11	54.0	21.5	9,965	7,829
S-1141-529-14	54.0	21.5	9,965	7,829

Rule 4320 Non-Compliant Post Project Potential to Emit (PE2)				
Daily PE (lb/day)			Annual PE (lb/yr)	
Permit Unit	NO _x	SO _x	NO _x	SO _x
S-1141-52-35	54.0	60.0	19,710	21,900

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

SSPE1 calculations are necessary to aid the following determinations:

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

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

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

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

SSPE2 calculations are necessary to aid the following determinations:

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

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

Facility emissions are already above the Offset and Major Source Thresholds for all pollutants. There is no increase in potential emissions for any of the units, for any pollutant in this project. Therefore, SSPE2 calculations are not necessary.

5. Major Source Determination

Pursuant to Section 3.24 of District Rule 2201, a Major Source is a stationary source with post-project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.24.2 states, "for the purposes of determining major source status, the SSPE2 shall not include the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site."

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

6. Baseline Emissions (BE)

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

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

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

otherwise,

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

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

7. Major Modification

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

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

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

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

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

8. Federal Major Modification

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

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

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

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

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

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

¹ Due to the large number of affected units proposed by CUSA for Rule 4320 compliance, this project (considering that steam generators typically have actual emissions below their permitted emission levels) is presumed to cross one or more major modification thresholds.

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

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

VIII. COMPLIANCE

Rule 1081 Source Testing

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

- Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
- {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

Rule 2201 New and Modified Stationary Source Review Rule

S-1141-44-31, '-45-31, '-46-31, '-52-34, '-52-35, '-53-32, '-61-31, '-526-10, '-528-11, and '-529-14:

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

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

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

Compliance with this rule is expected for these modifications.

S-1141-44-30, '-45-30, '-46-30, '-52-33, '-53-31, '-61-30, '-520-8, '-526-9, '-528-10, and '-529-13 modifications are all subject to this rule as follows:

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

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

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

BACT shall not be required for the following:

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

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

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

B. Offsets

1. Offset Applicability

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

Emission offsets shall not be required for the following:

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

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

C. Public Notification

1. Applicability

Public noticing is required for:

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

a. New Major Source

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

b. Major Modification

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

c. PE > 100 lb/day

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

d. Offset Threshold

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

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

e. SSIPE > 20,000 lb/year

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

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

2. Public Notice Action

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

D. Daily Emission Limits (DELs)

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

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

S-1141-44-30, '-45-30, '-46-30, '-52-33, '-53-31, '-61-30, '-526-9, '-528-10, and '-529-13:

- The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, and PTO S-1141-495. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320]
- Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when this unit is burning 50% or greater by volume PUC quality gas on a monthly average basis: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
- Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when the unit is burning less than 50% by volume PUC quality gas on a monthly average basis: 12 ppmvd NO_x @ 3% O₂ or 0.014 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
- Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 7665 lb-NO_x/year, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rules 2201, 4305, 4306, and 4320]
- The applicable NO_x and CO emissions concentration for each month shall be determined based on the volume and type of fuel combusted in the unit (< 50% by volume PUC quality gas or > = 50% by volume PUC quality gas). Permittee shall maintain supporting records that demonstrate the type of fuel combusted. [District Rules 2201, 4305, 4306, and 4320]

- 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 ($\geq 50\%$ 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, 4305, 4306, and 4320]
- Source testing is required at least once every twelve (12) months from the initial source test date of each fuel type ($\geq 50\%$ PUC quality gas or $< 50\%$ PUC quality gas). After initial compliance demonstration with the NO_x 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, 4305, 4306, and 4320]
- Compliance source testing after switching fuel types is not required if the unit continues to demonstrate compliance with 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas. In which case, source testing shall only be required every thirty-six (36) months for the less than 50% by PUC quality gas. If the result of a source test demonstrates that the unit does not meet 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas, the source test frequency shall revert to at least one test every 36 months for each fuel type. [District Rules 2201, 4305, 4306, and 4320]

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- The operator shall fire the unit only on natural gas that has a combined fuel sulfur content not exceeding 1.0 gr S/100 scf. [District Rules 2201, 4406, 4320]
- Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
- Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 6023 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rule 2201, 4305, 4306, and 4320]

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

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

3. Recordkeeping

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

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Rule 2520 Federally Mandated Operating Permits

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

- {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520, 5.3.4]
- {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4]

Rule 4001 New Source Performance Standards (NSPS)

40 CFR Part 60 Subpart Dc is applicable to each steam-generating unit that is greater than 10 MMBtu/hr, but less than 100 MMBtu/hr for which construction, modification, or reconstruction

has commenced after June 9, 1989. The applicant is granted a permit shield from the requirements of this subpart because the steam generators were constructed prior to June 19, 1989 and have not been modified or reconstructed as defined in 40 CFR 60.14-.15. In addition, these units qualify for the exemption under 40CFR 60.42 (j) for firing on fuels other than oil or coal.

40 CFR Part 72 is applicable to each steam-generating unit used to produce electricity, commenced commercial operation after November 15, 1990, or serves a generator greater than 25 MW. The applicant is granted a permit shield from the requirements of this subpart because the steam generators were operated prior to November 15, 1990 and are not used to produce electricity.

The following condition will remain listed on the permit.

- {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2]

Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringelmann 1 or equivalent to 20% opacity. Compliance with this rule is expected provided the equipment is well maintained. In addition, this rule is applied through the facility-wide permit. Therefore, the following condition will be removed from ATCs for the steam generators:

- No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101, by using EPA method 9. If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)]

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations provided the equipment is well maintained. In addition, this rule is applied through the facility-wide permit. Therefore, compliance with this rule is expected and the following condition will be removed from ATCs for the steam generators:

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

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

California Health & Safety Code 42301.6 (School Notice)

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

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot. The worst case emissions unit will be used for this calculation (S-1141-526 @ 0.096 lb-PM₁₀/MMBtu).

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

$$GL = \left(\frac{0.096 \text{ lb} - \text{PM}}{\text{MMBtu}} \times \frac{7,000 \text{ grain}}{\text{lb} - \text{PM}} \right) / \left(\frac{8,578 \text{ ft}^3}{\text{MMBtu}} \times 1.17 \right)$$

$$GL = 0.07 \text{ grain/dscf} < 0.1 \text{ grain/dscf}$$

Therefore, compliance with District Rule 4201 requirements is expected. Additionally, particulate matter emissions from the steam generators are already limited by Rule 2201 to a value less than or equal to the rule limit of 0.1 grain per cubic foot of gas at dry standard conditions.

Therefore, the following condition previously listed on the permits will be removed since it is unnecessary:

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

Rule 4301 Fuel Burning Equipment

This rule limits SO_x, NO_x, and total combustion air contaminant emissions from fuel burning equipment. The requirements of this rule are that no person shall discharge into the atmosphere combustion contaminants exceeding.

- 0.1 grain per cubic foot of gas calculated to 12% of carbon dioxide at dry standard conditions at the point of discharge,
- 200 pound per hour of sulfur compounds, calculated as sulfur dioxide (SO₂)
- 140 pounds per hour of nitrogen oxides, calculated as nitrogen dioxide (NO₂)
- Ten pounds per hour of combustion contaminants as defined in Rule 1020 and derived from the fuel.

In addition, the units in this project are also subject to District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process heaters Greater than 5.0 MMBTU/hr*. Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4301 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4301. Therefore, the following conditions previously listed on the permits will be removed since it is unnecessary:

- {521} Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3]
- Nitrogen oxide (NO_x) emissions shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2 and 2520, 9.3.2]
- Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1]

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

This rule provides equipment tuning procedures for boilers, steam generators and process heaters to control visible emissions and emissions of both nitrogen oxides (NO_x) and carbon monoxide (CO). Equipment tuning may be required of steam generators based on heat capacity and monitoring requirements. However, all units in this project are using the alternate monitoring method for compliance with Rule 4320 and are not required to perform tuning in accordance with the procedures of this Rule.

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

This rule limits the NO_x and CO emissions from boiler, steam generator, or process heater with a total heat input greater than 5.0 MMBtu/hr. Section 5.1 limits the NO_x emissions to 30 ppmv

@ 3% O₂ or 0.036 lb/MMBtu and CO emissions to 400 ppmv @ 3% O₂ for gaseous fuel-fired units.

In addition, the units in this project are also subject to District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process heaters Greater than 5.0 MMBTU/hr*. Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4305.

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

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

The steam generators are currently in compliance with this rule (except for DEU ATC S-1141-52-35) and are proposing to meet compliance with Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process heaters Greater than 5.0 MMBTU/hr*. Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4306 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4306.

ATC S-1141-52-35 will continue to comply with this rule as a non-compliant dormant emissions unit.

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

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

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

Section 5.2.1 states that on and after the indicated Compliance Deadline units shall not be operated in a manner which exceeds the applicable NO_x limit specified in Table 1 of this rule.

With a maximum heat input of 62.5 MMBtu/year for these steam generators the applicable emission limit category Section 5.2, Table 1, Category C.2 (units firing on >50% PUC quality gas) and C.3 (units firing on <50% PUC quality gas), from District Rule 4320 are as follows:

C. Oilfield Steam Generators			
2. Units with a total rated heat input > 20.0 MMBtu/hr	a) Standard Schedule 7 ppmv or 0.008 lb/MMBtu; or	July 1, 2009	July 1, 2010
	b) Staged Enhanced Schedule Initial Limit 9 ppmv or 0.011 lb/MMBtu; and	July 1, 2011	July 1, 2012
	Final Limit 5 ppmv or 0.0062 lb/MMBtu	January 1, 2013	January 1, 2014
3. Units firing on less than 50%, by volume, PUC quality gas.	Staged Enhanced Schedule Initial Limit 12 ppmv or 0.014 lb/MMBtu; and	July 1, 2010	July 1, 2011
	Final Limit 9 ppmv or 0.011 lb/MMBtu	January 1, 2013	January 1, 2014

As shown in the previous table, the 9 and 12 ppmvd @ 3% O₂ NO_x limit proposed for the steam generators, for staged schedules, in this project are consistent with one of the compliance options allowed by the rule.

In order to enjoy the higher NO_x limit allowed by category C.3 the units must combust less than 50% PUC quality gas. CUSA has proposed a dual NO_x limit that will allow them to burn both PUC and non-PUC gas by meeting the individual limits. CUSA has also indicated that fuel for these units is comingled before arriving at the steam generator. Therefore, the following conditions will be listed to ensure compliance:

S-1141-44-30, '-45-30, '-46-30, '-52-33, '-53-31, '-61-30, '-526-9, '-528-10, and '-529-13:

- The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, and PTO S-1141-495. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320]
- Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when this unit is burning 50% or greater by volume PUC quality gas on a monthly average basis: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
- Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when the unit is burning less than 50% by volume PUC quality gas on a monthly average basis: 12 ppmvd NO_x @ 3% O₂ or 0.014 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320]

- Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NOx/MMBtu, 54.0 lb-NOx/day, 7665 lb-NOx/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rules 2201, 4305, 4306, and 4320]
- The applicable NOx and CO emissions concentration for each month shall be determined based on the volume and type of fuel combusted in the unit (< 50% by volume PUC quality gas or > = 50% by volume PUC quality gas). Permittee shall maintain supporting records that demonstrate the type of fuel combusted. [District Rules 2201, 4305, 4306, and 4320]
- A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. The NOx limit in effect at the time of the startup source testing will be determined based on the volume and type of fuel combusted (>= 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 NOx and CO shall be conducted within 90 days of the date the fuel type is switched. [District Rules 2201, 4305, 4306, and 4320]
- Source testing is required at least once every twelve (12) months from the initial source test date of each fuel type (>= 50% PUC quality gas or < 50% PUC quality gas). After 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, 4305, 4306, and 4320]
- Compliance source testing after switching fuel types is not required if the unit continues to demonstrate compliance with 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu and 25 ppmvd CO @ 3% O2 or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas. In which case, source testing shall only be required every thirty-six (36) months for the less than 50% by PUC quality gas. If the result of a source test demonstrates that the unit does not meet 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu and 25 ppmvd CO @ 3% O2 or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas, the source test frequency shall revert to at least one test every 36 months for each fuel type. [District Rules 2201, 4305, 4306, and 4320]

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- The operator shall fire the unit only on natural gas that has a combined fuel sulfur content not exceeding 1.0 gr S/100 scf. [District Rules 2201, 4406, and 4320]
- Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu and 25 ppmvd CO @ 3% O2 or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
- Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NOx/MMBtu, 54.0 lb-NOx/day, 6023 lb-

NOx/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rules 2201, 4305, 4306, and 4320

One compliance scenario entails making unit S-1141-52 a non-compliant dormant emissions unit. Therefore, the following conditions will be incorporated into the permit to enforce the dormant emission unit status pursuant to District Policy SSP 1705. The conditions below will be placed ahead of the existing permit conditions:

Dormant steam generator S-1141-52-35:

- No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in the following conditions. [District Rule 2201]
- This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary permit changes and/or retrofits required to comply with the applicable requirements of District Rules 4305, 4306, 4320 and all other applicable District regulations. [District Rules 4305, 4306, and 4320]
- When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rule 2080]

Unit S-1141-52-35 compliance with this rule is expected and no further discussion is required.

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

All units except S-1141-520-8:

- The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320]

S-1141-520-8:

- The operator shall fire the unit only on natural gas that has a combined fuel sulfur content not exceeding 1.0 gr S/100 scf. [District Rules 2201, 4406, and 4320]

Section 5.6 details requirements for operation and maintenance of the steam generator. Shutdown and start-up periods should not be more than two hours per occurrence. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is

taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off.

The following conditions will be listed on the ATC to demonstrate compliance:

- Duration of startup shall not exceed two hours each per occurrence. The emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 2201, 4305, 4306, and 4320]
- Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 4305, 4306, and 4320]

Monitoring:

Pursuant to Section 5.7, the applicant is required to monitor the operational characteristics recommended by the manufacturer using a method approved by the APCO. In lieu of installing and maintaining a Continuous Emissions Monitoring System (CEMS), NO_x and CO emissions can be monitored using a portable analyzer and adjusting the equipment to operate in compliance. The facility already conducts monitoring that meets this requirement; therefore, the following conditions will be listed on the ATC.

- The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
- If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rules 4305, 4306, and 4320]
- All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the

APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

- All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 5.8 of District Rule 4320. [District Rules 4305, 4306, and 4320]

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

CUSA will be required to test monthly for units listing two NO_x limits (per FYI 148 for units burning <50% PUC gas) and quarterly (proposed by CUSA) for SO_x only units. Therefore the following conditions were added to the ATCs:

- Each fuel source shall be tested (**monthly for NO_x/SO_x units and quarterly for SO_x only units**) 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 monthly testing may resume. [District Rule 2520, 9.3.2 and Rule 4320, 5.7.6]
- If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 2520, 9.3.2]
- If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 2520, 9.3.2 and Rule 4320, 5.7.6]
- If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4320]

Record Keeping:

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

- The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320]
- 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, 4320, and 4351]
- Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, 4305, 4306, and 4320]

Source Testing:

Pursuant to Sections 6.3, source testing for NO_x, SO_x, and CO will be required for each unit in this project to demonstrate compliance with the applicable emissions limits. Therefore, the following conditions will be listed on the ATCs:

- Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). 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]
- The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
- Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
- The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) -

EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 4305, 4306, and 4320]

- 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]

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

The purpose of this rule is to limit emissions of oxides of nitrogen (NO_x) from boilers, steam generators, and process heaters to levels consistent with reasonably available control technology (RACT). This rule applies to any boiler, steam generator or process heater, with a rated heat input greater than 5 million Btu per hour that is fired with gaseous and/or liquid fuels, and is included in a major NO_x source. This rule does not apply to any unit located west of Interstate Highway 5 located in Fresno, Kern, or Kings County. The Heavy Oil Western Stationary Source Field is west of I-5 therefore, this rule does not apply. The applicant was granted a permit shield from Rule 4351; Therefore, the following permit condition will be listed on the permit:

- {1678} this unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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]

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

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

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

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

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

In addition, the units in this project are also subject to District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process heaters Greater than 5.0 MMBTU/hr*. Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4406 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4406.

Therefore, the following conditions previously listed on the permits will be removed since they are unnecessary (except for DEU unit S-1141-52-35):

- 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, 9.3.2]
- SOx emissions, measured as total SO₂, shall not exceed 0.0473 lb/MMBtu. [District NSR Rule and 4406]

Rule 4801 Sulfur Compounds

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

In addition, the unit is also subject to District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process heaters Greater than 5.0 MMBTU/hr*. Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4801 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4801. Therefore, the following condition previously listed on the permits will be removed since it is unnecessary (except for DEU unit S-1141-52-35):

- Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1]

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

Compliance with all applicable rules and regulations is expected. Issue Authorities to Construct S-1141-44-30, '-44-31, '-45-30, '-45-31, '-46-30, '-46-31, '-52-33, '-52-34, '-52-35, '-53-31, '-53-32, '-61-30, '-61-31, '-520-8, '-526-9, '-526-10, '-528-10, '-528-11, '-529-13, and '-529-14 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
All Units	3020-02-H	62.5 MMBTU/hr	\$ 1,030

Appendices

- A: Current PTOs and Implemented ATCs
- B: Manufacturer Guarantee
- C: Draft ATCs

Appendix A

Current PTOs and Implemented ATCs

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1141-44-27

EXPIRATION DATE: 02/28/2006

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL/TEOR/TVC GAS-FIRED STRUTHERS STEAM GENERATOR #106 (SN81-37398-9, NB 661, DIS 12462) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER AND VAPOR PIPING FROM TEOR SYSTEMS AND STATION 2-22 TANKS

PERMIT UNIT REQUIREMENTS

1. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; all of Sections 19 and 20, and the SW/4 Section 6, T30S, R22E; and NE/4 Section 22, T31S R22E (MDBM). [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall fire the unit only on PUC-quality natural gas and gas from the following permit units: PTO S-1141-88, PTO S-1141-250, and PTO S-1128-116. [District Rules 2201 & 4406; and CH&SC 41700] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
4. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. SOx emissions, measured as total SO2, shall not exceed 0.0473 lb/MMBtu. [District NSR Rule and 4406] Federally Enforceable Through Title V Permit
6. Except during startup and shutdown periods, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 25 ppmvd CO @ 3%O2. [District Rules 2201; 4301, 5.2; 4305, 5.1; and 4306, 5.1] Federally Enforceable Through Title V Permit
7. Emission rates shall not exceed any of the following: PM10 0.005 lb/MMBtu; or VOC 0.003 lb/MMBtu. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
8. During startup and shutdown periods, emissions from the steam generators shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Maximum emissions from the steam generator, including startup and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day, 9,855 lb-NOx/year, 28.1 lb-CO/day, and 10,147 lb-CO/year [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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
11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
13. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2 and County Rules 404 (Madera), 406 (Fresno), and 407 (Kern, Kings, Merced, San Joaquin, Stanislaus, and Tulare)] Federally Enforceable Through Title V Permit
14. 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, 9.3.2] Federally Enforceable Through Title V Permit
15. Duration of startup or shutdown shall not exceed two hours each per occurrence. During startup 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 startup and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
16. Startup 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 until the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
17. When complying with sulfur emission limits by 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, 9.3.2] Federally Enforceable Through Title V Permit
18. When complying with SO_x emission limits by fuel analysis or source testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
19. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. 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, 9.3.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. 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
22. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
23. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
24. This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
25. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
26. 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
27. Steam generator firebox convection section and all flue gas ductwork shall have no detectible leaks. [District NSR Rule] Federally Enforceable Through Title V Permit
28. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once 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
29. 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 and 4306] Federally Enforceable Through Title V Permit
30. 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
31. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] 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.

32. 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]
33. Permittee shall measure and record the fuel gas sulfur content and BTU content at the time of NO_x testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and 4406] Federally Enforceable Through Title V Permit
34. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit
35. Records required by this permit shall be retained at the facility for a period of no less than 5 years and shall be made readily available for District inspection upon request. [District NSR Rule and 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. A source test to demonstrate compliance with NO_x and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
37. Source testing to measure NO_x and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 2520, 9.3.2; 4305; and 4306] Federally Enforceable Through Title V Permit
38. Source testing to measure NO_x and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 2520, 9.3.2; 4305; and 4306] Federally Enforceable Through Title V Permit
39. If permittee fails any compliance demonstration for NO_x or CO emission limits when testing not less than once every 36 months, compliance with NO_x and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 2520, 9.3.2; 4305; and 4306] Federally Enforceable Through Title V Permit
40. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NO_x and CO source testing requirement. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit
41. 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
42. 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
43. 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
44. 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, 9.3.2] Federally Enforceable Through Title V Permit
45. 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, 9.4.2] Federally Enforceable Through Title V Permit
46. 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

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

47. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - ARB Method 100 and EPA method 19, and gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit
48. Permittee shall maintain no less than 0.45 miles of asphalt-paved roadway. The 0.45 miles of asphalt-paved roadways are separate from roadways associated with other steam injection and oil production well projects. [District NSR Rule] Federally Enforceable Through Title V Permit
49. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
50. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO_x emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
51. The following conditions must be met for representative unit(s) to be used to test for NO_x 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 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
52. All units in a group for which representative units are source for NO_x emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
53. All units in a group for which representative units are source tested for NO_x emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
54. This unit is not authorized to burn liquid or solid fuel. [District Rule 2010]
55. The number of representative units source tested for NO_x 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, 9.3.2] Federally Enforceable Through Title V Permit
56. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] 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.

57. The EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
58. The EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
59. In the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
60. The provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
61. The owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
62. Permittee shall consume no more than 5125 barrels per day of oil on a daily maximum average and no more than 4648 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
63. The sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
64. The amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
65. Permittee shall have installed operable scrubbers on the equipment. Exhaust gases from the generators shall be ducted through operable scrubbers. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
66. Permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
67. Within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
68. Permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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69. Within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
70. Permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
71. Permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
72. Performance tests for the emission of NO_x and SO₂ shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] 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-1141-45-27

EXPIRATION DATE: 02/28/2006

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #93 (SN 81-37398-10, NB 1003, DIS 12463-82) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER, AND VAPOR PIPING FROM TEOR AND TVC SYSTEMS

PERMIT UNIT REQUIREMENTS

1. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; all of Sections 19 and 20, and the SW/4 Section 6, T30S, R22E; and NE/4 Section 22, T31S R22E (MDBM). [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall fire the unit only on PUC-quality natural gas and gas from the following permit units: PTO S-1141-88, PTO S-1141-250, and PTO S-1128-116. [District Rules 2201 & 4406; and CH&SC 41700] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
4. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. SOx emissions, measured as total sulfur, shall not exceed 0.0473 lb/MMBtu. [District NSR Rule and 4406] Federally Enforceable Through Title V Permit
6. Except during startup and shutdown periods, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 25 ppmvd CO @ 3%O2. [District Rules 2201; 4301, 5.2; 4305, 5.1; and 4306, 5.1] Federally Enforceable Through Title V Permit
7. Emission rates shall not exceed any of the following: PM10 0.005 lb/MMBtu; or VOC 0.003 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
8. During startup and shutdown periods, emissions from the steam generators shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Maximum emissions from the steam generator, including startup and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day, 9,855 lb-NOx/year, 28.1 lb-CO/day, and 10,147 lb-CO/year [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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
11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
13. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. 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. [District Rules 2520, 9.3.2 and 4406] Federally Enforceable Through Title V Permit
15. Duration of startup or shutdown shall not exceed two hours each per occurrence. During startup 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 startup and shutdown periods. [District Rule 4306, 5.3 and 6.1] Federally Enforceable Through Title V Permit
16. Startup 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 until the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
17. When complying with sulfur emission limits by 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, 9.3.2] Federally Enforceable Through Title V Permit
18. When complying with SO_x emission limits by fuel analysis or source testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
19. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. 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, 9.3.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. 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
22. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
23. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
24. 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
25. Steam generator firebox convection section and all flue gas ductwork shall have no detectible leaks. [District NSR Rule] Federally Enforceable Through Title V Permit
26. 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, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit
27. 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, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit
28. 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, 5.4.2 and 4306, 5.4.2 & 5.5.4] Federally Enforceable Through Title V Permit
29. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit
30. 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]
31. Permittee shall measure and record the fuel gas sulfur content and BTU content at the time of NO_x testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and 4406] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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32. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit
33. Records required by this permit shall be retained at the facility for a period of no less than 5 years and shall be made readily available for District inspection upon request. [District NSR Rule and District Rules 2520, 9.4.2 and 4306, 6.1] Federally Enforceable Through Title V Permit
34. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit
35. 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
36. 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
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] Federally Enforceable Through Title V Permit
38. 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, 9.3.2] Federally Enforceable Through Title V Permit
39. 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, 9.4.2] Federally Enforceable Through Title V Permit
40. 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
41. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - ARB Method 100 and EPA method 19, and gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
42. Permittee shall maintain no less than 0.45 miles of asphalt-paved roadway. The 0.45 miles of asphalt-paved roadways are separate from roadways associated with other steam injection and oil production well projects. [District NSR Rule] Federally Enforceable Through Title V Permit
43. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO_x emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.3.2; 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
45. This unit is not authorized to burn liquid or solid fuel. [District Rule 2010]

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

46. 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, 9.3.2; 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
47. 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, 9.3.2; 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
48. 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, 9.3.2; 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
49. 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, 9.3.2] Federally Enforceable Through Title V Permit
50. 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
51. 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
52. 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
53. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
54. The EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] 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.

55. The EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
56. In the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
57. The provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
58. The owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
59. Permittee shall consume no more than 6290 barrels per day of oil on a daily maximum average and no more than 5700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
60. The sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
61. The amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
62. Permittee shall have installed operable scrubbers on the equipment. Exhaust gases from the generators shall be ducted through operable scrubbers. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
63. Permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
64. Within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
65. Permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
66. Within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
67. Permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] 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.

68. Permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NOx. In no event shall EPA set a higher emission limit for NOx. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
69. Performance tests for the emission of NOx and SO2 shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] 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-1141-46-26

EXPIRATION DATE: 02/28/2006

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #103 (DIS 41754-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. 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
3. Steam generator shall be equipped with a gas flowmeter that measures the total combined volume of fuel gas and vapor recovery gas sent to the steam generator. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
4. This generator is permitted to operate at the following locations: Section 31, T29S, R22E, SW/4 Section 6, T30S, R22E, SW/4 Section 36, T29S, R21E, Section 1, T30S, R21E, SE/4 Section 35, T29S, R21E, Sections 17, 21, 22, 26, 27 of T31S, R22E. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District NSR Rule] Federally Enforceable Through Title V Permit
6. 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]
7. 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
8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6 or 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans 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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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 and 4305, 6.2.1] Federally Enforceable Through Title V Permit
10. 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
11. Emissions from the steam generator shall not exceed any of the following limits: 0.0473 lb-SO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, or 0.003 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 25 ppmvd CO @ 3% O₂ or 0.0185 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: 54.0 lb-NO_x/day, 9,965 lb-NO_x/yr, 27.8 lb-CO/day, or 10,147 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, or grab sample analysis by double GC for H₂S and mercaptans 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. Permittee shall maintain no less than 0.45 miles of paved roadway in the Midway-Sunset Oil Field. The 0.45 miles of roadways are separate from roadways associated with other steam injection and oil production well projects. [District NSR Rule] Federally Enforceable Through Title V Permit
31. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

32. 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
33. 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
34. 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
35. 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
36. 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
37. 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
38. 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
39. 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
40. 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
41. 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
42. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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44. 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
45. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
46. This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
47. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, all equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
48. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
49. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
50. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, in the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
51. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
52. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] 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.

53. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall consume no more than 6,290 barrels per day of oil on a daily maximum average and no more than 5,700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
54. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
55. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
56. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall have installed an operable scrubber on the equipment. Exhaust gases from the generator shall be ducted through an operable scrubber. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
57. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
58. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
59. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
60. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
61. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
62. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
63. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, performance tests for the emission of NO_x and SO₂ shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] 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-1141-52-24

EXPIRATION DATE: 02/28/2006

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

DORMANT EMISSION UNIT: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #100 (SN 81-37469-2, NB 1056, DIS 39545-88) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN BURNER, O2 CONTROLLER, SO2 SCRUBBER, AND VAPOR PIPING FROM TEOR AND TVC SYSTEMS

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
3. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
4. 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 Rules 4305 and 4306 and all other applicable District regulations. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
5. 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
6. 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, 9.3.2] Federally Enforceable Through Title V Permit
7. 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, 9.4.2] Federally Enforceable Through Title V Permit
8. 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
9. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
10. 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, 9.3.2] 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.

11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit
14. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2 and County Rules 404 (Madera), 406 (Fresno), and 407 (Kern, Kings, Merced, San Joaquin, Stanislaus, and Tulare)] Federally Enforceable Through Title V Permit
15. 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, 9.3.2] Federally Enforceable Through Title V Permit
16. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. 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
18. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
19. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
20. This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
21. Permit unit shall include TEOR/TVC/natural gas-fired steam generator with North American burner, O2 controller, FGR, SO2 scrubber shared with S-1141-53, '-55, '-60, and '-61 and vapor piping from TEOR operations. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. 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 NSR Rule and 4305] Federally Enforceable Through Title V Permit
23. Permittee shall maintain with the permit a current listing of all TEOR and TVC 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
24. Upon recommencing operation, testing for TEOR/TVC gas sulfur content shall be conducted no less than monthly. [District Rule 1081] Federally Enforceable Through Title V Permit
25. Permittee shall maintain daily records of volume of fuel gas burned and TEOR/TVC gas incinerated, monthly TEOR/TVC and fuel gas sulfur content, and monthly Btu content of TEOR/TVC and fuel gas. Such records shall be made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
26. The scrubber shall be equipped with a differential pressure gauge to indicate the pressure drop across the unit. The gauge shall be maintained in good working condition at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
27. Scrubber liquid supply (at inlet to scrubber) shall have an operational pressure indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Scrubber liquid supply (at inlet to scrubber) shall have an operational flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit
29. Scrubber sprays and/or nozzles shall be maintained as required to achieve compliance with emission limits. [District NSR Rule] Federally Enforceable Through Title V Permit
30. Dissolved and suspended solids and condensed organics shall not exceed 20% of the scrubbing stream. [District NSR Rule] Federally Enforceable Through Title V Permit
31. Scrubber stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit
32. Scrubber shall be equipped with recirculation liquor pH indicator and pump discharge pressure indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
33. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall have no detectible leaks. [District NSR Rule] Federally Enforceable Through Title V Permit
34. Scrubber recirculation liquor pH shall be maintained between 6.2 and 7.5. [District NSR Rule] Federally Enforceable Through Title V Permit
35. Scrubber recirculation liquor pH shall be maintained only with soda ash unless District approval is granted for substitution. [District NSR Rule] Federally Enforceable Through Title V Permit
36. Emission rates shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as S): 0.040 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu or CO: 1.4 ppmv @ 3% O2. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
37. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing has occurred within the previous 12 months. [District Rule 1081] Federally Enforceable Through Title V Permit
38. If the unit is operated with the scrubber, compliance source testing for SOx shall be conducted not less than once every 12 months. [District Rule 1081] Federally Enforceable Through Title V Permit
39. Upon recommencing operation, source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months, except as provided below. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

40. Upon recommencing operation, source testing to demonstrate compliance with NO_x and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 2520, 9.3.2 and 4305]
41. Upon recommencing operation, if permittee fails any compliance demonstration for NO_x and CO emission limits when testing not less than once every 36 months, compliance with NO_x and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit
42. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NO_x and CO source testing requirement. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit
43. 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
44. 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
45. 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
46. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - ARB Method 100 and EPA method 19, and gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305] Federally Enforceable Through Title V Permit
47. Testing to measure TEOR/TVC gas sulfur content shall be conducted using ASTM D3246 oxidation combustion microcoulometric or double GC for H₂S and mercaptans. [District Rule 1801] Federally Enforceable Through Title V Permit
48. Permittee shall pave and maintain with asphalt no less than 0.45 miles of roadway. The 0.45 miles of roadways constructed are in addition to new roadways associated with other steam injection and oil production well projects. [District NSR Rule] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305] Federally Enforceable Through Title V Permit
50. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305] Federally Enforceable Through Title V Permit
51. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305] 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.

52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit
53. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
54. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
55. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO_x emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
56. The following conditions must be met for representative unit(s) to be used to test for NO_x 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 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
57. All units in a group for which representative units are source for NO_x emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
58. All units in a group for which representative units are source tested for NO_x emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
59. The number of representative units source tested for NO_x 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, 9.3.2] Federally Enforceable Through Title V Permit
60. Scrubber pressure drop shall be observed and recorded weekly during operation of this unit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
61. Records of scrubber pressure drop shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
62. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] 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.

63. The EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
64. The EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
65. In the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
66. The provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
67. The owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
68. Permittee shall consume no more than 6290 barrels per day of oil on a daily maximum average and no more than 5700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
69. The sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
70. The amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
71. Permittee shall have installed operable scrubbers on the equipment. Exhaust gases from the generators shall be ducted through operable scrubbers. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
72. Permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
73. Within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [District Rule] Federally Enforceable Through Title V Permit
74. Permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] 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.

75. Within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
76. Permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
77. Permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
78. Performance tests for the emission of NO_x and SO₂ shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] 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

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1141-52-29

ISSUANCE DATE: 06/02/2008

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #108 (SN 81-37469-2, NB 1056, DIS 39545-88) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER AND O2 CONTROLLER: AUTHORIZE OPERATION IN W HALF OF SECTION 7 AND SE QUARTER OF SECTION 8, T30S, R22E (RENEWED ONE TIME 2/17/10)

CONDITIONS

1. {1829} The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; all of Sections 19 and 20, and the SW/4 Section 6, T30S, R22E; NE/4 Section 22, T31S R22E; W/2 Section 7, T30S, R22E and SE/4 Section 8, T30S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The operator shall fire the unit only on PUC-quality natural gas and gas from the following permit units: PTO S-1141-250, and PTO S-1128-116. [District Rules 2201 & 4406; and CH&SC 41700] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services
S-1141-52-29, Apr 1 2010 1:16PM - RICKARDK : Joint Inspection NOT Required

6. SO_x emissions, measured as total sulfur, shall not exceed 0.0473 lb/MMBtu. [District NSR Rule and 4406] Federally Enforceable Through Title V Permit
7. Except during startup and shutdown periods, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 25 ppmvd CO @ 3%O₂. [District Rules 2201; 4301, 5.2; 4305, 5.1; and 4306, 5.1] Federally Enforceable Through Title V Permit
8. Emission rates shall not exceed any of the following: PM₁₀ 0.005 lb/MMBtu; or VOC 0.003 lb/MMBtu. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
9. During startup and shutdown periods, emissions from the steam generators 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
10. Maximum emissions from the steam generator, including startup and shutdown, shall not exceed any of the following limits: 54.0 lb-NO_x/day, 9,855 lb-NO_x/year, 28.1 lb-CO/day, and 10,147 lb-CO/year [District Rule 2201] Federally Enforceable Through Title V Permit
11. {521} Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
12. Nitrogen oxide (NO_x) emissions shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
14. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2 and County Rules 404 (Madera), 406 (Fresno), and 407 (Kern, Kings, Merced, San Joaquin, Stanislaus, and Tulare)] Federally Enforceable Through Title V Permit
15. 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, 9.3.2] Federally Enforceable Through Title V Permit
16. Duration of startup or shutdown shall not exceed two hours each per occurrence. During startup 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 startup and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
17. Startup 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 until the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

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18. When complying with sulfur emission limits by 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, 9.3.2] Federally Enforceable Through Title V Permit
19. When complying with SOx emission limits by fuel analysis or source testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. 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 double GC for H2S and mercaptans, performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. 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, 9.3.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit
22. {533} 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
23. {534} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
24. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
25. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
26. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
27. 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
28. Steam generator firebox convection section and all flue gas ductwork shall have no detectible leaks. [District NSR Rule] Federally Enforceable Through Title V Permit
29. 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

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30. 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 and 4306] Federally Enforceable Through Title V Permit
31. 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
32. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
33. 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]
34. Permittee shall measure and record the fuel gas sulfur content and BTU content at the time of NO_x testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and 4406] Federally Enforceable Through Title V Permit
35. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit
36. Records required by this permit shall be retained at the facility for a period of no less than 5 years and shall be made readily available for District inspection upon request. [District NSR Rule and 2520, 9.4.2] Federally Enforceable Through Title V Permit
37. Source testing to measure NO_x and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 2520, 9.3.2; 4305; and 4306] Federally Enforceable Through Title V Permit
38. Source testing to measure NO_x and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 2520, 9.3.2; 4305; and 4306] Federally Enforceable Through Title V Permit
39. If permittee fails any compliance demonstration for NO_x or CO emission limits when testing not less than once every 36 months, compliance with NO_x and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 2520, 9.3.2; 4305; and 4306] Federally Enforceable Through Title V Permit
40. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NO_x and CO source testing requirement. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit
41. 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

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42. 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
43. {518} 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
44. 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, 9.3.2] Federally Enforceable Through Title V Permit
45. 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, 9.4.2] Federally Enforceable Through Title V Permit
46. 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
47. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - ARB Method 100 and EPA method 19, and gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit
48. Permittee shall maintain no less than 0.45 miles of asphalt-paved roadway. The 0.45 miles of asphalt-paved roadways are separate from roadways associated with other steam injection and oil production well projects. [District NSR Rule] Federally Enforceable Through Title V Permit
49. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
50. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO_x emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
51. The following conditions must be met for representative unit(s) to be used to test for NO_x 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 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
52. All units in a group for which representative units are source for NO_x emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
53. All units in a group for which representative units are source tested for NO_x emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
54. This unit is not authorized to burn liquid or solid fuel. [District Rule 2010]

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55. 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, 9.3.2] Federally Enforceable Through Title V Permit
56. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
57. The EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
58. The EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
59. In the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
60. The provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
61. The owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
62. Permittee shall consume no more than 6290 barrels per day of oil on a daily maximum average and no more than 5700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
63. The sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
64. The amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
65. Permittee shall have installed operable scrubbers on the equipment. Exhaust gases from the generators shall be ducted through operable scrubbers. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
66. Permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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67. Within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
68. Permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
69. Within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
70. Permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
71. Permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
72. Performance tests for the emission of NO_x and SO₂ shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
73. ATC S-1141-52-27 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1141-53-27

EXPIRATION DATE: 02/28/2006

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #104 (DIS 41755-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. 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
3. Steam generator shall be equipped with a gas flowmeter that measures the total combined volume of fuel gas and vapor recovery gas sent to the steam generator. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
4. This generator is permitted to operate at the following locations: Section 31, T29S, R22E, SW/4 Section 6, T30S, R22E, SW/4 Section 36, T29S, R21E, Section 1, T30S, R21E, SE/4 Section 35, T29S, R21E, Section 22, T31S, R22E. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District NSR Rule] Federally Enforceable Through Title V Permit
6. 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]
7. 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
8. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6 or 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory and EPA Method 19 to calculate 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

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

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 and 4305, 6.2.1] Federally Enforceable Through Title V Permit
10. 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
11. Emissions from the steam generator shall not exceed any of the following limits: 0.0473 lb-SO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, or 0.003 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 25 ppmvd CO @ 3% O₂ or 0.0185 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: 54.0 lb-NO_x/day, 9,965 lb-NO_x/yr, 27.8 lb-CO/day, or 10,147 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, or grab sample analysis by double GC for H₂S and mercaptans 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. Permittee shall maintain no less than 0.45 miles of paved roadway in the Midway-Sunset Oil Field. The 0.45 miles of roadways are separate from roadways associated with other steam injection and oil production well projects. [District NSR Rule] Federally Enforceable Through Title V Permit
31. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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32. 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
33. 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
34. 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
35. 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
36. 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
37. 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
38. 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
39. 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
40. 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
41. 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
42. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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44. 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
45. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
46. This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
47. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, all equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
48. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
49. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
50. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, in the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
51. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
52. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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53. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall consume no more than 6,290 barrels per day of oil on a daily maximum average and no more than 5,700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
54. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
55. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
56. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall have installed an operable scrubber on the equipment. Exhaust gases from the generator shall be ducted through an operable scrubber. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
57. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
58. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
59. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
60. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
61. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
62. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
63. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, performance tests for the emission of NO_x and SO₂ shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1141-61-26

EXPIRATION DATE: 02/28/2006

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR/TVC GAS FIRED STRUTHERS STEAM GENERATOR #105 (DIS 41756-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. 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
3. Steam generator shall be equipped with a gas flowmeter that measures the total combined volume of fuel gas and vapor recovery gas sent to the steam generator. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
4. This generator is permitted to operate at the following locations: Section 31, T29S, R22E, SW/4 Section 6, T30S, R22E, SW/4 Section 36, T29S, R21E, Section 1, T30S, R21E, SE/4 Section 35, T29S, R21E, Section 22, T31S, R22E. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District NSR Rule] Federally Enforceable Through Title V Permit
6. 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]
7. 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
8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6 or 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans 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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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 and 4305, 6.2.1] Federally Enforceable Through Title V Permit
10. 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
11. Emissions from the steam generator shall not exceed any of the following limits: 0.0473 lb-SO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, or 0.003 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 25 ppmvd CO @ 3% O₂ or 0.0185 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: 54.0 lb-NO_x/day, 9,965 lb-NO_x/yr, 27.8 lb-CO/day, or 10,147 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, or grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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

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. Permittee shall maintain no less than 0.45 miles of paved roadway in the Midway-Sunset Oil Field. The 0.45 miles of roadways are separate from roadways associated with other steam injection and oil production well projects. [District NSR Rule] Federally Enforceable Through Title V Permit
31. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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32. 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
33. 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
34. 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
35. 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
36. 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
37. 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
38. 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
39. 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
40. 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
41. 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
42. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

44. 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
45. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
46. 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-1141-520-5

EXPIRATION DATE: 02/28/2006

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

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR GAS-FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR N.B. #973 WITH NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER, FGR AND O2 MONITOR/CONTROLLER

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
8. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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 and 4305, 6.2.1] 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. [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. 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. 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, and flue gas oxygen monitor. [District NSR Rule and 4305] 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. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission rate shall not exceed 18 ppmvd @ 3% O2 or 0.022 lb/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4306 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit
19. Except for periods of startup and shutdown, emission rates shall not exceed any of the following: PM10: 0.005 lb/MMBtu; NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2; SOx (as SO2): 0.00285 lb/MMBtu; VOC: 0.0027 lb/MMBtu; or CO: 0.0185 lb/MMBtu or 25 ppmvd @ 3% O2. [District Rules 2201, 4305 and 4306]
20. Daily emissions shall not exceed any of the following: 32.7 lb NOx/day, 9,855 lb NOx/year, 4.3 lb/SOx/day, 7.5 lb PM10/day, 27.8 lb CO/day, 4.1 lb VOC/day. [District Rule 2201]
21. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit
22. 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

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

23. 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]
24. 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]
25. 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]
26. 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]
27. 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
28. 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
29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305 and 4306]
30. 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]
31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]
32. 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
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, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081, 4305 and 4306]
34. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

35. 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
36. 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 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
37. 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 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
38. 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 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
39. 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 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
40. 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
41. Source testing for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1141-520-6

ISSUANCE DATE: 08/21/2008

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

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

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR GAS-FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR N.B. #973 WITH NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER, FGR AND O2 MONITOR/CONTROLLER: ADD ADDITIONAL APPROVED OPERATING LOCATIONS, CONVERT RADIANT SECTION TO SPLIT FLOW DESIGN AND REPLACE CONVECTION SECTION

CONDITIONS

1. {1829} The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. This steam generator may only operate at the following locations: NW/4 and SW/4 of Section 7, Township 30S, Range 22E, SE/4 Section 8, Township 30S, Range 22E, NW/4 of Section 21, Township 31S, Range 22E, NE/4, NW/4, SE/4, and SW/4 of Section 1, Township 30S, Range 21E and NE/4, NW/4, SE/4, and SW/4 of Section 36, Township 29S, Range 21E. [District Rule 4102]
3. {518} 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
4. {519} 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

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

DRAFT

DAVID WARNER, Director of Permit Services
S-1141-520-6 : Apr 1 2010 1:16PM - RICKARDK : Joint Inspection NOT Required

5. {520} 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
6. {521} Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
7. 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
8. {524} 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
9. 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
10. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. 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
12. 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
13. 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. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
14. Nitrogen oxide (NO_x) 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
15. {533} 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

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16. {468} The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
17. {535} 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
18. Steam generator shall be equipped with the following operational instrumentation: fuel gas volume flowmeter, and flue gas oxygen monitor. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
19. 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
20. Except for periods of startup and shutdown, emission rates shall not exceed any of the following: PM10: 0.005 lb/MMBtu; NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2; SOx (as SO2): 0.00285 lb/MMBtu; VOC: 0.0027 lb/MMBtu; or CO: 0.0185 lb/MMBtu or 25 ppmvd @ 3% O2. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit
21. Daily emissions shall not exceed any of the following: 32.7 lb NOx/day, 9,855 lb NOx/year, 4.3 lb/SOx/day, 7.5 lb PM10/day, 27.8 lb CO/day, 4.1 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit
23. 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
24. 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
25. 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
26. 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
27. 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
28. 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

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29. 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
30. 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
31. 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
32. 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
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, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081, 4305 and 4306] Federally Enforceable Through Title V Permit
34. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
35. 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
36. 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 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
37. 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 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
38. 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 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
39. 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 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
40. 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

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41. Source testing for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1141-526-6

EXPIRATION DATE: 02/28/2006

SECTION: SW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR #100 N.B.#980 WITH NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER, AND FGR WITH BLOWER MOTOR AND VARIABLE SPEED DRIVE (VSD)

PERMIT UNIT REQUIREMENTS

1. 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
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. 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
4. Steam generator shall be equipped with a gas flowmeter that measures the total combined volume of fuel gas and vapor recovery gas sent to the steam generator. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
5. This generator is permitted to operate at the following locations: Section 31, T29S, R22E, SW/4 Section 6, T30S, R22E, SW/4 Section 36, T29S, R21E, Section 1, T30S, R21E, SE/4 Section 35, T29S, R21E, Section 22, T31S, R22E. [District NSR Rule] Federally Enforceable Through Title V Permit
6. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District NSR Rule] Federally Enforceable Through Title V Permit
7. 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]
8. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

9. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6 or 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H₂S and mercaptans 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
10. 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
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. Emissions from the steam generator shall not exceed any of the following limits: 0.6 lb-SO_x/MMBtu, 0.096 lb-PM₁₀/MMBtu, or 0.0027 lb-VOC/MMBtu. [District Rules 2201 and 4301, 5.2] Federally Enforceable Through Title V Permit
13. 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 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit
14. 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
15. During the initial "shakedown" period emissions from the steam generator shall not exceed any of the following limits: 30 ppmvd NO_x @ 3% O₂ or 0.036 lb-NO_x/MMBtu, 0.6 lb-SO_x/MMBtu, 0.096 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.0027 lb-VOC/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit
16. During a shakedown period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NO_x emission rate shall not exceed 30 ppmvd @ 3% O₂ or 0.036 lb/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4306 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
17. 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
18. 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
19. 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, 27.8 lb-CO/day, or 10,147 lb-CO/yr. [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. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 6.3.1, and 4306, 6.3.1] Federally Enforceable Through Title V Permit
21. 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, 6.3.1, and 4306, 6.3.1] Federally Enforceable Through Title V Permit
22. 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
23. 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
24. 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, or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. 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
26. 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, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
27. 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 and 4306, 5.4] Federally Enforceable Through Title V Permit
28. 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
29. NOx 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
30. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

31. 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
32. 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
33. 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
34. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
36. 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
37. 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
38. 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
39. The following conditions must be met for representative unit(s) to be used to test for NO_x 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
40. All units in a group for which representative units are source tested for NO_x 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
41. All units in a group for which representative units are source tested to for NO_x 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
42. The number of representative units source tested for NO_x and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

43. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
44. 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
45. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit
46. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1, and 4306, 6.1] Federally Enforceable Through Title V Permit
47. 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
48. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
49. 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-1141-528-7

EXPIRATION DATE: 02/28/2006

SECTION: SW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED C.E. NATCO STEAM GENERATOR (#101) WITH NORTH AMERICAN GLE MAGNA-FLAME LOW NOX BURNER, FGR, AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. 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
3. Steam generator shall be equipped with a gas flowmeter that measures the total combined volume of fuel gas and vapor recovery gas sent to the steam generator. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
4. This generator is permitted to operate at the following locations: Section 31, T29S, R22E; SW/4 Section 6, T30S, R22E; SW/4 Section 36, T29S, R21E; Section 1, T30S, R21E; SE/4 Section 35, T29S, R21E; Section 22, T31S, R22E. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District NSR Rule] Federally Enforceable Through Title V Permit
6. 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
7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6 or 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
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, 9.3.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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, 9.3.2] Federally Enforceable Through Title V Permit
10. Emissions from the steam generator shall not exceed any of the following limits: 0.6 lb-SO_x/MMBtu, 0.096 lb-PM₁₀/MMBtu, or 0.0027 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit
12. 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
13. During the initial "shakedown" period emissions from the steam generator shall not exceed any of the following limits: 30 ppmvd NO_x @ 3% O₂ or 0.036 lb-NO_x/MMBtu, 0.6 lb-SO_x/MMBtu, 0.096 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.0027 lb-VOC/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit
14. During a shakedown period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NO_x emission rate shall not exceed 30 ppmvd @ 3% O₂ or 0.036 lb/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4306 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
15. 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
16. 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
17. 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, 27.8 lb-CO/day, or 10,147 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
18. 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
19. 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
20. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. 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, or grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. 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
23. 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
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

32. 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
33. 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
34. 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
35. The following conditions must be met for representative unit(s) to be used to test for NO_x 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
36. All units in a group for which representative units are source tested for NO_x 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
37. All units in a group for which representative units are source tested to for NO_x 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
38. The number of representative units source tested for NO_x and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, 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
39. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
40. 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
41. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit
42. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

43. 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
44. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
45. 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-1141-529-11

EXPIRATION DATE: 02/28/2006

SECTION: SW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED C.E. NATCO STEAM GENERATOR N.B. #9769 WITH A NORTH AMERICAN, MODEL MAGNA FLAME GLE, ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. This generator is permitted to operate at the following locations: Section SW23 of Township 31S, Range 22E; Section 31 of Township 29S, Range 22E; Sections SW36 and SE35 of Township 29S, Range 21E; and Section 1 of Township 30S, Range 21E; and Section SW6 of Township 30S and Range 22E. [District NSR Rule] Federally Enforceable Through Title V Permit
2. 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
3. Copies of all fuel invoices, gas purchase contract, supplier certifications, and test results used 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. [District Rule 2520, 9.4.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
4. 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
5. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
6. 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
7. 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6, 6A, 6B, or 6C; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084 or a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate 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, 9.2] Federally Enforceable Through Title V Permit
9. 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 double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2 and 4306, 6.2.1] Federally Enforceable Through Title V Permit
11. Emissions from the steam generator shall not exceed any of the following limits: 0.035 lb-SOx/MMBtu, 0.0100 lb-PM10/MMBtu, or 0.0030 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Except during start-up and shutdown, and as provided below, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.0182 lb-NOx/MMBtu or 25 ppmvd CO @ 3% O2 or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit
13. During start-up and shutdown, emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day, 9,965 lb-NOx/yr or 27.8 lb-CO/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit
16. 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
17. 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
18. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rule 2520, 9.4.2 and 4305] Federally Enforceable Through Title V Permit
19. 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
20. 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
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. The sample collection shall be conducted under conditions (fuel quality, firing rate, waste gas incineration, air fuel ratio, etc.) expected to result in emissions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and fuel gas sulfur content - ASTM D1072, D3031, D3246, D4084 or a grab sample analysis by double GC for H₂S and mercaptans performed in the laboratory. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit
24. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule and 2520, 9.5.2] Federally Enforceable Through Title V Permit
25. The operational conditions during compliance testing may be imposed as permit requirements. [District Rule 2080] Federally Enforceable Through Title V Permit
26. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
27. 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 and 4306] Federally Enforceable Through Title V Permit
28. 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
29. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
30. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO_x emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.4.2 and 4305, 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.

31. The following conditions must be met for representative unit(s) to be used to test for NO_x 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 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
32. All units in a group for which representative units are source for NO_x emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
33. All units in a group for which representative units are source tested for NO_x emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
34. The number of representative units source tested for NO_x 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
35. Source testing for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. Steam generator shall be equipped with a gas flowmeter that measures the total combined volume of fuel gas and TEOR gas sent to the steam generator. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit
37. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rules 1081, 2201] Federally Enforceable Through Title V Permit
38. The permittee shall maintain records of the date and time of NO_x, CO, and O₂ measurements, the measured NO₂ and CO concentrations corrected to 3% O₂, and the O₂ concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range. These records shall be retained at the facility for a period of no less than two years and shall be made readily available for District inspection upon request. [District Rules 1070 and 4305] Federally Enforceable Through Title V Permit
39. Permittee shall measure and record, at least monthly, the sulfur content and BTU content of the combined gas streams incinerated in this unit. [District Rules 2201, 4406] Federally Enforceable Through Title V Permit
40. Permittee shall measure and record the fuel gas sulfur content and BTU content at the time of NO_x testing, except for natural gas purchased from a PUC regulated utility. [District Rules 2201, 4406] Federally Enforceable Through Title V Permit
41. Permittee shall maintain daily records of total combined volume of fuel gas and TEOR gas burned, and a current listing of all thermally enhanced well vent control systems providing TEOR vapors to this steam generator and shall make such listing readily available for District inspection upon request.. [District Rule 2201] Federally Enforceable Through Title V Permit
42. Records required by this permit shall be retained at the facility for a period of no less than 5 years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

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

Appendix B

Manufacturer Guarantee



North American

Manufacturing Company, Ltd.

4455 East 71st Street Cleveland, OH 44105-5600 USA
Tel 216.271.6000 Fax 216.641.7852 email: sales@namfg.com

Reply to:
North American Mfg. Co.
1820 West Oranewood Ave., Suite 101
Orange, CA 92868-2043
Phone (714) 634-4891
Fax (714) 634-4595



September 4, 2008

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

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

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

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

Dear John,

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

PRICE & DELIVERY

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



[REDACTED]

[REDACTED]

[REDACTED]

MAGNA FLAME MODEL 4231-62.5-GLE COMBUSTION SYSTEM CONTENT

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

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

SPECIFIC COMBUSTION SYSTEM FEATURES AND BENEFITS

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

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

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

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

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

MAGNA FLAME GLE BURNER, EMBEDDED CMS & VENTURI METER

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

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

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

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

HI-EFFICIENCY COMBUSTION AIR BLOWER

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

EMISSION GUARANTEE

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

Burner Generated NOx is guaranteed not to exceed:

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

Burner Generated CO is guaranteed not to exceed:

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

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

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

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

STARTUP SERVICES

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

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

Regards,

John M. Quiel

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

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

This document contains information that is considered privileged, confidential and exempt from disclosure under applicable law. If the reader of this document is not the intended recipient, nor the employee or agent of the intended recipient, you are hereby notified that any dissemination, distribution or copying of this document is strictly prohibited by North American Mfg. Co., Ltd.

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

Appendix C

Draft ATCs

Rule 4320 Non-Compliant Dormant

Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1141-52-35

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE22 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF DORMANT EMISSION UNIT: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #100 (SN 81-37469-2, NB 1056, DIS 39545-88) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN BURNER, O2 CONTROLLER, SO2 SCRUBBER, AND VAPOR PIPING FROM TEOR AND TVC SYSTEMS: MAKE NON-COMPLIANT DORMANT EMISSIONS UNIT FOR RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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] Federally Enforceable Through Title V Permit
4. The fuel supply line shall be physically disconnected from this unit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. 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 Rules 4306, 4320, and all other applicable District regulations. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DRAFT

DAVID WARNER, Director of Permit Services

S-1141-52-35 : May 20 2010 8:52AM - RICKARDK : Joint Inspection NOT Required

6. {518} 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
7. 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, 9.3.2] Federally Enforceable Through Title V Permit
8. 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, 9.4.2] Federally Enforceable Through Title V Permit
9. {521} Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
10. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or ARB Method 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit
15. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2 and County Rules 404 (Madera), 406 (Fresno), and 407 (Kern, Kings, Merced, San Joaquin, Stanislaus, and Tulare)] Federally Enforceable Through Title V Permit
16. 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, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

17. Nitrogen oxide (NO_x) emissions shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
18. {533} 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
19. {534} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
20. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
21. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
22. Permit unit shall include TEOR/TVC/natural gas-fired steam generator with North American burner, O₂ controller, FGR, SO₂ scrubber shared with S-1141-53, '-55, '-60, and '-61 and vapor piping from TEOR operations. [District NSR Rule] Federally Enforceable Through Title V Permit
23. 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 NSR Rule and 4305] Federally Enforceable Through Title V Permit
24. Permittee shall maintain with the permit a current listing of all TEOR and TVC 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
25. Upon recommencing operation, testing for TEOR/TVC gas sulfur content shall be conducted no less than monthly. [District Rule 1081] Federally Enforceable Through Title V Permit
26. Permittee shall maintain daily records of volume of fuel gas burned and TEOR/TVC gas incinerated, monthly TEOR/TVC and fuel gas sulfur content, and monthly Btu content of TEOR/TVC and fuel gas. Such records shall be made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
27. The scrubber shall be equipped with a differential pressure gauge to indicate the pressure drop across the unit. The gauge shall be maintained in good working condition at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Scrubber liquid supply (at inlet to scrubber) shall have an operational pressure indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
29. Scrubber liquid supply (at inlet to scrubber) shall have an operational flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit
30. Scrubber sprays and/or nozzles shall be maintained as required to achieve compliance with emission limits. [District NSR Rule] Federally Enforceable Through Title V Permit
31. Dissolved and suspended solids and condensed organics shall not exceed 20% of the scrubbing stream. [District NSR Rule] Federally Enforceable Through Title V Permit
32. Scrubber stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

33. Scrubber shall be equipped with recirculation liquor pH indicator and pump discharge pressure indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
34. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall have no detectible leaks. [District NSR Rule] Federally Enforceable Through Title V Permit
35. Scrubber recirculation liquor pH shall be maintained between 6.2 and 7.5. [District NSR Rule] Federally Enforceable Through Title V Permit
36. Scrubber recirculation liquor pH shall be maintained only with soda ash unless District approval is granted for substitution. [District NSR Rule] Federally Enforceable Through Title V Permit
37. Emission rates shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as S): 0.040 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu or CO: 1.4 ppmv @ 3% O2. [District NSR Rule and 4305] Federally Enforceable Through Title V Permit
38. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing has occurred within the previous 12 months. [District Rule 1081] Federally Enforceable Through Title V Permit
39. If the unit is operated with the scrubber, compliance source testing for SOx shall be conducted not less than once every 12 months. [District Rule 1081] Federally Enforceable Through Title V Permit
40. Upon recommencing operation, source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months, except as provided below. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit
41. Upon recommencing operation, source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 2520, 9.3.2 and 4305]
42. Upon recommencing operation, if permittee fails any compliance demonstration for NOx and CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit
43. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rule 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit
44. 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
45. 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
46. 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
47. 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, SOx (lb/MMBtu) - ARB Method 100 and EPA method 19, and gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305] Federally Enforceable Through Title V Permit
48. Testing to measure TEOR/TVC gas sulfur content shall be conducted using ASTM D3246 oxidation combustion microcoulometric or double GC for H2S and mercaptans. [District Rule 1801] Federally Enforceable Through Title V Permit
49. Permittee shall pave and maintain with asphalt no less than 0.45 miles of roadway. The 0.45 miles of roadways constructed are in addition to new roadways associated with other steam injection and oil production well projects. [District NSR Rule] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

50. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305] Federally Enforceable Through Title V Permit
51. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305] Federally Enforceable Through Title V Permit
52. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305] Federally Enforceable Through Title V Permit
53. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit
54. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
55. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
56. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO_x emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
57. The following conditions must be met for representative unit(s) to be used to test for NO_x 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 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
58. All units in a group for which representative units are source for NO_x emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rule 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

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59. 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, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit
60. 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, 9.3.2] Federally Enforceable Through Title V Permit
61. Scrubber pressure drop shall be observed and recorded weekly during operation of this unit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
62. Records of scrubber pressure drop shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
63. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
64. The EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
65. The EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
66. In the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
67. The provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
68. The owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
69. Permittee shall consume no more than 6290 barrels per day of oil on a daily maximum average and no more than 5700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
70. The sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

71. The amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
72. Permittee shall have installed operable scrubbers on the equipment. Exhaust gases from the generators shall be ducted through operable scrubbers. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
73. Permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
74. Within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
75. Permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
76. Within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
77. Permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
78. Permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
79. Performance tests for the emission of NO_x and SO₂ shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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Rule 4320 Staged Enhanced Schedule

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
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PERMIT NO: S-1141-44-30

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE22 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL/TEOR/TVC GAS-FIRED STRUTHERS STEAM GENERATOR #106 (DIS 41757-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER APPROVED FOR VARIOUS LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100SCF) OF RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; all of Sections 19 and 20, and the SW/4 Section 6, T30S, R22E; and NE/4 Section 22, T31S R22E (MDBM). [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services

S-1141-44-30 : Apr 29 2010 12:38PM - RICKARDIK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. PUC-quality natural gas is any gaseous fuel where the sulfur content is no more than 0.25 gr H₂S/100 scf, no more than 5.0 gr S/100 scf, and at least 80% methane by volume. [District Rule 4320]
7. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. Emission rates shall not exceed any of the following limits: 0.005 lb-PM₁₀/MMBtu; or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when this unit is burning 50% or greater by volume PUC quality gas on a monthly average basis: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when the unit is burning less than 50% by volume PUC quality gas on a monthly average basis: 12 ppmvd NO_x @ 3% O₂ or 0.014 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 7665 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rules 2201] Federally Enforceable Through Title V Permit
12. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rule 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. During the initial "shakedown" period 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 54.0 lb-NO_x/day, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu or 27.8 lb-CO/day, 21.5 lb-SO_x/day, 7.5 lb-PM₁₀/day, and 4.5 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The shakedown period shall begin after this unit is modified as authorized by this ATC and confirmed through startup inspection. The shakedown period shall be concluded within 60 days of initial operation and prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and all monitoring records as required by this permit starting on the date of initial operation. [District Rules 2201] Federally Enforceable Through Title V Permit
16. Each fuel source shall be tested monthly 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 monthly testing may resume. [District Rule 4320, 5.7.6]
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 Rule 4320, 5.7.6]
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. [District Rule 4320, 5.7.6]

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19. Permittee shall submit an analysis to the District demonstrating compliance with the fuel sulfur content and higher heating value within 60 days of startup and at least once every 12 months. The sulfur content and higher heating value of the fuel shall be determined using the test methods referenced in this permit or certified by a third party fuel supplier. [District Rule 2520, 9.3.2 and 4320 6.2.1] Federally Enforceable Through Title V Permit
20. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 2201 and 1081] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The applicable NO_x and CO emissions concentration for each month shall be determined based on the volume and type of fuel combusted in the unit (< 50% by volume PUC quality gas or > = 50% by volume PUC quality gas). Permittee shall maintain supporting records that demonstrate the type of fuel combusted. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. 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 (>= 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Source testing is required at least once every twelve (12) months from the initial source test date of each fuel type (>= 50% PUC quality gas or < 50% PUC quality gas). After initial compliance demonstration with the NO_x 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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28. Compliance source testing after switching fuel types is not required if the unit continues to demonstrate compliance with 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas. In which case, source testing shall only be required every thirty-six (36) months for the less than 50% by PUC quality gas. If the result of a source test demonstrates that the unit does not meet 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas, the source test frequency shall revert to at least one test every 36 months for each fuel type. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the dates of any fuel type switching, the monthly NO_x and CO emissions limit determinations, the sulfur content and higher heat value as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
36. 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]
37. Permittee shall maintain no less than 0.45 miles of asphalt-paved roadway. The 0.45 miles of asphalt-paved roadways are separate from roadways associated with other steam injection and oil production well projects. [District Rule 2201] Federally Enforceable Through Title V Permit
38. {533} 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

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39. {534} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
42. As required by PSD permit SJ 78-17 when using fuel oil, all equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
43. As required by PSD permit SJ 78-17 when using fuel oil, the EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
44. As required by PSD permit SJ 78-17 when using fuel oil, the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
45. As required by PSD permit SJ 78-17 when using fuel oil, in the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
46. As required by PSD permit SJ 78-17 when using fuel oil, the provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
47. As required by PSD permit SJ 78-17 when using fuel oil, the owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
48. As required by PSD permit SJ 78-17 when using fuel oil, permitted shall consume no more than 6,290 barrels per day of oil on a daily maximum average and no more than 5,700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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49. As required by PSD permit SJ 78-17 when using fuel oil, the sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
50. As required by PSD permit SJ 78-17 when using fuel oil, the amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
51. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall have installed an operable scrubber on the equipment. Exhaust gases from the generator shall be ducted through an operable scrubber. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
52. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
53. As required by PSD permit SJ 78-17 when using fuel oil, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
54. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
55. As required by PSD permit SJ 78-17 when using fuel oil, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
56. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
57. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
58. As required by PSD permit SJ 78-17 when using fuel oil, performance tests for the emission of NO_x and SO₂ shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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ISSUANCE DATE: DRAFT

PERMIT NO: S-1141-45-30

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #107 (DIS 41762-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; all of Sections 19 and 20, and the SW/4 Section 6, T30S, R22E; and NE/4 Section 22, T31S R22E (MDBM). [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] 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-1141-45-30 : Jun 1 2010 11:32AM - RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. PUC-quality natural gas is any gaseous fuel where the sulfur content is no more than 0.25 gr H₂S/100 scf, no more than 5.0 gr S/100 scf, and at least 80% methane by volume. [District Rule 4320]
7. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. Emission rates shall not exceed any of the following limits: 0.005 lb-PM₁₀/MMBtu; or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when the unit is burning less than 50% by volume PUC quality gas on a monthly average basis: 12 ppmvd NO_x @ 3% O₂ or 0.014 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when this unit is burning 50% or greater by volume PUC quality gas on a monthly average basis: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 49.1 lb-NO_x/day, 7665 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rules 2201] Federally Enforceable Through Title V Permit
12. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. During the initial "shakedown" period 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 54.0 lb-NO_x/day, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu or 27.8 lb-CO/day, 21.5 lb-SO_x/day, 7.5 lb-PM₁₀/day, and 4.5 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The shakedown period shall begin after this unit is modified as authorized by this ATC and confirmed through startup inspection. The shakedown period shall be concluded within 60 days of initial operation and prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and all monitoring records as required by this permit starting on the date of initial operation. [District Rules 2201] Federally Enforceable Through Title V Permit
16. Including startup and shutdown periods, maximum emissions from the steam generators shall not exceed any of the following limits: 0.036 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 7665 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Each fuel source shall be tested monthly 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 monthly testing may resume. [District Rule 2520, 9.3.2 and Rule 4320, 5.7.6]
18. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]

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19. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
20. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 2520, 9.3.2 and Rule 4320, 5.7.6] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
25. 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 gas (PUC-quality or non-PUC quality gas) being combusted and shall be identified in the source test protocol. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The applicable NO_x and CO emissions concentration for each month shall be determined based on the volume and type of fuel combusted in the unit (< 50% by volume PUC quality gas or >= 50% by volume PUC quality gas). Permittee shall maintain supporting records that demonstrate the type of fuel combusted. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
27. 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 (>= 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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28. Source testing is required at least once every twelve (12) months from the initial source test date of each fuel type (\geq 50% PUC quality gas or $<$ 50% PUC quality gas). After initial compliance demonstration with the NO_x 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Compliance source testing after switching fuel types is not required if the unit continues to demonstrate compliance with 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas. In which case, source testing shall only be required every thirty-six (36) months for the less than 50% by PUC quality gas. If the result of a source test demonstrates that the unit does not meet 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas, the source test frequency shall revert to at least one test every 36 months for each fuel type. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. 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
31. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
32. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
37. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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38. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
39. 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] Federally Enforceable Through Title V Permit
40. Permittee shall maintain no less than 0.45 miles of asphalt-paved roadway. The 0.45 miles of asphalt-paved roadways are separate from roadways associated with other steam injection and oil production well projects. [District Rule 2201] Federally Enforceable Through Title V Permit
41. {533} 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. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. As required by PSD permit SJ 78-17 when using fuel oil, all equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
44. As required by PSD permit SJ 78-17 when using fuel oil, the EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
45. As required by PSD permit SJ 78-17 when using fuel oil, the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
46. As required by PSD permit SJ 78-17 when using fuel oil, in the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
47. As required by PSD permit SJ 78-17 when using fuel oil, the provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

48. As required by PSD permit SJ 78-17 when using fuel oil, the owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
49. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall consume no more than 6,290 barrels per day of oil on a daily maximum average and no more than 5,700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
50. As required by PSD permit SJ 78-17 when using fuel oil, the sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
51. As required by PSD permit SJ 78-17 when using fuel oil, the amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
52. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall have installed an operable scrubber on the equipment. Exhaust gases from the generator shall be ducted through an operable scrubber. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
53. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
54. As required by PSD permit SJ 78-17 when using fuel oil, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
55. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
56. As required by PSD permit SJ 78-17 when using fuel oil, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
57. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
58. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
59. As required by PSD permit SJ 78-17 when using fuel oil, performance tests for the emission of NO_x and SO₂ shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
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PERMIT NO: S-1141-46-30

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #103 (DIS 41754-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; all of Sections 17, 21, 22, 26, 27 of T31S, R22E, and the SW/4 Section 6, T30S, R22E; and NE/4 Section 22, T31S R22E (MDBM). [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services

S-1141-46-30 : Jun 1 2010 11:32AM - RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. PUC-quality natural gas is any gaseous fuel where the sulfur content is no more than 0.25 gr H₂S/100 scf, no more than 5.0 gr S/100 scf, and at least 80% methane by volume. [District Rule 4320]
7. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. Emission rates shall not exceed any of the following limits: 0.005 lb-PM₁₀/MMBtu or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when this unit is burning 50% or greater by volume PUC quality gas on a monthly average basis: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when the unit is burning less than 50% by volume PUC quality gas on a monthly average basis: 12 ppmvd NO_x @ 3% O₂ or 0.014 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 7665 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rules 2201] Federally Enforceable Through Title V Permit
12. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. During the initial "shakedown" period 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 54.0 lb-NO_x/day, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu or 27.8 lb-CO/day, 21.5 lb-SO_x/day, 7.5 lb-PM₁₀/day, and 4.5 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The shakedown period shall begin after this unit is modified as authorized by this ATC and confirmed through startup inspection. The shakedown period shall be concluded within 60 days of initial operation and prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and all monitoring records as required by this permit starting on the date of initial operation. [District Rules 2201] Federally Enforceable Through Title V Permit
16. Each fuel source shall be tested monthly 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 monthly testing may resume. [District Rule 4320, 5.7.6]
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 Rule 4320, 5.7.6]

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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 Rule 4320, 5.7.6]
19. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
20. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The applicable NO_x and CO emissions concentration for each month shall be determined based on the volume and type of fuel combusted in the unit (< 50% by volume PUC quality gas or > = 50% by volume PUC quality gas). Permittee shall maintain supporting records that demonstrate the type of fuel combusted. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. 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 (>= 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

27. Source testing is required at least once every twelve (12) months from the initial source test date of each fuel type (\geq 50% PUC quality gas or $<$ 50% PUC quality gas). After initial compliance demonstration with the NO_x 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Compliance source testing after switching fuel types is not required if the unit continues to demonstrate compliance with 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas. In which case, source testing shall only be required every thirty-six (36) months for the less than 50% by PUC quality gas. If the result of a source test demonstrates that the unit does not meet 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas, the source test frequency shall revert to at least one test every 36 months for each fuel type. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
31. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 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, 4306, and 4320] Federally Enforceable Through Title V Permit
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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37. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. Permittee shall maintain no less than 0.45 miles of asphalt-paved roadway. The 0.45 miles of asphalt-paved roadways are separate from roadways associated with other steam injection and oil production well projects. [District Rule 2201] Federally Enforceable Through Title V Permit
40. {533} 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
41. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
43. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, all equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
44. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
45. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
46. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, in the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

47. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
48. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
49. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall consume no more than 6,290 barrels per day of oil on a daily maximum average and no more than 5,700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
50. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
51. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
52. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall have installed an operable scrubber on the equipment. Exhaust gases from the generator shall be ducted through an operable scrubber. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
53. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
54. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
55. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
56. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
57. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
58. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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59. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, performance tests for the emission of NO_x and SO₂ shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
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PERMIT NO: S-1141-52-33

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #108 (DIS 39545-88) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER AND O2 CONTROLLER - AUTHORIZED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S, R21E; all of Section 31, T29S, R22E; all of Section 1 T30S R21E; all of Sections 19 and 20, and the SW/4 Section 6, T30S, R22E; NE/4 Section 22, T31S, R22E; W/2 Section 7, T30S, R22E; and SE/4 Section 8, T30S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services
S-1141-52-33 : Jun 1 2010 11:32AM - RICKARDK : Joint Inspection NOT Required

5. Steam generator shall be equipped with the following operational instrumentation: fuel gas volume flowmeter that measures the combined gas volume sent to the steam generator or volume flowmeter for each fuel source. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
6. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495, and S-1141-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
7. PUC-quality natural gas is any gaseous fuel where the sulfur content is no more than 0.25 gr H₂S/100 scf, no more than 5.0 gr S/100 scf, and at least 80% methane by volume. [District Rule 4320]
8. Emission rates shall not exceed any of the following limits: 0.005 lb-PM₁₀/MMBtu or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when this unit is burning 50% or greater by volume PUC quality gas on a monthly average basis: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when the unit is burning less than 50% by volume PUC quality gas on a monthly average basis: 12 ppmvd NO_x @ 3% O₂ or 0.014 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 7665 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rules 2201] Federally Enforceable Through Title V Permit
12. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. During the initial "shakedown" period 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 54.0 lb-NO_x/day, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu or 27.8 lb-CO/day, 21.5 lb-SO_x/day, 7.5 lb-PM₁₀/day, and 4.5 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The shakedown period shall begin after this unit is modified as authorized by this ATC and confirmed through startup inspection. The shakedown period shall be concluded within 60 days of initial operation and prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and all monitoring records as required by this permit starting on the date of initial operation. [District Rules 2201] Federally Enforceable Through Title V Permit
16. Each fuel source shall be tested monthly 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 monthly testing may resume. [District Rule 2520, 9.3.2 and Rule 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 Rule 4320, 5.7.6]

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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 Rule 4320, 5.7.6]
19. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
20. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
24. 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 gas (PUC-quality or non-PUC quality gas) being combusted and shall be identified in the source test protocol. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The applicable NO_x and CO emissions concentration for each month shall be determined based on the volume and type of fuel combusted in the unit (< 50% by volume PUC quality gas or > = 50% by volume PUC quality gas). Permittee shall maintain supporting records that demonstrate the type of fuel combusted. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. 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 (>= 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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28. Source testing is required at least once every twelve (12) months from the initial source test date of each fuel type (\geq 50% PUC quality gas or $<$ 50% PUC quality gas). After initial compliance demonstration with the NO_x 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Compliance source testing after switching fuel types is not required if the unit continues to demonstrate compliance with 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas. In which case, source testing shall only be required every thirty-six (36) months for the less than 50% by PUC quality gas. If the result of a source test demonstrates that the unit does not meet 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas, the source test frequency shall revert to at least one test every 36 months for each fuel type. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. 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
31. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 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, 4306, and 4320] Federally Enforceable Through Title V Permit
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
37. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit

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38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. Permittee shall pave and maintain with asphalt no less than 0.45 miles of roadway. The 0.45 miles of roadways constructed are in addition to new roadways associated with other steam injection and oil production well projects. [District Rule 2201] Federally Enforceable Through Title V Permit
40. {533} 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
41. {534} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
44. As required by PSD permit SJ 78-17 when using fuel oil, all equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
45. As required by PSD permit SJ 78-17 when using fuel oil, the EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
46. As required by PSD permit SJ 78-17 when using fuel oil, the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
47. As required by PSD permit SJ 78-17 when using fuel oil, in the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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48. As required by PSD permit SJ 78-17 when using fuel oil, the provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
49. As required by PSD permit SJ 78-17 when using fuel oil, the owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
50. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall consume no more than 6290 barrels per day of oil on a daily maximum average and no more than 5700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
51. As required by PSD permit SJ 78-17 when using fuel oil, the sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
52. As required by PSD permit SJ 78-17 when using fuel oil, the amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
53. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall have installed operable scrubbers on the equipment. Exhaust gases from the generators shall be ducted through operable scrubbers. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
54. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
55. As required by PSD permit SJ 78-17 when using fuel oil, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
56. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
57. As required by PSD permit SJ 78-17 when using fuel oil, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
58. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
59. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
60. As required by PSD permit SJ 78-17 when using fuel oil, performance tests for the emission of NO_x and SO₂ shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

61. Authorities to Construct (ATC) S-1141-52-27 and '-52-29 shall be implemented concurrently with or prior to this ATC. [District Rule 2201]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
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PERMIT NO: S-1141-53-31

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #104 (DIS 41755-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; all of Sections 22 of T31S, R22E, and the SW/4 Section 6, T30S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services
S-1141-53-31 : Jun 1 2010 11:32AM - RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. PUC-quality natural gas is any gaseous fuel where the sulfur content is no more than 0.25 gr H₂S/100 scf, no more than 5.0 gr S/100 scf, and at least 80% methane by volume. [District Rule 4320]
7. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. Emission rates shall not exceed any of the following limits: 0.005 lb-PM₁₀/MMBtu or 0.003 lb-VOC/MMBtu. [District Rules 2201] Federally Enforceable Through Title V Permit
9. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when this unit is burning 50% or greater by volume PUC quality gas on a monthly average basis: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when the unit is burning less than 50% by volume PUC quality gas on a monthly average basis: 12 ppmvd NO_x @ 3% O₂ or 0.014 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 7665 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rules 2201] Federally Enforceable Through Title V Permit
12. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. During the initial "shakedown" period 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 54.0 lb-NO_x/day, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu or 27.8 lb-CO/day, 21.5 lb-SO_x/day, 7.5 lb-PM₁₀/day, and 4.5 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The shakedown period shall begin after this unit is modified as authorized by this ATC and confirmed through startup inspection. The shakedown period shall be concluded within 60 days of initial operation and prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and all monitoring records as required by this permit starting on the date of initial operation. [District Rules 2201] Federally Enforceable Through Title V Permit
16. Each fuel source shall be tested monthly 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 monthly testing may resume. [District Rule 4320, 5.7.6]
17. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]

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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 Rule 4320, 5.7.6]
19. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
20. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The applicable NO_x and CO emissions concentration for each month shall be determined based on the volume and type of fuel combusted in the unit (< 50% by volume PUC quality gas or > = 50% by volume PUC quality gas). Permittee shall maintain supporting records that demonstrate the type of fuel combusted. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. 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 (>= 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

27. Source testing is required at least once every twelve (12) months from the initial source test date of each fuel type (\geq 50% PUC quality gas or $<$ 50% PUC quality gas). After initial compliance demonstration with the NO_x 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Compliance source testing after switching fuel types is not required if the unit continues to demonstrate compliance with 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas. In which case, source testing shall only be required every thirty-six (36) months for the less than 50% by PUC quality gas. If the result of a source test demonstrates that the unit does not meet 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas, the source test frequency shall revert to at least one test every 36 months for each fuel type. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
31. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 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, 4306, and 4320] Federally Enforceable Through Title V Permit
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

37. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, 4320] Federally Enforceable Through Title V Permit
38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. Permittee shall maintain no less than 0.45 miles of asphalt-paved roadway. The 0.45 miles of asphalt-paved roadways are separate from roadways associated with other steam injection and oil production well projects. [District Rule 2201] Federally Enforceable Through Title V Permit
40. {533} 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
41. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
43. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, all equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
44. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
45. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
46. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, in the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

47. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
48. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
49. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall consume no more than 6,290 barrels per day of oil on a daily maximum average and no more than 5,700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
50. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
51. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
52. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall have installed an operable scrubber on the equipment. Exhaust gases from the generator shall be ducted through an operable scrubber. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
53. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
54. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
55. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
56. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
57. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
58. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

59. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, performance tests for the emission of NO_x and SO₂ shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1141-61-30

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR/TVC GAS FIRED STRUTHERS STEAM GENERATOR #105 (DIS 41756-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; SW/4 Section 6, T30S, R22E; and all of Section 22, T31S R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services
S-1141-61-30 : Jun 1 2010 11:32AM - RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
7. PUC-quality natural gas is any gaseous fuel where the sulfur content is no more than 0.25 gr H₂S/100 scf, no more than 5.0 gr S/100 scf, and at least 80% methane by volume. [District Rule 4320]
8. Emission rates shall not exceed any of the following limits: 0.005 lb-PM₁₀/MMBtu or 0.003 lb-VOC/MMBtu. [District Rules 2201] Federally Enforceable Through Title V Permit
9. Except during startup, shutdown and the shakedown period, emissions shall not exceed any of the following limits when this unit is burning 50% or greater by volume PUC quality gas on a monthly average basis: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Except during startup, shutdown and the shakedown period, emissions shall not exceed any of the following limits when the unit is burning less than 50% by volume PUC quality gas on a monthly average basis: 12 ppmvd NO_x @ 3% O₂ or 0.014 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 7665 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rules 2201] Federally Enforceable Through Title V Permit
12. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. During the initial "shakedown" period 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 54.0 lb-NO_x/day, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu or 27.8 lb-CO/day, 21.5 lb-SO_x/day, 7.5 lb-PM₁₀/day, and 4.5 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The shakedown period shall begin after this unit is modified as authorized by this ATC and confirmed through startup inspection. The shakedown period shall be concluded within 60 days of initial operation and prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and all monitoring records as required by this permit starting on the date of initial operation. [District Rules 2201] Federally Enforceable Through Title V Permit
16. Each fuel source shall be tested monthly 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 monthly testing may resume. [District Rule 4320, 5.7.6]
17. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]

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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 Rule 4320, 5.7.6]
19. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
20. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The applicable NO_x and CO emissions concentration for each month shall be determined based on the volume and type of fuel combusted in the unit (< 50% by volume PUC quality gas or > = 50% by volume PUC quality gas). Permittee shall maintain supporting records that demonstrate the type of fuel combusted. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. 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 (>= 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

27. Source testing is required at least once every twelve (12) months from the initial source test date of each fuel type (\geq 50% PUC quality gas or $<$ 50% PUC quality gas). After initial compliance demonstration with the NO_x 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Compliance source testing after switching fuel types is not required if the unit continues to demonstrate compliance with 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas. In which case, source testing shall only be required every thirty-six (36) months for the less than 50% by volume PUC quality gas. If the result of a source test demonstrates that the unit does not meet 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas, the source test frequency shall revert to at least one test every 36 months for each fuel type. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
31. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 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, 4306, and 4320] Federally Enforceable Through Title V Permit
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

37. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. A permanent record shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. Permittee shall maintain no less than 0.45 miles of asphalt-paved roadway. The 0.45 miles of asphalt-paved roadways are separate from roadways associated with other steam injection and oil production well projects. [District Rule 2201] Federally Enforceable Through Title V Permit
40. {533} 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
41. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1141-520-8

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NW21 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR GAS-FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR #110 N.B. #973 WITH NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER, FGR AND O2 MONITOR/CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX STAGED ENHANCED SCHEDULE (9 PPM) AND LIMIT FUEL SULFUR CONTENT FOR RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The operator shall fire the unit only on natural gas that has a combined fuel sulfur content not exceeding 1.0 gr S/100 scf. [District Rules 2201, 4406, 4320] Federally Enforceable Through Title V Permit
4. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas sent to the steam generator and operational flue gas oxygen monitor. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

S-1141-520-8 : Jun 1 2010 11:33AM - RICKARDK : Joint Inspection NOT Required

5. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Emission rates shall not exceed any of the following limits: 0.005 lb-PM₁₀/MMBtu or 0.0027 lb-VOC/MMBtu. [District Rules 2201] Federally Enforceable Through Title V Permit
7. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 6023 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rules 2201] Federally Enforceable Through Title V Permit
8. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. During the initial "shakedown" period 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 54.0 lb-NO_x/day, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu or 27.8 lb-CO/day, 4.3 lb-SO_x/day, 7.5 lb-PM₁₀/day, and 4.1 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The shakedown period shall begin after this unit is modified as authorized by this ATC and confirmed through startup inspection. The shakedown period shall be concluded within 60 days of initial operation and prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and all monitoring records as required by this permit starting on the date of initial operation. [District Rules 2201] Federally Enforceable Through Title V Permit
12. Each fuel source shall be tested quarterly for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which quarterly testing may resume. [District Rule 4320, 5.7.6]
13. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]
14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
15. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

17. 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] Federally Enforceable Through Title V Permit
18. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
19. A source test to demonstrate compliance with NO_x and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

29. Permittee shall maintain daily records of total combined volume of fuel gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, 4320] Federally Enforceable Through Title V Permit
30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. {533} 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
32. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1141-526-9

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: SW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR #100 N.B.#980 WITH NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, FGR, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; SW/4 Section 6, T30S, R22E; and all of Section 22, T31S R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services
S-1141-526-9 : Jun 1 2010 11:33AM - RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
7. PUC-quality natural gas is any gaseous fuel where the sulfur content is no more than 0.25 gr H₂S/100 scf, no more than 5.0 gr S/100 scf, and at least 80% methane by volume. [District Rule 4320]
8. Emission rates shall not exceed any of the following limits: 0.096 lb-PM₁₀/MMBtu; or 0.0027 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when this unit is burning 50% or greater by volume PUC quality gas on a monthly average basis: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when the unit is burning less than 50% by volume PUC quality gas on a monthly average basis: 12 ppmvd NO_x @ 3% O₂ or 0.014 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 7665 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rules 2201] Federally Enforceable Through Title V Permit
12. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. During the initial "shakedown" period 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 54.0 lb-NO_x/day, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu or 27.8 lb-CO/day, 21.5 lb-SO_x/day, 144.0 lb-PM₁₀/day, and 4.1 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The shakedown period shall begin after this unit is modified as authorized by this ATC and confirmed through startup inspection. The shakedown period shall be concluded within 60 days of initial operation and prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and all monitoring records as required by this permit starting on the date of initial operation. [District Rules 2201] Federally Enforceable Through Title V Permit
16. Each fuel source shall be tested monthly 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 monthly testing may resume. [District Rule 4320, 5.7.6]
17. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]

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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 Rule 4320, 5.7.6]
19. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
20. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The applicable NO_x and CO emissions concentration for each month shall be determined based on the volume and type of fuel combusted in the unit (< 50% by volume PUC quality gas or > = 50% by volume PUC quality gas). Permittee shall maintain supporting records that demonstrate the type of fuel combusted. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. 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 (>= 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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27. Source testing is required at least once every twelve (12) months from the initial source test date of each fuel type (\geq 50% PUC quality gas or $<$ 50% PUC quality gas). After initial compliance demonstration with the NO_x 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Compliance source testing after switching fuel types is not required if the unit continues to demonstrate compliance with 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas. In which case, source testing shall only be required every thirty-six (36) months for the less than 50% by PUC quality gas. If the result of a source test demonstrates that the unit does not meet 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas, the source test frequency shall revert to at least one test every 36 months for each fuel type. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6] Federally Enforceable Through Title V Permit
31. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel h_hv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 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, 4306, and 4320] Federally Enforceable Through Title V Permit
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

37. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. {533} 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
40. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1141-528-10

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: SW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED C.E. NATCO STEAM GENERATOR (#101) WITH NORTH AMERICAN GLE MAGNA-FLAME LOW NOX BURNER, FGR, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; SW/4 Section 6, T30S, R22E; and all of Section 22, T31S R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] 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-1141-528-10; Jun 1 2010 11:33AM - RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, and 4406] Federally Enforceable Through Title V Permit
6. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
7. PUC-quality natural gas is any gaseous fuel where the sulfur content is no more than 0.25 gr H₂S/100 scf, no more than 5.0 gr S/100 scf, and at least 80% methane by volume. [District Rule 4320]
8. Emission rates shall not exceed any of the following limits: 0.096 lb-PM₁₀/MMBtu or 0.0027 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when this unit is burning 50% or greater by volume PUC quality gas on a monthly average basis: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when the unit is burning less than 50% by volume PUC quality gas on a monthly average basis: 12 ppmvd NO_x @ 3% O₂ or 0.014 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 7665 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rules 2201] Federally Enforceable Through Title V Permit
12. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. During the initial "shakedown" period 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 54.0 lb-NO_x/day, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu or 27.8 lb-CO/day, 21.5 lb-SO_x/day, 144.0 lb-PM₁₀/day, and 4.1 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The shakedown period shall begin after this unit is modified as authorized by this ATC and confirmed through startup inspection. The shakedown period shall be concluded within 60 days of initial operation and prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and all monitoring records as required by this permit starting on the date of initial operation. [District Rules 2201] Federally Enforceable Through Title V Permit
16. Each fuel source shall be tested monthly 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 monthly testing may resume. [District Rule 4320, 5.7.6]
17. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]

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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 Rule 4320, 5.7.6]
19. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
20. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The applicable NO_x and CO emissions concentration for each month shall be determined based on the volume and type of fuel combusted in the unit (< 50% by volume PUC quality gas or > = 50% by volume PUC quality gas). Permittee shall maintain supporting records that demonstrate the type of fuel combusted. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. 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 (>= 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

27. Source testing is required at least once every twelve (12) months from the initial source test date of each fuel type (\geq 50% PUC quality gas or $<$ 50% PUC quality gas). After initial compliance demonstration with the NO_x 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Compliance source testing after switching fuel types is not required if the unit continues to demonstrate compliance with 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas. In which case, source testing shall only be required every thirty-six (36) months for the less than 50% by volume PUC quality gas. If the result of a source test demonstrates that the unit does not meet 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas, the source test frequency shall revert to at least one test every 36 months for each fuel type. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
31. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 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, 4306, and 4320] Federally Enforceable Through Title V Permit
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520 and 4320] Federally Enforceable Through Title V Permit
36. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

37. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. {533} 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
40. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1141-529-13

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: SW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED C.E. NATCO STEAM GENERATOR #102 (N.B. #9769) WITH A NORTH AMERICAN, MODEL MAGNA FLAME GLE, ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE FGR, BURNER, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX DUAL LIMIT STAGED ENHANCED SCHEDULE (9 PPM AND 12 PPM) AND SOX LIMITS (5 GR-S/100 SCF) OF RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; SW/4 Section 23 of T31S, R22E and the SW/4 Section 6, T30S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] 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-1141-529-13 : Jun 1 2010 11:33AM - RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
7. PUC-quality natural gas is any gaseous fuel where the sulfur content is no more than 0.25 gr H₂S/100 scf, no more than 5.0 gr S/100 scf, and at least 80% methane by volume. [District Rule 4320]
8. Emission rates shall not exceed any of the following limits: 0.010 lb-PM₁₀/MMBtu; or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when this unit is burning 50% or greater by volume PUC quality gas on a monthly average basis: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Except during startup, shutdown, and the shakedown period, emissions shall not exceed any of the following limits when the unit is burning less than 50% by volume PUC quality gas on a monthly average basis: 12 ppmvd NO_x @ 3% O₂ or 0.014 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 7665 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rules 2201] Federally Enforceable Through Title V Permit
12. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. During the initial "shakedown" period 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 54.0 lb-NO_x/day, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu or 27.8 lb-CO/day, 21.5 lb-SO_x/day, 15.0 lb-PM₁₀/day, and 4.5 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The shakedown period shall begin after this unit is modified as authorized by this ATC and confirmed through startup inspection. The shakedown period shall be concluded within 60 days of initial operation and prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and all monitoring records as required by this permit starting on the date of initial operation. [District Rules 2201] Federally Enforceable Through Title V Permit
16. Each fuel source shall be tested monthly 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 monthly testing may resume. [District Rule 4320, 5.7.6]
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 Rule 4320, 5.7.6]

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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 Rule 4320, 5.7.6]
19. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
20. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The applicable NO_x and CO emissions concentration for each month shall be determined based on the volume and type of fuel combusted in the unit (< 50% by volume PUC quality gas or >= 50% by volume PUC quality gas). Permittee shall maintain supporting records that demonstrate the type of fuel combusted. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. 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 (>= 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

27. Source testing is required at least once every twelve (12) months from the initial source test date of each fuel type (\geq 50% PUC quality gas or $<$ 50% PUC quality gas). After initial compliance demonstration with the NO_x 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, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Compliance source testing after switching fuel types is not required if the unit continues to demonstrate compliance with 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas. In which case, source testing shall only be required every thirty-six (36) months for the less than 50% by PUC quality gas. If the result of a source test demonstrates that the unit does not meet 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu while firing on less than 50% by volume PUC quality gas, the source test frequency shall revert to at least one test every 36 months for each fuel type. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
31. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 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, 4306, and 4320] Federally Enforceable Through Title V Permit
35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

37. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. A permanent record shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. {533} 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
40. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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

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Rule 4320 SOx Only Schedule

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1141-44-31

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL/TEOR/TVC GAS-FIRED STRUTHERS STEAM GENERATOR #106 (DIS 41757-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; all of Sections 19 and 20, and the SW/4 Section 6, T30S, R22E; and NE/4 Section 22, T31S R22E (MDBM). [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] 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-1141-44-31 : May 12 2010 9:39AM - RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
7. Emission rates shall not exceed any of the following limits: 0.005 lb-PM10/MMBtu; or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.0182 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu except during start-up or shutdown. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Including startup and shutdown periods, maximum emissions from the steam generators shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 9,965 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rules 2201] Federally Enforceable Through Title V Permit
10. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Each fuel source shall be tested quarterly for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which quarterly testing may resume. [District Rule 4320, 5.7.6]
13. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]
14. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 2520, 9.3.2 and 4320, 6.2.1] Federally Enforceable Through Title V Permit
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 2201 and 1081] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]
31. Permittee shall maintain no less than 0.45 miles of asphalt-paved roadway. The 0.45 miles of asphalt-paved roadways are separate from roadways associated with other steam injection and oil production well projects. [District Rule 2201] Federally Enforceable Through Title V Permit
32. {533} 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
33. {534} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
35. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
36. As required by PSD permit SJ 78-17 when using fuel oil, all equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
37. As required by PSD permit SJ 78-17 when using fuel oil, the EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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38. As required by PSD permit SJ 78-17 when using fuel oil, the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
39. As required by PSD permit SJ 78-17 when using fuel oil, in the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
40. As required by PSD permit SJ 78-17 when using fuel oil, the provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
41. As required by PSD permit SJ 78-17 when using fuel oil, the owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
42. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall consume no more than 6,290 barrels per day of oil on a daily maximum average and no more than 5,700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
43. As required by PSD permit SJ 78-17 when using fuel oil, the sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
44. As required by PSD permit SJ 78-17 when using fuel oil, the amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
45. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall have installed an operable scrubber on the equipment. Exhaust gases from the generator shall be ducted through an operable scrubber. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
46. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
47. As required by PSD permit SJ 78-17 when using fuel oil, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
48. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
49. As required by PSD permit SJ 78-17 when using fuel oil, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

50. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
51. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NOx. In no event shall EPA set a higher emission limit for NOx. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
52. As required by PSD permit SJ 78-17 when using fuel oil, performance tests for the emission of NOx and SO2 shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
53. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
54. {4253} 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]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
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PERMIT NO: S-1141-45-31

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #107 (DIS 41762-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; all of Sections 19 and 20, and the SW/4 Section 6, T30S, R22E; and NE/4 Section 22, T31S R22E (MDBM). [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

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YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services

S-1141-45-31 : May 12 2010 8:40AM -- RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
7. Emission rates shall not exceed any of the following limits: 0.005 lb-PM10/MMBtu or 0.003 lb-VOC/MMBtu. [District Rules 2201] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.0182 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu except during start-up or shutdown. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Including startup and shutdown periods, maximum emissions from the steam generators shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 9,965 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Each fuel source shall be tested quarterly for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which quarterly testing may resume. [District Rule 4320, 5.7.6]
13. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
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20. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
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31. Permittee shall maintain no less than 0.45 miles of asphalt-paved roadway. The 0.45 miles of asphalt-paved roadways are separate from roadways associated with other steam injection and oil production well projects. [District Rule 2201] Federally Enforceable Through Title V Permit
32. {533} 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
33. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. As required by PSD permit SJ 78-17 when using fuel oil, all equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
35. As required by PSD permit SJ 78-17 when using fuel oil, the EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
36. As required by PSD permit SJ 78-17 when using fuel oil, the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

37. As required by PSD permit SJ 78-17 when using fuel oil, in the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
38. As required by PSD permit SJ 78-17 when using fuel oil, the provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
39. As required by PSD permit SJ 78-17 when using fuel oil, the owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
40. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall consume no more than 6,290 barrels per day of oil on a daily maximum average and no more than 5,700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
41. As required by PSD permit SJ 78-17 when using fuel oil, the sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
42. As required by PSD permit SJ 78-17 when using fuel oil, the amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
43. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall have installed an operable scrubber on the equipment. Exhaust gases from the generator shall be ducted through an operable scrubber. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
44. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
45. As required by PSD permit SJ 78-17 when using fuel oil, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
46. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
47. As required by PSD permit SJ 78-17 when using fuel oil, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
48. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
49. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

50. As required by PSD permit SJ 78-17 when using fuel oil, performance tests for the emission of NOx and SO2 shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
51. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
52. {4253} 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]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
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PERMIT NO: S-1141-46-31

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #103 (DIS 41754-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36; T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; all of Sections 17, 21, 22, 26, 27 of T31S, R22E, and the SW/4 Section 6, T30S, R22E; and NE/4 Section 22, T31S R22E (MDBM). [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] 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-1141-46-31: May 12 2010 9:40AM -- RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
7. Emission rates shall not exceed any of the following limits: 0.005 lb-PM10/MMBtu or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.0182 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu except during start-up or shutdown. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Including startup and shutdown periods, maximum emissions from the steam generators shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 9,965 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Each fuel source shall be tested quarterly for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which quarterly testing may resume. [District Rule 4320, 5.7.6]
13. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]
14. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Permittee shall maintain no less than 0.45 miles of asphalt-paved roadway. The 0.45 miles of asphalt-paved roadways are separate from roadways associated with other steam injection and oil production well projects. [District Rule 2201] Federally Enforceable Through Title V Permit
32. {533} 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
33. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
35. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, all equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
36. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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37. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
38. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, in the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
39. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
40. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
41. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall consume no more than 6,290 barrels per day of oil on a daily maximum average and no more than 5,700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
42. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
43. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
44. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall have installed an operable scrubber on the equipment. Exhaust gases from the generator shall be ducted through an operable scrubber. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
45. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
46. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
47. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

48. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
49. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
50. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
51. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, performance tests for the emission of NO_x and SO₂ shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
52. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in Rule 4320. [District Rule 4320]
53. {4253} 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]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
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PERMIT NO: S-1141-52-34

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #108 (DIS 39545-88) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER AND O2 CONTROLLER - AUTHORIZED FOR VARIOUS SPECIFIED LOCATIONS: UPGRADE BURNER, FGR, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH RULE 4306 NOX LIMITS (15 PPM) AND RULE 4320 SOX LIMITS (5 GR-S/100 SCF)

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S, R21E; all of Section 31, T29S, R22E; all of Section 1 T30S R21E; all of Sections 19 and 20, and the SW/4 Section 6, T30S, R22E; NE/4 Section 22, T31S, R22E; W/2 Section 7, T30S, R22E; and SE/4 Section 8, T30S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services

S-1141-52-34 : May 12 2010 9:40AM - RICKARDK : Joint Inspection NOT Required

5. Steam generator shall be equipped with the following operational instrumentation: fuel gas volume flowmeter that measures the combined gas sent to the steam generator or volume flowmeter for each fuel source. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
6. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495, and PTO S-1141-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
7. Emission rates shall not exceed any of the following limits: 0.005 lb-PM10/MMBtu or 0.003 lb-VOC/MMBtu. [District Rules 2201] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.0182 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, except during start-up or shutdown. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Including startup and shutdown periods, maximum emissions from the steam generators shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 9,855 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Each fuel source shall be tested quarterly for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which quarterly testing may resume. [District Rule 4320, 5.7.6]
13. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. A permanent record shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Permittee shall pave and maintain with asphalt no less than 0.45 miles of roadway. The 0.45 miles of roadways constructed are in addition to new roadways associated with other steam injection and oil production well projects. [District Rule 2201] Federally Enforceable Through Title V Permit
32. {533} 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
33. {534} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
35. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
36. As required by PSD permit SJ 78-17 when using fuel oil, all equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

37. As required by PSD permit SJ 78-17 when using fuel oil, the EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
38. As required by PSD permit SJ 78-17 when using fuel oil, the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
39. As required by PSD permit SJ 78-17 when using fuel oil, in the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
40. As required by PSD permit SJ 78-17 when using fuel oil, the provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
41. As required by PSD permit SJ 78-17 when using fuel oil, the owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
42. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall consume no more than 6290 barrels per day of oil on a daily maximum average and no more than 5700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
43. As required by PSD permit SJ 78-17 when using fuel oil, the sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
44. As required by PSD permit SJ 78-17 when using fuel oil, the amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
45. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall have installed operable scrubbers on the equipment. Exhaust gases from the generators shall be ducted through operable scrubbers. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
46. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

47. As required by PSD permit SJ 78-17 when using fuel oil, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
48. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
49. As required by PSD permit SJ 78-17 when using fuel oil, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
50. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
51. As required by PSD permit SJ 78-17 when using fuel oil, permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
52. As required by PSD permit SJ 78-17 when using fuel oil, performance tests for the emission of NO_x and SO₂ shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
53. Authorities to Construct (ATC) S-1141-52-27 and '-52-29 shall be implemented concurrently with or prior to this ATC. [District Rule 2201]
54. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in Rule 4320. [District Rule 4320]
55. {4253} 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]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1141-53-32

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE22 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVC GAS FIRED STRUTHERS STEAM GENERATOR #104 (DIS 41755-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; all of Sections 22 of T31S, R22E, and the SW/4 Section 6, T30S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services

S-1141-53-32: May 12 2010 9:40AM - RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
7. Emission rates shall not exceed any of the following limits: 0.005 lb-PM10/MMBtu or 0.003 lb-VOC/MMBtu. [District Rules 2201] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.0182 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu except during start-up or shutdown. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Including startup and shutdown periods, maximum emissions from the steam generators shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 9,965 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Each fuel source shall be tested quarterly for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which quarterly testing may resume. [District Rule 4320, 5.7.6]
13. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]
14. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, 4320] Federally Enforceable Through Title V Permit
30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070s 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Permittee shall maintain no less than 0.45 miles of asphalt-paved roadway. The 0.45 miles of asphalt-paved roadways are separate from roadways associated with other steam injection and oil production well projects. [District Rule 2201] Federally Enforceable Through Title V Permit
32. {533} 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
33. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
35. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, all equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Authority to Construct shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
36. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the condition below. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the condition below, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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37. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local Air Pollution Control Agency, and/or their authorized representative, upon the presentation of credentials, shall be permitted: A. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this Authority to Construct; and B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct; and C. to inspect any equipment, operation, or method required in this Authority to Construct; and D. to sample emissions from the source(s). [PSD SJ 78-17] Federally Enforceable Through Title V Permit
38. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, in the event of any changes in control or ownership of the facilities to be constructed, the Authority to Construct shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Authority to Construct and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
39. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the provisions of this Authority to Construct are severable, and, if any provision of the Authority to Construct is held invalid, the remainder of this Authority to Construct shall not be affected thereby. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
40. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the owner and operator of the proposed facility shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
41. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall consume no more than 6,290 barrels per day of oil on a daily maximum average and no more than 5,700 barrels per day of oil on an annual average basis. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
42. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the sulfur content of the fuel shall be no greater than 1.5% by weight on a daily maximum average and no greater than 1.5% by weight on an annual average basis, as determined by ASTM Methods D115-68, D129-64, or D151-64, or equivalent methods approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
43. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, the amount of fuel burned and the sulfur content of the fuel shall be recorded in a permanent record and shall be available for periodic inspection by the District, the California Air Resource Board, and the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
44. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall have installed an operable scrubber on the equipment. Exhaust gases from the generator shall be ducted through an operable scrubber. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
45. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall not discharge into the atmosphere SO₂ in excess of 0.063 lbs/MMBtu. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
46. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance tests for SO₂, and furnish the District and the EPA a written report of the results of such tests. The tests for SO₂ shall be conducted on an annual basis. The performance tests shall be conducted for each scrubber required for the generator. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
47. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall not discharge into the atmosphere NO_x in excess of 0.277 lb/MMBtu (maximum 2-hour average). [PSD SJ 78-17] Federally Enforceable Through Title V Permit

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48. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, within 60 days after achieving the maximum production rate of the proposed facility, but not later than 180 days after initial start-up of this facility (as defined in 40 CFR 60.2(o)), and at such other times as specified by the EPA, permittee shall conduct performance test for NO_x, and furnish the District and the EPA written report of the results of such tests. The tests for NO_x shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
49. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall install and operate ammonia injection equipment to control nitrogen oxide emissions on the steam generator. This condition may be amended if other control technologies are determined by EPA to satisfy BACT requirements, in accordance with the periodic BACT review procedure below. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
50. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, permittee shall submit updated Best Available Control Technology (BACT) proposals every six months. Based on the information submitted and on other information which is available at that time, EPA may impose more stringent emission limits for NO_x. In no event shall EPA set a higher emission limit for NO_x. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
51. As required by PSD permit SJ 78-17 when using fuel oil and operating at the North Midway-Sunset Oil Field, performance tests for the emission of NO_x and SO₂ shall be conducted and results reported in accordance with the methods set forth in Parts 60.8 and 60.46 of the Standards of Performance for New Sources. The EPA shall be notified at least 30 days in advance of such test to allow an observer to be present. In lieu of the above mentioned test methods, equivalent methods may be used if approved by the EPA. [PSD SJ 78-17] Federally Enforceable Through Title V Permit
52. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in Rule 4320. [District Rule 4320]
53. {4253} 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]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
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PERMIT NO: S-1141-61-31

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE22 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR/TVC GAS FIRED STRUTHERS STEAM GENERATOR #105 (DIS 41756-06) WITH FLUE GAS RECIRCULATION, NORTH AMERICAN MAGNA-FLAME GLE LOW-NOX BURNER, AND O2 CONTROLLER - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; SW/4 Section 6, T30S, R22E; and all of Section 22, T31S R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

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YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services
S-1141-61-31 : May 12 2010 9:40AM - RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
7. Emission rates shall not exceed any of the following limits: 0.005 lb-PM10/MMBtu; or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.0182 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu except during start-up or shutdown. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Including startup and shutdown periods, maximum emissions from the steam generators shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 9,965 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Each fuel source shall be tested quarterly for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which quarterly testing may resume. [District Rule 4320, 5.7.6]
13. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320]
14. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6] Federally Enforceable Through Title V Permit
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
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30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Permittee shall maintain no less than 0.45 miles of asphalt-paved roadway. The 0.45 miles of asphalt-paved roadways are separate from roadways associated with other steam injection and oil production well projects. [District Rule 2201] Federally Enforceable Through Title V Permit
32. {533} 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
33. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
35. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in Rule 4320. [District Rule 4320]
36. {4253} 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]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1141-526-10

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: SW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STRUTHERS THERMOFLOOD STEAM GENERATOR #100 N.B.#980 WITH NORTH AMERICAN MAGNA-FLAME GLE LOW NOX BURNER, O2 CONTROLLER, AND FGR WITH BLOWER MOTOR AND VARIABLE SPEED DRIVE (VSD): LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; SW/4 Section 6, T30S, R22E; and all of Section 22, T31S R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] 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-1141-526-10 : May 12 2010 9:40AM - RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
7. Emission rates shall not exceed any of the following limits: 0.096 lb-PM10/MMBtu, or 0.0027 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.0182 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu except during start-up or shutdown. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Including startup and shutdown periods, maximum emissions from the steam generators shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 9,965 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Each fuel source shall be tested quarterly for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which quarterly testing may resume. [District Rule 4320, 5.7.6]
13. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320]
14. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6] Federally Enforceable Through Title V Permit
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, 4320] Federally Enforceable Through Title V Permit
30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. {533} 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
32. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
34. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in Rule 4320. [District Rule 4320]
35. {4253} 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]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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ISSUANCE DATE: DRAFT

PERMIT NO: S-1141-528-11

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: SW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED C.E. NATCO STEAM GENERATOR (#101) WITH NORTH AMERICAN GLE MAGNA-FLAME LOW NOX BURNER, FGR, AND O2 CONTROLLER: LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; SW/4 Section 6, T30S, R22E; and all of Section 22, T31S R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] 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-1141-528-11 : May 12 2010 9:40AM -- RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
7. Emission rates shall not exceed any of the following limits: 0.096 lb-PM10/MMBtu or 0.0027 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.0182 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu except during start-up or shutdown. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Including startup and shutdown periods, maximum emissions from the steam generators shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 9,965 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Each fuel source shall be tested quarterly for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which quarterly testing may resume. [District Rule 4320, 5.7.6]
13. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320]
14. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, 4320] Federally Enforceable Through Title V Permit
30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. {533} 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
32. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
34. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in Rule 4320. [District Rule 4320]
35. {4253} 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]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1141-529-14

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: SW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED C.E. NATCO STEAM GENERATOR #102 (N.B. #9769) WITH A NORTH AMERICAN, MODEL MAGNA FLAME GLE, ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION - APPROVED FOR VARIOUS SPECIFIED LOCATIONS: LIMIT SOX TO 5 GR-S/100SCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This generator is permitted to operate at the following locations: SE/4 Section 35, and SW/4 Section 36, T29S R21E; all of Section 31, T29S R22E; all of Section 1 T30S R21E; SW/4 Section 23 of T31S, R22E and the SW/4 Section 6, T30S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

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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-1141-529-14 : May 12 2010 9:40AM - RICKARDK : Joint Inspection NOT Required

5. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit units: PTO S-1141-250, PTO S-1141-479, PTO S-1141-495 and PTO S-1128-116. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
6. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rule 2201 and 4320] Federally Enforceable Through Title V Permit
7. Emission rates shall not exceed any of the following limits: 0.010 lb-PM10/MMBtu; or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.0182 lb-NO_x/MMBtu and 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu except during start-up or shutdown. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Including startup and shutdown periods, maximum emissions from the steam generators shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 54.0 lb-NO_x/day, 9,965 lb-NO_x/year, 0.084 lb-CO/MMBtu, 27.8 lb-CO/day, and 10,129 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Each fuel source shall be tested quarterly for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which quarterly testing may resume. [District Rule 4320, 5.7.6]
13. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320]
14. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value (as methane) for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Permittee shall submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x at least once 12 months. [District Rule 4320, 5.7.6]
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, 4320] Federally Enforceable Through Title V Permit
30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. {533} 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
32. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. {1678} This unit is located west of interstate 5 in Kern county. Therefore, the requirements of District 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
34. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in Rule 4320. [District Rule 4320]
35. {4253} 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]

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