



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

JUN 11 2012

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

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1121188

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of E&B Natural Resources' application for an Authority to Construct for five new 85 MMBtu/hr steam generators and one new 5000 bbl wash tank, at various unspecified locations in E&B Natural Resources' Central Kern County Fields Heavy Oil stationary source.

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

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. David Torii of Permit Services at 661-392-5620.

Sincerely,

A handwritten signature in black ink, appearing to read "David Warner", with a long horizontal flourish extending to the right.

David Warner
Director of Permit Services

DW: DBT/cm

Enclosure



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

JUN 11 2012

Gerardo C. Rios (AIR 3)
Chief, Permits Office
Air Division
U.S. E.P.A. - Region IX
75 Hawthorne Street
San Francisco, CA 94105

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1121188

Dear Mr. Rios:

Enclosed for your review and comment is the District's analysis of E&B Natural Resources' application for an Authority to Construct for five new 85 MMBtu/hr steam generators and one new 5000 bbl wash tank, at various unspecified locations in E&B Natural Resources' Central Kern County Fields Heavy Oil stationary source.

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

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. David Torii of Permit Services at 661-392-5620.

Sincerely,

David Warner
Director of Permit Services

DW: DBT/cm

Enclosure

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to E&B Natural Resources for five new 85 MMBtu/hr steam generators and one new 5000 bbl wash tank, at various unspecified locations in E&B Natural Resources' Central Kern County Fields Heavy Oil stationary source.

The analysis of the regulatory basis for this proposed action, Project #S-1121188, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, .**

San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Facility Name: E&B Natural Resources
Mailing Address: 1600 Norris Road
Bakersfield, CA 93308
Contact Person: Greg Youngblood
Telephone: 661-766-2501
Fax: 661-766-2348
Application #(s): S-1624-13-9, '56-3, '57-3, '60-3, '64-3, '65-3, '66-3, '67-3, '220-0, '221-0, '222-0, '223-0, '224-0 and '225-0
Project #: 1121188
Deemed Complete: 4/30/12

Engineer: David Torii
Lead Engineer: Rich Karrs
Rwk
5-23-12

I. Proposal

E&B Natural Resources (ENR) requests Authorities to Construct (ATCs) for five new 85 MMBtu/hr steam generators and one new 5000 bbl wash tank.

Also, the NOx emission limit for steam generator S-1624-13 will be reduced from 9 ppmv @ 3% O2 to 7 ppmv @ 3% O2, vapor control will be added to tanks S-1624-56, '57, '60, '64, '65, '66 and '67 and permits S-1624-27, '106, '107, '108 and '149 will be surrendered.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 2530	Federally Mandated Operating Permits (12/18/08)
Rule 4001	New Source Performance Standards (4/14/99)
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 4305	Boilers, Steam Generators and Process Heaters – Phase II (8/21/03)
Rule 4306	Boilers, Steam Generators and Process Heaters – Phase III (3/17/05)
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 4623	Storage of Organic Liquids (5/19/05)
Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The five new steam generators will be located at various unspecified locations in ENR's Heavy Oil Central stationary source. New 5000 bbl wash tank S-1624-225 will be located at the Midway Premier tank battery in Section 33, Township 27S, Range 27E. Facility S-1624 is ENR's Heavy Oil Central stationary source. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

E&B operates facilities for the processing of crude oil within their Heavy Oil Central stationary source.

In TEOR operations, steam generators are used to produce steam which is injected into the production zone to reduce the viscosity of the crude oil and pressurize the oil-bearing strata, thereby facilitating oil flow to the producing wells. Produced fluids are then piped to surface facilities for processing and temporary storage.

Production from wells initially enters a gas/liquid separator. Liquid from the gas liquid separator enters wash tanks for separation into oil, gas and water. Separated oil is stored in stock tanks prior to custody transfer. The tanks will be served by a vapor control systems listed on permit S-1624-56. Collected vapors will be incinerated in PEER heaters S-1624-2, '3 and '8.

V. Equipment Listing

PTOs to be Surrendered (see PTOs in Appendix B):

- S-1624-27: NON-COMPLIANT DORMANT 3.5 MMBTU/HR NATURAL GAS-FIRED LOCOMOTIVE BOILER (CONOCO)
- S-1624-106: 100 KW COGENERATION UNIT #1 INCLUDING 154 BHP RICH-BURN NATURAL GAS-FIRED NEW MILLENNIUM MOTIVE POWER MODEL GPS-1 IC ENGINE WITH 3-WAY CATALYST AND AIR/FUEL CONTROLLER DRIVING A 100 KW ELECTRICAL GENERATOR (WILCOX LEASE)
- S-1624-107: 100 KW COGENERATION UNIT #2 INCLUDING 154 BHP RICH-BURN NATURAL GAS-FIRED NEW MILLENNIUM MOTIVE POWER MODEL GPS-1 IC ENGINE WITH 3-WAY CATALYST AND AIR/FUEL CONTROLLER DRIVING A 100 KW ELECTRICAL GENERATOR (WILCOX LEASE)
- S-1624-108: 100 KW COGENERATION UNIT #3 INCLUDING 154 BHP RICH-BURN NATURAL GAS-FIRED NEW MILLENNIUM MOTIVE POWER MODEL GPS-1 IC ENGINE WITH 3-WAY CATALYST AND AIR/FUEL CONTROLLER DRIVING A 100 KW ELECTRICAL GENERATOR (WILCOX LEASE)

E&B Natural Resources
S-1624, 1121188

S-1624-149: NON-COMPLIANT DORMANT 3.5 MM BTU/HR NATURAL GAS-FIRED LOCOMOTIVE BOILER (BOWLES LEASE)

Pre-Project Equipment Description (see PTOs in Appendix C):

- S-1624-13-8: 27.5 MMBTU/HR STRUTHERS NATURAL GAS/LPG/CASING GAS-FIRED STEAM GENERATOR WITH A GIDEON ULTRA LOW NOX BURNER, O2 CONTROLLER AND VARIABLE FLUE GAS RECIRCULATION (FGR) OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN THE E&B HEAVY OIL CENTRAL
- S-1624-56-1: 5,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #1
- S-1624-57-1: 5,000 BBL FIXED ROOF PETROLEUM WASH TANK, MIDWAY PREMIER #2
- S-1624-60-1: 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #11
- S-1624-64-1: 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #27
- S-1624-65-1: 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #34
- S-1624-66-1: 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #35
- S-1624-67-1: 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #99

Proposed ATCs:

- S-1624-13-9: MODIFICATION OF 27.5 MMBTU/HR STRUTHERS NATURAL GAS/LPG/CASING GAS-FIRED STEAM GENERATOR WITH A GIDEON ULTRA LOW NOX BURNER, O2 CONTROLLER AND VARIABLE FLUE GAS RECIRCULATION (FGR) OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN THE E&B HEAVY OIL CENTRAL: LOWER NOX EMISSIONS TO 7 PPMV @ 3% O2
- S-1624-56-3: MODIFICATION OF 5,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #1: INSTALL VAPOR CONTROL SYSTEM TO BE SHARED WITH TANKS S-1624-57-3, '60-3, '64-3, '65-3, '66-3 AND '67-3

E&B Natural Resources
S-1624, 1121188

- S-1624-57-3: MODIFICATION OF 5,000 BBL FIXED ROOF PETROLEUM WASH TANK, MIDWAY PREMIER #2: CONNECT TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1624-56
- S-1624-60-3: MODIFICATION OF 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #11: CONNECT TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1624-56
- S-1624-64-3: MODIFICATION OF 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #27: CONNECT TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1624-56
- S-1624-65-3: MODIFICATION OF 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #34: CONNECT TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1624-56
- S-1624-66-3: MODIFICATION OF 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #35: CONNECT TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1624-56
- S-1624-67-3: MODIFICATION OF 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #99: CONNECT TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1624-56
- S-1624-220-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR 85B)
- S-1624-221-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR 85C)
- S-1624-222-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR 85D)
- S-1624-223-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR 85E)
- S-1624-224-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR 85F)
- S-1624-225-0: 5,000 BBL FIXED ROOF PETROLEUM STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-1624-56 (MIDWAY PREMIER)

E&B Natural Resources
S-1624, 1121188

Post Project Equipment Description:

- S-1624-13-9: 27.5 MMBTU/HR STRUTHERS NATURAL GAS/LPG/CASING GAS-FIRED STEAM GENERATOR WITH A GIDEON ULTRA LOW NOX BURNER, O2 CONTROLLER AND VARIABLE FLUE GAS RECIRCULATION (FGR) OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN THE E&B HEAVY OIL CENTRAL
- S-1624-56-3: 5,000 BBL FIXED ROOF PETROLEUM STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM SHARED WITH TANKS S-1624-57-3, '60-3, '64-3, '65-3, '66-3 AND '67-3, MIDWAY PREMIER #1
- S-1624-57-3: 5,000 BBL FIXED ROOF PETROLEUM WASH TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1624-56, MIDWAY PREMIER #2
- S-1624-60-3: 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1624-56, MIDWAY PREMIER #11
- S-1624-64-3: MODIFICATION OF 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1624-56, MIDWAY PREMIER #27
- S-1624-65-3: 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1624-56, MIDWAY PREMIER #34
- S-1624-66-3: 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1624-56, MIDWAY PREMIER #35
- S-1624-67-3: 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1624-56, MIDWAY PREMIER #99
- S-1624-220-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR 85B)
- S-1624-221-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR 85C)
- S-1624-222-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR 85D)

E&B Natural Resources
S-1624, 1121188

- S-1624-223-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR 85E)
- S-1624-224-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR 85F)
- S-1624-225-0: 5,000 BBL FIXED ROOF PETROLEUM STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-1624-56 (MIDWAY PREMIER)

VI. Emission Control Technology Evaluation

Emissions from natural gas-fired steam generators include NO_x, CO, VOC, PM₁₀, and SO_x.

NO_x is the major pollutant of concern when burning natural gas. NO_x formation is either due to thermal fixation of atmospheric nitrogen in the combustion air (thermal NO_x) or due to conversion of chemically bound nitrogen in the fuel (fuel NO_x). Due to the low fuel nitrogen content of natural gas, nearly all NO_x emissions are thermal NO_x. Formation of thermal NO_x is affected by four furnace zone factors: (1) nitrogen concentration, (2) oxygen concentration, (3) peak temperature, and (4) time of exposure at peak temperature.

Low-NO_x burners reduce NO_x formation by producing lower flame temperatures (and longer flames) than conventional burners. Low-NO_x burners delay the mixing of fuel and air by introducing the fuel (or sometimes air) in multiple stages. In the first stage, the air-fuel mixture is fuel-rich in which the oxygen is consumed in reactions with the fuel, thereby limiting excess oxygen available to react with nitrogen to produce thermal NO_x.

The combustion zones in the secondary and tertiary stages are maintained in a fuel-lean environment. The excess air in these stages helps to reduce the flame temperature, which in turn minimizes the reaction between excess oxygen and nitrogen. The North American burner incorporates patented internal mixing elements that pre-mix the fuel and air prior to combustion in the reaction zone. By completing a majority of the combustion in the burner reaction chamber, the low emissions of the burner are protected from process influences.

Flue gas recirculation (FGR) reduces NO_x emissions by recirculating a percentage of the exhaust gas back into the windbox. This reduces the oxygen concentration in the air-fuel mixture and regulates the combustion process, lowering the combustion temperature. The lowered availability of oxygen in conjunction with lowered combustion temperature reduces the formation of NO_x.

The tank vapor control system collects vapors from the tanks, removes entrained liquid in knockout vessels and scrubber vessels, condenses gases in heat exchangers and routes the uncondensed vapors to incineration devices. The efficiency of the vapor control system is at least 95%.

VII. General Calculations

A. Assumptions

The maximum operating schedule is 24 hours per day, 8,760 hr/year

Steam Generators S-1624-220-0, '221-0, '222-0, '223-0 and '224-0:

- Maximum heat input rating = 85 MMBtu/hr
- Units are fired on PUC quality natural gas with < 1.0 grain-S/100 dscf
- F-Factor for Natural Gas @ 60°F: 8,578 dscf/MMBtu
- Gas Molar Vol 60 oF = $10.7316 \text{ psia ft}^3/\text{lbmol R} \times 519.67 \text{ R}/(14.696 \text{ psia/atm})$
= 378.61 ft³/lbmol
- Natural Gas Heating Value: 1,000 Btu/scf
- Startup and shut down of the units occur infrequently and do not affect annual emissions.
- The DEL for NO_x is based on a worst case day with one startup and one shutdown (total transitional time = 4 hrs).

Tanks Pre-Project:

- Turnovers per day: one (District assumption)
- Maximum TVP: 0.5 psi (current PTO)
- API gravity: <26 degrees (applicant)

Tanks, Post-Project:

- The fugitive emissions for all tanks are calculated using California Implementation Guidelines for Estimating Mass Emissions of fugitive Hydrocarbon Leaks at Petroleum Facilities, CAPCOA/CARB, February 1999 revised screening emissions factors.
- Only fugitive VOCs emitted from components in gas service are calculated.
- Fugitive emissions from heavy oil liquid service components are negligible.
- The percentage of VOCs of the total hydrocarbons is 100%

B. Emission Factors

E&B Natural Resources
S-1624, 1121188

Steam Generator S-1624-13-8 Pre-Project Emission Factors			
Pollutant	Emission Factors		Source
NO _x	0.011 lb-NO _x /MMBtu	9 ppmv NO _x (@ 3%O ₂)	PTO
SO _x	0.0143 lb-SO _x /MMBtu	1.0 grain-S/100 scf	PTO
PM ₁₀	0.005 lb-PM10/MMBtu		PTO
CO	0.074 lb-CO/MMBtu	100 ppmv CO (@ 3%O ₂)	PTO
VOC	0.003		PTO

Steam Generator S-1624-13-9 Post-Project Emission Factors			
Pollutant	Emission Factors		Source
NO _x	0.0085 lb-NO _x /MMBtu	7 ppmv NO _x (@ 3%O ₂)	Applicant
SO _x	0.0143 lb-SO _x /MMBtu	1.0 grain-S/100 scf	PTO
PM ₁₀	0.005 lb-PM10/MMBtu		PTO
CO	0.074 lb-CO/MMBtu	100 ppmv CO (@ 3%O ₂)	PTO
VOC	0.003		PTO

Steam Generators S-1624-220-0, '221-0, '222-0, '223-0 and '224-0 Emission Factors			
Pollutant	Emission Factors		Source
NO _x	0.0061 lb-NO _x /MMBtu	5 ppmv NO _x (@ 3%O ₂)	Applicant, Rule 4320
SO _x	0.00285 lb-SO _x /MMBtu	1.0 grain-S/100 scf	Applicant, APR 1720
PM ₁₀	0.0035 lb-PM10/MMBtu*		Applicant
CO	0.032 lb-CO/MMBtu	50 ppmv CO (@ 3%O ₂)	Applicant, BACT
VOC	0.0055		Applicant, AP-42 Table 1.4-2

*Based on emissions testing documenting that natural gas fired steam generators have a PM10 emission rate of 0.001 lb/MMBtu (see Appendix D). The applicant has proposed an emission factor that will provide a margin of compliance.

E&B Natural Resources
S-1624, 1121188

Startup/Shutdown (2 hr per occurrence)

Steam Generators S-1624-220-0, '221-0, '222-0, '223-0 and '224-0 Emission Factors			
Pollutant	Emission Factors		Source
NO _x	0.018 lb-NO _x /MMBtu	15 ppmv NO _x (@ 3%O ₂)	Rule 4306 emission limit

For tanks S-1624-56-1, '57-1, '60-1, '64-1, '65-1, '66-1 and '67-1, the PE1 is calculated based on the results from the District's Microsoft Excel spreadsheets for Tank Emissions - Fixed Roof Crude Oil less than 26° API. The spreadsheet for tanks was developed using the equations for fixed-roof tanks from EPA AP-42, Chapter 7.1. See Calculations in Appendix E.

Post-project tank emissions are calculated using California Implementation Guidelines for Estimating Mass Emissions of fugitive Hydrocarbon Leaks at Petroleum Facilities, CAPCOA/CARB, February 1999 revised screening emissions factors.

Boilers S-1624-27 and '149 PE1 Emission Factors			
Pollutant	Emission Factors		Source
NO _x	0.036 lb-NO _x /MMBtu	30 ppmv NO _x (@ 3%O ₂)	Rule 4307
SO _x	0.00285 lb-SO _x /MMBtu	1.0 grain-S/100 scf	APR 1720
PM ₁₀	0.0076 lb-PM ₁₀ /MMBtu*		Applicant, AP-42 Table 1.4-2
CO	0.296 lb-CO/MMBtu	400 ppmv CO (@ 3%O ₂)	Rule 4307
VOC	0.0055 lb-VOC/MMbtu		Applicant, AP-42 Table 1.4-2

Cogens S-1624-106, '107 and '108 PE1 Emission Factors			
Pollutant	Emission Factors		Source
NO _x	0.15 g/hphr		PTO
SO _x	0.011 g/hphr		
PM ₁₀	0.02g/hphr		
CO	0.6 g/hphr		
VOC	0.15g/hphr		

E&B Natural Resources
S-1624, 1121188

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Steam Generator S-1624-13-8					
Pollutant	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	PE1 (lb/day)	PE1 (lb/yr)
NOx	0.011	27.5	24	7.3	2650
SOx	0.0143			9.4	3445
PM10	0.005			3.3	1205
CO	0.074			48.8	17,827
VOC	0.003			2.0	723

Permit unit	VOC - Daily PE1 (lb/day)	VOC- Annual PE1 (lb/Year)
S-1624-56-1	265.6	96,931
S-1624-57-1	15.6	5681
S-1624-60-1	52.2	19,038
S-1624-64-1	52.2	19,038
S-1624-65-1	52.2	19,038
S-1624-66-1	52.2	19,038
S-1624-67-1	52.2	19,038

Boilers S-1624-27-3 and '149-2					
Pollutant	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	PE1 (lb/day)	PE1 (lb/yr)
NOx	0.036	3.5	24	3.0	1104
SOx	0.00285			0.2	87
PM10	0.0076			0.6	233
CO	0.296			24.9	9075
VOC	0.0055			0.5	169

E&B Natural Resources
S-1624, 1121188

Cogens S-1624-106, '107 and '108					
Pollutant	EF1	HP	Operating Schedule (hr/day)	PE1 (lb/day)	PE1 (lb/yr) (lb/day x 365)
NOx	0.15 g/hphr	154	24	1.2	446
SOx	0.011 g/hphr			0.1	33
PM10	0.02g/hphr			0.2	59
CO	0.6 g/hphr			4.9	1784
VOC	0.15g/hphr			1.2	446

2. Post Project Potential to Emit (PE2)

Steam Generator S-1624-13-8					
Pollutant	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	PE2 (lb/day)	PE2 (lb/yr)
NOx	0.0085	27.5	24	5.6	2048
SOx	0.0143			9.4	3445
PM10	0.005			3.3	1205
CO	0.074			48.8	17,827
VOC	0.003			2.0	723

Permit unit	VOC - Daily PE2 (lb/day)	VOC- Annual PE2 (lb/year)
S-1624-56-3	0.24	88
S-1624-57-3	0.24	88
S-1624-60-3	0.24	88
S-1624-64-3	0.24	88
S-1624-65-3	0.24	88
S-1624-66-3	0.24	88
S-1624-67-3	0.24	88
S-1624-225-0	0.40	146

E&B Natural Resources
S-1624, 1121188

Steam Generators S-1624-220-0, '221-0, '222-0, '223-0 and '224-0					
Pollutant	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	PE2 (lb/day)	PE2 (lb/yr) (lb/day x 365)
NOx	0.0061	85		16.5*	4542
SOx	0.00285	85	24	5.8	2122
PM10	0.0035			7.1	2606
CO	0.032			65.3	23827
VOC	0.0055			11.2	4095

*Daily NOx PE with Startups/Shutdowns

$$\text{NOx} = (0.0061 \text{ lb/MMBtu})(85 \text{ mmbtu/hr})(20 \text{ hrs/day}) + (0.018 \text{ lb/mmbtu})(85 \text{ mmbtu/hr})(4 \text{ hrs/day})$$

= 16.5 lb-NOx/day

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

Pursuant to District Rule 2201, the 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 (AER) that have occurred at the source, and which have not been used on-site.

SSPE1 (lb/year)					
Permit Unit	NO_x	SO_x	PM₁₀	CO	VOC
SSPE1	19,103	6,403	7,895	113,412	>>20,000

*from most recently issued project 1120528

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

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

E&B Natural Resources
S-1624, 1121188

SSPE2 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	19,103	6,403	7,895	113,412	>>20,000
S-1624-13-8	-2650	-3445	-1205	-17,827	-723
S-1624-13-9	2048	3445	1205	17,827	723
S-1624-27-3*	-1104	-87	-233	-9075	-169
S-1624-56-1					-96,931
S-1624-57-1					-5681
S-1624-60-1					-19,038
S-1624-64-1					-19,038
S-1624-65-1					-19,038
S-1624-66-1					-19,038
S-1624-67-1					-19,038
S-1624-56-3					88
S-1624-57-3					88
S-1624-60-3					88
S-1624-64-3					88
S-1624-65-3					88
S-1624-66-3					88
S-1624-67-3					88
S-1624-106-0*	-446	-33	-59	-1784	-446
S-1624-107-0*	-446	-33	-59	-1784	-446
S-1624-108-0*	-446	-33	-59	-1784	-446
S-1624-149-2*	-1104	-87	-233	-9075	-169
S-1624-220-0	4542	2122	2606	23827	4095
S-1624-221-0	4542	2122	2606	23827	4095
S-1624-222-0	4542	2122	2606	23827	4095
S-1624-223-0	4542	2122	2606	23827	4095
S-1624-224-0	4542	2122	2606	23827	4095
S-1624-225-0					146
SSPE2	37,665	16,740	20,282	209,045	>>20,000
SSPE2 – SSPE1	18,562	10,337	12,387	95,633	-178,241

*permit surrendered

5. Major Source Determination

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. However, for the purposes of determining major source status, the SSPE2 shall not include the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site."

E&B Natural Resources
S-1624, 1121188

Major Source Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	19,103	6,403	7,895	113,412	>>20,000
SSPE2	37,665	16,740	20,282	209,045	>>20,000
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	Yes	Yes

This source is an existing Major Source for VOC emissions and will remain a Major Source for VOC. In this project this source will become a Major Source for NO_x and CO emissions.

6. Baseline Emissions (BE)

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

Pursuant to District Rule 2201, BE = PE1 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 District Rule 2201.

As shown in Section VII.C.5 above, the facility is not a Major Source for SO_x, PM₁₀ or CO. Therefore their BE=PE1.

As shown in Section VII.C.5 above, the facility is a Major Source for NO_x and VOC.

S-1624-220-0, '221-0, '222-0, '223-0, '224-0 and '225-0 are new emissions units. Therefore, BE = PE1 = 0 for all pollutants.

a. BE NO_x

Pursuant to Rule 2201, a Clean Emissions Unit is defined as an emissions unit that is "equipped with an emissions control technology with a minimum control efficiency of at least 95% or is equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

E&B Natural Resources
S-1624, 1121188

S-1624-13-8:

This emissions unit is limited to 9 ppmv @3% O₂, which meets the requirements for achieved-in-practice BACT. Therefore, BE=PE1..

S-1624-27-3 and '149-2:

These units are not Highly-Utilized, Fully-Offset or Clean Emission Units. Therefore, BE=HAE. These dormant units are assumed to have zero HAE.

S-1624-106-0, '107-0 and '108-0:

These units are limited to 9 ppmvd NO_x @ 15% O₂ which meets the Achieved in Practice of current BACT Guideline 3.3.12. Therefore, BE=PE1..

b. BE VOC

Pursuant to Rule 2201, a Clean Emissions Unit is defined as an emissions unit that is "equipped with an emissions control technology with a minimum control efficiency of at least 95% or is equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

S-1624-13-8:

This emissions unit is fired on gaseous fuel, which meets the requirements for achieved-in-practice BACT. Therefore, BE=PE1..

S-1624-27-3 and '149-2

This emissions unit is fired on natural gas, which meets the requirements for achieved-in-practice BACT. Therefore, BE=PE1..

S-1624-56-1, '57-1, '60-1, '64-1, '65-1, '66-1 and '67-1:

These tanks are equipped with a PV-vent set to within 10% of maximum allowable pressure which meets the requirements for achieved-in-practice BACT. Therefore, BE=PE1.

S-1624-106-0, '107-0 and '108-0:

These units are limited to 25 ppmvd VOC @ 15% O₂ which meets the Achieved in Practice of current BACT Guideline 3.3.12. Therefore, BE=PE1..

E&B Natural Resources
S-1624, 1121188

Summary BE (lb/year)		
Permit Unit	NO _x	VOC
S-1624-13-8	2650	723
S-1624-27-3	0	169
S-1624-56-1		96,931
S-1624-57-1		5681
S-1624-60-1		19,038
S-1624-64-1		19,038
S-1624-65-1		19,038
S-1624-66-1		19,038
S-1624-67-1		19,038
S-1624-106-0	446	446
S-1624-107-0	446	446
S-1624-108-0	446	446
S-1624-149-2	0	169
S-1624-220-0	0	0
S-1624-221-0	0	0
S-1624-222-0	0	0
S-1624-223-0	0	0
S-1624-224-0	0	0
S-1624-225-0		0
Total BE	3988	200,201

7. SB 288 Major Modification

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

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not included in the SB 288 Major Modification calculation.

Since this facility is a major source for NO_x and VOC, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required. For this step, only the emission *increases* are counted. Emission decreases may not cancel out the increases for this determination.

E&B Natural Resources
S-1624, 1121188

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO _x	22,710	50,000	No
VOC	20,475	50,000	No

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not included in the Federal Major Modification determination.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. Emission decreases may not cancel out the increases for this determination.

Step 1

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NO _x *	22,710	0	Yes
VOC*	20,475	0	Yes
PM ₁₀	13,030	30,000	Step 2 Required/No
PM _{2.5}	13,030	20,000	Step 2 Required/No
SO _x	10,610	80,000	Step 2 Required/No

*If there is any emission increases in NO_x or VOC, this project is a Federal Major Modification and no further analysis is required.

9. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix A.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

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

a. New emissions units – PE > 2 lb/day

As seen in Section VII.C.2 above, the applicant is proposing to install five new steam generators each with a PE greater than 2 lb/day for NO_x, SO_x, PM₁₀, CO, and VOC. Therefore, BACT is triggered for NO_x, SO_x, PM₁₀, CO and VOC.

As seen in Section VII.C.2 above, the applicant is proposing to install new tank S-1624-225-0 with a PE less than 2 lb/day for VOC. Therefore, BACT is not triggered.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

$$\text{AIPE} = \text{PE}_2 - \text{HAPE}$$

Where,

AIPE = Adjusted Increase in Permitted Emissions, (lb/day)

PE₂ = Post-Project Potential to Emit, (lb/day)

HAPE = Historically Adjusted Potential to Emit, (lb/day)

$$\text{HAPE} = \text{PE}_1 \times (\text{EF}_2/\text{EF}_1)$$

E&B Natural Resources
S-1624, 1121188

Where,

- PE1 = The emissions unit's PE prior to modification or relocation, (lb/day)
- EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1
- EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

$$AIPE = PE2 - (PE1 * (EF2 / EF1))$$

S-1624-13:

Steam Generator:

$$AIPE = 5.6 - (7.26 * (0.0085/0.011))$$

$$= 0.0 \text{ lb-NOx/day}$$

AIPE calculations for other pollutants is not required because there is no PE or EF change.

S-1624-56-1, '57-1, '60-1, '64-1, '65-1, '66-1 and '67-1:

Tanks

	PE2	PE1	EF2	EF1	AIPE
S-1624-56-1	0.24	265.6	0.99	0.95	-277.3
S-1624-57-1	0.24	15.6			-16.1
S-1624-60-1	0.24	52.2			-54.3
S-1624-64-1	0.24	52.2			-54.3
S-1624-65-1	0.24	52.2			-54.3
S-1624-66-1	0.24	52.2			-54.3
S-1624-67-1	0.24	52.2			-54.3

As demonstrated above, the AIPE is not greater than 2.0 lb/day for these units.. Therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project does constitute an SB 288 and/or Federal Major Modification for NO_x and VOC emissions. Therefore BACT is triggered for NO_x and VOC for all emissions units in the project for which there is an emission increase. Only units S-1624-220-0, '221-0, '222-0, '223-0, '224-0 and '225-0 have an emission increase. Therefore, BACT for NO_x and VOC is triggered for S-1624-220-0, '221-0, '222-0, '223-0, '224-0 and '225-0.

2. BACT Guideline

BACT Guideline 1.2.1 (Steam Generator ≥ 5 MMBtu/hr, Oilfield) has been rescinded. Therefore, a project specific BACT analysis will be performed to determine BACT for this project (see Appendix F).

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see Appendix F), BACT has been satisfied with the following:

NO_x: 5 ppmv @ 3% O₂
 SO_x: Natural gas,
 PM₁₀: Natural gas,
 CO: 50 ppmvd @ 3% O₂
 VOC: Gaseous fuel

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	37,665	16,740	20,282	209,045	>20,000
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	yes	No	No	yes	yes

2. Quantity of Offsets Required

NO_x:

As seen above, the SSPE2 is greater than the offset thresholds for NO_x. Therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year for NO_x is calculated as follows for sources with an SSPE1 less than the offset threshold levels before implementing the project being evaluated.

$$\text{Offsets Required (lb/year)} = [(\text{SSPE2} - \text{ROT} + \text{ICCE}) \times \text{DOR}]$$

Where,

SSPE2 = Post Project Stationary Source Potential to Emit

ROT = Respective Offset Threshold, for the respective pollutant

E&B Natural Resources
S-1624, 1121188

ICCE = Increase in Cargo Carrier Emissions
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

$$\text{Offsets Required (lb/year)} = [(\text{SSPE2} - \text{BE} - \text{ROT} + \text{ICCE}) \times \text{DOR}]$$

SSPE2 (NO_x) = 37,665 lb/year
BE = 3988
Offset threshold (NO_x) = 20,000 lb/year
ICCE = 0 lb/year

Assuming an offset ratio of 1.5:1, the amount of NO_x ERCs that need to be withdrawn is:

$$\begin{aligned} \text{Offsets Required (lb/year)} &= [(37,665 - 3988 - 20,000 + 0) \times 1.5] \\ &= 13,677 \times 1.5 \\ &= 20,516 \text{ lb NO}_x/\text{year} \end{aligned}$$

Calculating the appropriate quarterly emissions to be offset is as follows:

<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
5129	5129	5129	5129

The applicant has stated that the facility plans to use ERC certificates S-3786-2, S-3797-2 and S-3789-2 to offset the increases in NO_x emissions associated with this project. The above certificate has available quarterly NO_x credits as follows:

	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
ERC #S-3786-2	0	2971	2714	2156
	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
ERC #S-3787-2	0	3374	5552	6708
	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
ERC #S-3788-2	7208	0	0	0

As seen above, the facility has sufficient credits to fully offset the quarterly NO_x emissions increases associated with this project.

Proposed Rule 2201 (offset) Conditions:

- {GC# 4447 - edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender NO_x emission reduction credits for the following quantity of emissions: 1st quarter - 5,129 lb, 2nd quarter - 5,129 lb, 3rd quarter - 5,129 lb, and fourth quarter - 5,129 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

E&B Natural Resources
S-1624, 1121188

- {GC# 1983} ERC Certificate Numbers S-3786-2, S-3797-2 and 'S-3789-2 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

VOC:

As seen above, the facility is an existing Major Source for VOC and the SSPE2 is greater than the offset thresholds. Therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year for VOC is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = $(\Sigma[PE2 - BE] + ICCE) \times DOR$, for all new or modified emissions units in the project,

Where,

PE2 = Post Project Potential to Emit, (lb/year)

BE = Baseline Emissions, (lb/year)

ICCE = Increase in Cargo Carrier Emissions, (lb/year)

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 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 = HAE

Also, there are no increases in cargo carrier emissions. Therefore offsets can be determined as follows:

E&B Natural Resources
S-1624, 1121188

PE2 (lb/year)	
Permit Unit	VOC
S-1624-13-9	723
S-1624-27-3*	0
S-1624-56-3	88
S-1624-57-3	88
S-1624-60-3	88
S-1624-64-3	88
S-1624-65-3	88
S-1624-66-3	88
S-1624-67-3	88
S-1624-106-0*	0
S-1624-107-0*	0
S-1624-108-0*	0
S-1624-149-2*	0
S-1624-220-0	4095
S-1624-221-0	4095
S-1624-222-0	4095
S-1624-223-0	4095
S-1624-224-0	4095
S-1624-225-0	146
PE2	21,960

*permit surrendered

$$\text{Offsets Required (lb/year)} = ([\text{PE2} - \text{BE}] + \text{ICCE}) \times \text{DOR}$$

$$\begin{aligned} \text{PE2 (NO}_x\text{)} &= 21,960 \text{ lb/year} \\ \text{BE (NO}_x\text{)} &= 200,201 \text{ lb/year} \\ \text{ICCE} &= 0 \text{ lb/year} \end{aligned}$$

$$\begin{aligned} \text{Offsets Required (lb/year)} &= ([21,960 - 200,201] + 0) \times \text{DOR} \\ &= 0 \text{ lb VOC/year} \end{aligned}$$

As demonstrated in the calculation above, the amount of VOC offsets is zero. Therefore, VOC offsets will not be required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

- New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- Any project which results in the offset thresholds being surpassed, and/or

d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

As demonstrated in VII.C.7, this project is a Federal Major Modification. Therefore, public noticing for Federal Major Modification purposes is required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	19,103	37,665	20,000 lb/year	Yes
SO _x	6403	16,740	54,750 lb/year	No
PM ₁₀	7895	20,282	29,200 lb/year	No
CO	113,412	209,045	200,000 lb/year	Yes
VOC	>>20,000	>>20,000	20,000 lb/year	No

As detailed above, offset thresholds were surpassed for NO_x and CO with this project; therefore public noticing is required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

E&B Natural Resources
S-1624, 1121188

SSIFE Public Notice Thresholds					
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	SSIFE (lb/year)	SSIFE Public Notice Threshold	Public Notice Required?
NO _x	19,103	37,665	18,562	20,000 lb/year	No
SO _x	6403	16,740	10,337	20,000 lb/year	No
PM ₁₀	7895	20,282	12,387	20,000 lb/year	No
CO	113,412	209,045	95,633	20,000 lb/year	Yes
VOC	>20,000	>20,000	0	20,000 lb/year	No

As demonstrated above, the SSIFEs for CO is greater than 20,000 lb/year; therefore public noticing for SSIFE purposes is required.

2. Public Notice Action

As discussed above, public noticing is required for this project for surpassing NO_x and CO offset thresholds and for triggering Federal 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)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. 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.

Proposed Rule 2201 (DEL) Conditions:

S-1624-13-9:

- Emissions from the combustion of natural gas/casing gas, except during start up, shut down, or refractory curing, shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.002 lb-SO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] N
- Emissions from the combustion of liquefied petroleum gas (LPG), except during start up, shut down, or refractory curing, shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.0143 lb-SO_x/MMBtu, 0.0066 lb-PM₁₀/MMBtu, 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] N

E&B Natural Resources
S-1624, 1121188

- Emissions rates shall not exceed any of the following: NO_x (as NO₂) 7.3 lb/day and 2650 lb/year. [District Rule 2201] N

S-1624-56-1, '57-1, '60-1, '64-1, '65-1, '66-1 and '67-1:

- VOC fugitive emissions from the components in gas and light oil service on tank shall not exceed 0.24 lb/day. [District Rule 2201] N
- Permittee shall maintain accurate component count for tank according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors < 10,000 ppmv. Permittee shall update such records when new components are approved and installed. [District Rule 2201] N

S-1624-220-0, '221-0, '222-0, '223-0 and '224-0:

- Emission rates, except during startup and shutdown shall not exceed: NO_x (as NO_x): 5 ppmvd @ 3% O₂. [District Rule 2201, 4305, 4306, and 4320] N
- Emission rates shall not exceed any of the following: SO_x:0.00285 lb/MMBtu; PM₁₀: 0.0035 lb/MMBtu; CO: 50 ppmvd @ 3% O₂; or VOC: 0.0055 lb/MMBtu. [District Rule 2201]
- Emissions rate of NO_x shall not exceed 16.5 lb/day nor 4542 lb/yr. [District Rule 2201]

S-1624-225-0:

- VOC fugitive emissions from the components in gas and light oil service on tank shall not exceed 0.4 lb/day. [District Rule 2201] N
- Permittee shall maintain accurate component count for tank according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors < 10,000 ppmv. Permittee shall update such records when new components are approved and installed. [District Rule 2201] N

E. Compliance Assurance

1. Source Testing

S-1624-13-9, 220-0, '221-0, '222-0, '223-0 and '224-0 are subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase 2*, District Rule 4306, *Boilers, Steam Generators and Process Heaters, Phase 3*, and District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr*. Source testing requirements will be discussed in the compliance review section of this evaluation.

2. Monitoring

As required by District Rules 4305, 4306 and 4320, S-1624-13-9, 220-0, '221-0, '222-0, '223-0 and '224-0 are subject to monitoring requirements. Monitoring requirements, in accordance with District Rules will be discussed in the compliance review section of this evaluation.

3. Recordkeeping

As required by District Rules 4305, 4306 and 4320, S-1624-13-9, 220-0, '221-0, '222-0, '223-0 and '224-0 are subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rules will be discussed in the compliance review section of this evaluation.

S-1624-56-1:

- Permittee shall maintain accurate component count for tank according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors < 10,000 ppmv. Permittee shall update such records when new components are approved and installed. [District Rule 2201] N
- Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623] N
- 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 1070] N

S-1624-57-1, '60-1, '64-1, '65-1, '66-1 and '67-1:

- Permittee shall maintain accurate component count for tank according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors < 10,000 ppmv. Permittee shall update such records when new components are approved and installed. [District Rule 2201] N

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The

District's Technical Services Division conducted the required analysis. Refer to Appendix G of this document for the AAQA summary sheet.

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

Technical Services performed modeling for criteria pollutants CO, NO_x, SO_x and PM₁₀; as well as a RMR. The emission rates used for criteria pollutant modeling were 6.3 lb/hr CO, 0.52 lb/hr NO_x, 0.26 lb/hr SO_x, and 0.30 lb/hr PM₁₀. These emission are for each steam Generator, emissions from the tank are all VOC which are not considered For AAQA.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	NA	X	NA	X	X
NO _x	NA	X	X	X	Pass
SO _x	NA	NA	X	NA	Pass
PM ₁₀	X	X	X	NA	Pass
PM _{2.5}	X	X	X	NA	Pass

*Results were taken from the attached PSD spreadsheet.

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

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Title I Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Section VIII above, this facility is a new major source and this project does constitute a Title I modification, therefore this requirement is applicable. Corporation ENR's compliance certification is included in Appendix H.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install a five new steam generators and a new storage tank..

Since the project will provide steam and product storage capacity to be used at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2520 Federally Mandated Operating Permits

Since this facility's emissions exceed the major source thresholds of District Rule 2201, this facility is a major source. However, this facility has elected to comply with Rule 2530, exempts it from the requirements of Rule 2520.

Rule 2530 Federally Enforceable Potential to Emit

The purpose of this rule is to restrict the emissions of a stationary source so that the source may elect to be exempt from the requirements of Rule 2520. Pursuant to Rule 2530, since this facility has elected exemption from the requirements of Rule 2520 by ensuring actual emissions from the stationary source in every 12-month periods to not exceed the following: ½ the major source thresholds for NO_x, VOCs, CO, and PM₁₀; 50 tons per year SO₂; 5 tons per year of a single HAP; 12.5 tons per year of any combination of HAPs; 50 percent of any lesser threshold for a single HAP as the EPA may establish by rule; and 50 percent of the major source threshold for any other regulated air pollutant not listed in Rule 2530.

Rule 4001 New Source Performance Standards (NSPS)

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

The subject steam generator has a rating of 85 MMBtu/hr and is gas fired. Subpart Dc has no standards for gas-fired steam generators. Therefore the subject steam generator is not an affected facility and subpart Dc does not apply.

This rule incorporates the New Source Performance Standards from 40 CFR Part 60, subparts, K, Ka and Kb, and could potentially apply to the storage tanks located at this facility. However, pursuant to 40 CFR 60.110 (b), 60.110(a) (b), and 60.110(b) (b), these subparts do not apply to storage vessels less than 10,000 bbls, used for petroleum or condensate, that is stored, processed, and/or treated at a drilling and production facility prior to custody transfer.

Therefore, the requirements of these subparts are not applicable to this project.

Rule 4101 Visible Emissions

Rule 4101 states that no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). As the units are fired solely on natural gas, visible emissions are not expected to exceed Ringelmann 1 or 20% opacity. Also, based on past inspections of the facility continued compliance is expected.

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (**Appendix G**), the total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.

Discussion of T-BACT

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

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.

F-Factor for NG:	8,578 dscf/MMBtu at 60 °F
PM10 Emission Factor:	0.0076 lb-PM10/MMBtu
Percentage of PM as PM10 in Exhaust:	100%
Exhaust Oxygen (O ₂) Concentration:	3%
Excess Air Correction to F Factor =	$\frac{20.9}{(20.9 - 3)} = 1.17$

$$GL = \left(\frac{0.005 \text{ lb} - \text{PM}}{\text{MMBtu}} \times \frac{7,000 \text{ grain}}{\text{lb} - \text{PM}} \right) / \left(\frac{8,578 \text{ ft}^3}{\text{MMBtu}} \times 1.17 \right)$$

$$GL = 0.0035 \text{ grain/dscf} < 0.1 \text{ grain/dscf}$$

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

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

District Rule 4301 Fuel Burning Equipment

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

District Rule 4301 Limits			
	NO₂	Total PM	SO₂
S-1624-13	0.23	0.18	0.06
S-1624-220-0	0.52	0.30	0.24
S-1624-221-0	0.52	0.30	0.24
S-1624-222-0	0.52	0.30	0.24
S-1624-223-0	0.52	0.30	0.24
S-1624-224-0	0.52	0.30	0.24
Rule Limit (lb/hr)	140	10	200

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

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

Pursuant to District Rules 4305, 4306 and 4320 Section 6.3.1, the steam generator is not required to tune since it follows a District approved Alternate Monitoring scheme where the applicable emission limits are periodically monitored. Therefore, the steam generators are not subject to this rule.

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

The units are natural gas-fired with a maximum heat input of 85 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4305, the unit is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*.

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 4306 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.

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

The unit is natural gas-fired with a maximum heat input of 85 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4306, the unit is subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*.

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

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

E&B Natural Resources
S-1624, 1121188

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

The unit is rated at greater than 5 MMBtu/hr heat input and is subject to this rule.

Section 5.1 NO_x Emission Limits

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.

S-1624-13 will continue to comply with this section by paying annual emission fees.

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, shown below. On and after October 1, 2008, units shall not be operated in a manner to which exceeds a carbon dioxide (CO) emissions limit of 400 ppmv.

Rule 4320 Emissions Limits			
Category	Operated on gaseous fuel		
	NO_x Limit	Authority to Construct	Compliance Deadline
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

The NO_x limit for S-1624-220-0, '221-0, '222-0, '223-0 and '224-0's is 5 ppmv; therefore, compliance with Section 5.2 of District Rule 4320 is expected.

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

Section 5.4 Particulate Matter Control Requirements

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

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

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

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

The steam generators will be fired on natural gas. Therefore, compliance with this section of the rule is expected.

Section 5.5 Low-Use Unit

This section discusses the requirements of low-use units. ENR is not requesting low-use status; therefore, this section of the rule is not applicable to this project.

Section 5.7 Monitoring Provisions

Section 5.7.1 requires that permit units subject to District Rule 4320, Section 5.2 shall either install and maintain an operational APCO approved Continuous Emission Monitoring System (CEMS) for NO_x, CO and O₂, or implement an APCO-approved alternate monitoring.

ENR has proposed to implement Alternate Monitoring Scheme A (pursuant to District Policy SSP-1105), which requires periodic monitoring of NO_x, CO, and O₂ concentrations at least once a month using a portable analyzer. The following conditions will be placed in the permit to ensure compliance with the requirements of this alternate monitoring plan:

- {2395} The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
- If either the NO_x or CO concentrations corrected to 3%, 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

E&B Natural Resources
S-1624, 1121188

shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320]

- All NO_x, CO, and O₂ 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 NO_x, CO, and O₂ 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 sample 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 4102, 4305, 4306 and 4320]
- The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]

Section 5.7.6 requires monitoring SO_x emissions. The following conditions will be placed in the permit to be in compliance with this rule requirement:

- PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]
- If the steam generator 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]
- 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]

Section 5.8 Compliance Determination

Section 5.8.1 requires that the operator of any unit have the option of complying with either the applicable heat input (lb/MMBtu), emission limits or the concentration (ppmv) emission limits specified in Section 5.2. The emission limits selected to demonstrate compliance shall

E&B Natural Resources
S-1624, 1121188

be specified in the source test proposal pursuant to Rule 1081 (Source Sampling). Therefore, the following condition will be retained or listed on the permits as follows:

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

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

- {2972} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320]

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

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

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

- {2980} For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test

cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320]

Section 6.1 Recordkeeping

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

- All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320 and 40 CFR 60.48c(i)]

Section 6.2, Test Methods

Section 6.2 identifies test methods to be used when determining compliance with the rule. The following conditions will be listed on the permits:

- {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
- The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhw (MMBtu) -ASTM D 1826 or D 1945 in conjunction with ASTM D 3588; VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. [District Rules 2201, 4305, 4306 and 4320]

Section 6.3, Compliance Testing

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

- A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320]
- Source testing to measure natural gas-combustion NOx 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 2201, 4305, 4306 and 4320]

- {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

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

Conclusion

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

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

This rule applies to boilers, steam generators, and process heaters at NO_x Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. The facility is located east of Interstate 5 in Kern County. Therefore, this rule applies.

Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than Rule 4351, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4351.

Rule 4623, Storage of Organic Liquids

This rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored.

Pursuant to Section 5.1, since the new tank is connected to an approved VOC destruction device that reduces inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6, the tank is allowed to store liquids with a true vapor pressure (TVP) in excess of 11 psia.

Since there is no limit on the TVP, and the tank's emissions are not based on the TVP of the oil stored, TVP testing is not required for the tank.

Pursuant to Section 5.6, the tank shall be fully enclosed and shall be maintained in a leak-free condition.

As tank emissions were calculated using no-leak gas emission factors, gas leaks greater than 10,000 ppmv are not allowed.

The following conditions are listed on each permit to ensure compliance.

E&B Natural Resources
S-1624, 1121188

- The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623]
- All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623]
- A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. A gas or liquid leak is a violation of this permit and shall be reported as a deviation. [District Rule 4623]
- Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623]
- All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070 and 4623]

In addition, the Inspection and Maintenance conditions from Rule 4623 are also listed on the permits as follows and allow for tank cleaning.

- Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623] N
- Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623] N
- Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623] N
- Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623] N

E&B Natural Resources
S-1624, 1121188

- Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule [District Rule 4623] N
- If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623] N
- Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623] N

In addition, the tank cleaning conditions from Rule 4623 are also listed on the permits as follows.

- Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport.
- This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623] N
- During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623] N
- To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] N
- This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623] N

E&B Natural Resources
S-1624, 1121188

- After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623] N
- During sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] N
- Permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] N
- Permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623]

Rule 4801 Sulfur Compounds

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

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

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

With:

N = moles SO₂

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

P (Standard Pressure) = 14.7 psi

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

$$\frac{0.00285 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 1.97 \frac{\text{parts}}{\text{million}}$$

$$\text{Sulfur Concentration} = 1.97 \frac{\text{parts}}{\text{million}} < 2,000 \text{ ppmv (or 0.2\%)}$$

Therefore, compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that there are no additional schools within ¼ mile of the emission source.

California Environmental Quality Act (CEQA)

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 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; and
- 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.

Project specific impacts on global climate change were evaluated consistent with the adopted District policy – *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The District's engineering evaluation (this document – **Appendix I**) demonstrates that the project includes Best Performance Standards (BPS) for each class and category of greenhouse gas emissions unit. 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

E&B Natural Resources
S-1624, 1121188

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATC ATCs S-1624-13-9, '56-3, '57-3, '60-3, '64-3, '65-3, '66-3, '67-3, '220-0, '221-0, '222-0, '223-0, 224-0 and '225-0 subject to the permit conditions on the attached draft ATC in **Appendix J**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee (\$)
S-1624-13-9	3020-02 H	27.5 MMBtu/hr	1030
S-1624-56-3	3020-05S E	210,000 gallons	99
S-1624-57-3	3020-05S E	210,000 gallons	99
S-1624-60-3	3020-05S C	42,000 gallons	63
S-1624-64-3	3020-05S C	42,000 gallons	63
S-1624-65-3	3020-05S C	42000 gallons	63
S-1624-66-3	3020-05S C	42000 gallons	63
S-1624-67-3	3020-05S C	42000 gallons	63
S-1624-220-0	3020-02 H	85 MMBtu/hr	1030
S-1624-221-0	3020-02 H	85 MMBtu/hr	1030
S-1624-222-0	3020-02 H	85 MMBtu/hr	1030
S-1624-223-0	3020-02 H	85 MMBtu/hr	1030
S-1624-224-0	3020-02 H	85 MMBtu/hr	1030
S-1624-225-0	3020-02 H	85 MMBtu/hr	1030

APPENDIX A
Quarterly Net Emissions Change (QNEC)

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - PE1, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.

PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.

PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$$\begin{aligned} \text{PE2}_{\text{quarterly}} &= \text{PE2}_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 4,600 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 1,150 \text{ lb PM}_{10}/\text{qtr} \end{aligned}$$

$$\begin{aligned} \text{PE1}_{\text{quarterly}} &= \text{PE1}_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 4,600 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 1,150 \text{ lb PM}_{10}/\text{qtr} \end{aligned}$$

S-1624-13-9 Quarterly NEC [QNEC]					
	PE2 (lb/yr)	PE2 (lb/qtr)	PE1 (lb/yr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	2048	512	2650	663	-1211
SO _x	3445	861	3445	861	0
PM ₁₀	1205	301	1205	301	0
CO	17,827	4457	17827	4457	0
VOC	723	181	723	181	0

Quarterly NEC [QNEC] (lb-VOC)					
	PE2 (lb/yr)	PE2 (lb/qtr)	PE1 (lb/yr)	PE1 (lb/qtr)	QNEC (lb/qtr)
S-1624-56-3	88	22	96,931	24233	-24211
S-1624-57-3	88	22	5681	1420	-1398
S-1624-60-3	88	22	19,038	4760	-4738
S-1624-64-3	88	22	19,038	4760	-4738
S-1624-65-3	88	22	19,038	4760	-4738
S-1624-66-3	88	22	19,038	4760	-4738
S-1624-67-3	88	22	19,038	4760	-4738
S-1624-225-0	146		96,931	24233	-24233

**S-1624-220-0, '221-0, '222-0, '223-0 and '224-0
Quarterly NEC [QNEC]**

	PE2 (lb/yr)	PE2 (lb/qtr)	PE1 (lb/yr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	4542	1136	0	0	1136
SO _x	2122	323	0	0	531
PM ₁₀	2606	652	0	0	652
CO	23827	5957	0	0	5957
VOC	4095	1024	0	0	1024

Permit #: S-1624-13-9	Last Updated
Facility: E&B NATURAL RESOURCES MGMT	05/06/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	2048.0	3445.0	1205.0	17827.0	723.0
Daily Emis. Limit (lb/Day)	5.6	9.4	3.3	48.8	4.0
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	-121.0	0.0	0.0	0.0	0.0
Q2:	-121.0	0.0	0.0	0.0	0.0
Q3:	-121.0	0.0	0.0	0.0	0.0
Q4:	-121.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1624-56-3	Last Updated
Facility: E&B NATURAL RESOURCES MGMT	05/06/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	88.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:					-24211.0
Q2:					-24211.0
Q3:					-24211.0
Q4:					-24211.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1624-57-3	Last Updated
Facility: E&B NATURAL RESOURCES MGMT	05/06/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	88.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:					-1398.0
Q2:					-1398.0
Q3:					-1398.0
Q4:					-1398.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1624-60-3	Last Updated
Facility: E&B NATURAL RESOURCES MGMT	05/06/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	88.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:					-4738.0
Q2:					-4738.0
Q3:					-4738.0
Q4:					-4738.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1624-64-3	Last Updated
Facility: E&B NATURAL RESOURCES MGMT	05/06/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	88.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:					-4738.0
Q2:					-4738.0
Q3:					-4738.0
Q4:					-4738.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1624-65-3	Last Updated
Facility: E&B NATURAL RESOURCES MGMT	05/06/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	88.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:					-4738.0
Q2:					-4738.0
Q3:					-4738.0
Q4:					-4838.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1624-66-3	Last Updated
Facility: E&B NATURAL RESOURCES MGMT	05/06/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	88.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:					-4738.0
Q2:					-4738.0
Q3:					-4738.0
Q4:					-4738.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1624-67-3	Last Updated
Facility: E&B NATURAL RESOURCES MGMT	05/06/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	88.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:					-4738.0
Q2:					-4738.0
Q3:					-4738.0
Q4:					-4738.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1624-220-0	Last Updated
Facility: E&B NATURAL RESOURCES MGMT	05/06/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	4542.0	2122.0	2606.0	23827.0	4095.0
Daily Emis. Limit (lb/Day)	16.5	5.8	7.1	65.3	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1136.0	531.0	652.0	5957.0	1024.0
Q2:	1136.0	531.0	652.0	5957.0	1024.0
Q3:	1136.0	531.0	652.0	5957.0	1024.0
Q4:	1136.0	531.0	652.0	5957.0	1024.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1624-221-0	Last Updated
Facility: E&B NATURAL RESOURCES MGMT	05/06/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	4542.0	2122.0	2606.0	23827.0	4095.0
Daily Emis. Limit (lb/Day)	16.5	5.8	7.1	65.3	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1136.0	531.0	652.0	5957.0	1024.0
Q2:	1136.0	531.0	652.0	5957.0	1024.0
Q3:	1136.0	531.0	652.0	5957.0	1024.0
Q4:	1136.0	531.0	652.0	5957.0	1024.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1624-222-0	Last Updated
Facility: E&B NATURAL RESOURCES MGMT	05/06/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	4542.0	2122.0	2606.0	23827.0	4095.0
Daily Emis. Limit (lb/Day)	16.5	5.8	7.1	65.3	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1136.0	531.0	652.0	5957.0	1024.0
Q2:	1136.0	531.0	652.0	5957.0	1024.0
Q3:	1136.0	531.0	652.0	5957.0	1024.0
Q4:	1136.0	531.0	652.0	5957.0	1024.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1624-223-0	Last Updated
Facility: E&B NATURAL RESOURCES MGMT	05/06/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	4542.0	2122.0	2606.0	23827.0	4095.0
Daily Emis. Limit (lb/Day)	16.5	5.8	7.1	65.3	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1136.0	531.0	652.0	5957.0	1024.0
Q2:	1136.0	531.0	652.0	5957.0	1024.0
Q3:	1136.0	531.0	652.0	5957.0	1024.0
Q4:	1136.0	531.0	652.0	5957.0	1024.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1624-224-0	Last Updated
Facility: E&B NATURAL RESOURCES MGMT	05/06/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	4542.0	2122.0	2606.0	23827.0	4095.0
Daily Emis. Limit (lb/Day)	16.5	5.8	7.1	65.3	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1136.0	531.0	652.0	5957.0	1024.0
Q2:	1136.0	531.0	652.0	5957.0	1024.0
Q3:	1136.0	531.0	652.0	5957.0	1024.0
Q4:	1136.0	531.0	652.0	5957.0	1024.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1624-225-0	Last Updated
Facility: E&B NATURAL RESOURCES MGMT	05/06/2012 TORID

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	146.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:					-24233.0
Q2:					-24233.0
Q3:					-24233.0
Q4:					-24233.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

APPENDIX B
PTOs to be Surrendered

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1624-27-3

EXPIRATION DATE: 06/30/2013

SECTION: 33 **TOWNSHIP:** 27S **RANGE:** 27E

EQUIPMENT DESCRIPTION:

NON-COMPLIANT DORMANT 3.5 MMBTU/HR NATURAL GAS-FIRED LOCOMOTIVE BOILER (CONOCO)

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]
2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4307]
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4307 and all other applicable District regulations. [District Rule 4307]
4. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
6. To maintain status as a small producer, permittee's crude oil production shall average less than 6000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rules 3020 & 4623]
7. Natural-gas sulfur content shall not exceed 1.0 grain S/100 dscf. [District NSR Rule]
8. All combustion equipment (burner, air controls, etc.) shall be operated and maintained as intended by manufacturer. [District NSR Rule]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1624-106-0

EXPIRATION DATE: 06/30/2013

SECTION: SW04 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:

100 KW COGENERATION UNIT #1 INCLUDING 154 BHP RICH-BURN NATURAL GAS-FIRED NEW MILLENNIUM MOTIVE POWER MODEL GPS-I IC ENGINE WITH 3-WAY CATALYST AND AIR/FUEL CONTROLLER DRIVING A 100 KW ELECTRICAL GENERATOR (WILCOX LEASE)

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. The permittee shall install and operate a nonresettable fuel meter and a nonresettable elapsed operating time meter. In lieu of installing a nonresettable fuel meter, the owner or operator may use a non-resettable elapsed operating time meter in conjunction with the engine manufacturer's maximum rated fuel consumption to determine annual fuel usage. [District Rule 4702]
5. This engine shall be operated and maintained in proper operating condition as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702]
6. This engine shall be operated within the ranges that the source testing has shown result in pollution concentrations within the emissions limits as specified on this permit. [District Rule 4702]
7. Total sulfur content of natural gas combusted shall not exceed 1.0 grain/100 scf. [District Rules 2201 and 4801]
8. Emissions from this IC engine shall not exceed any of the following limits: 9 ppmvd NO_x @ 15% O₂ (equivalent to 0.15 g-NO_x/hp-hr), 0.011 g-SO_x/hp-hr, 0.02 g-PM₁₀/hp-hr, 56 ppmvd CO @ 15% O₂ (equivalent to 0.6 g-CO/hp-hr), or 25 ppmvd VOC @ 15% O₂ (equivalent to 0.15 g-VOC/hp-hr). [District Rules 2201, 4701, and 4702]
9. If the engine 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 2201]
10. Source testing to measure natural gas-combustion NO_x, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702]
11. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rules 4701 and 4702]
12. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 4701 and 4702]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

13. 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]
14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
15. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100; CO (ppmv) - EPA Method 10 or ARB Method 100; VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100; stack gas oxygen - EPA Method 3 or 3A or ARB Method 100; and natural gas fuel sulfur content - ASTM method D 1072, D 3031, D 4084, D 3246, or double GC for H₂S and mercaptans. [District Rules 1081, 2201, 4701, and 4702]
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 engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4701 and 4702]
17. If either the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4701 and 4702]
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 4701 and 4702]
19. 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 15% 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 4701 and 4702]
20. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type and quantity (cubic feet of gas or gallons of liquid) of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 4701 and 4702]
21. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702]
22. 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 4701 and 4702]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1624-107-0

EXPIRATION DATE: 06/30/2013

SECTION: SW04 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:

100 KW COGENERATION UNIT #2 INCLUDING 154 BHP RICH-BURN NATURAL GAS-FIRED NEW MILLENNIUM MOTIVE POWER MODEL GPS-1 IC ENGINE WITH 3-WAY CATALYST AND AIR/FUEL CONTROLLER DRIVING A 100 KW ELECTRICAL GENERATOR (WILCOX LEASE)

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. The permittee shall install and operate a nonresettable fuel meter and a nonresettable elapsed operating time meter. In lieu of installing a nonresettable fuel meter, the owner or operator may use a non-resettable elapsed operating time meter in conjunction with the engine manufacturer's maximum rated fuel consumption to determine annual fuel usage. [District Rule 4702]
5. This engine shall be operated and maintained in proper operating condition as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702]
6. This engine shall be operated within the ranges that the source testing has shown result in pollution concentrations within the emissions limits as specified on this permit. [District Rule 4702]
7. Total sulfur content of natural gas combusted shall not exceed 1.0 grain/100 scf. [District Rules 2201 and 4801]
8. Emissions from this IC engine shall not exceed any of the following limits: 9 ppmvd NO_x @ 15% O₂ (equivalent to 0.15 g-NO_x/hp-hr), 0.011 g-SO_x/hp-hr, 0.02 g-PM₁₀/hp-hr, 56 ppmvd CO @ 15% O₂ (equivalent to 0.6 g-CO/hp-hr), or 25 ppmvd VOC @ 15% O₂ (equivalent to 0.15 g-VOC/hp-hr). [District Rules 2201, 4701, and 4702]
9. If the engine 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 2201]
10. Source testing to measure natural gas-combustion NO_x, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702]
11. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rules 4701 and 4702]
12. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 4701 and 4702]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

13. 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]
14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
15. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100; CO (ppmv) - EPA Method 10 or ARB Method 100; VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100; stack gas oxygen - EPA Method 3 or 3A or ARB Method 100; and natural gas fuel sulfur content - ASTM method D 1072, D 3031, D 4084, D 3246, or double GC for H₂S and mercaptans. [District Rules 1081, 2201, 4701, and 4702]
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 engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4701 and 4702]
17. If either the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4701 and 4702]
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 4701 and 4702]
19. 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 15% 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 4701 and 4702]
20. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type and quantity (cubic feet of gas or gallons of liquid) of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 4701 and 4702]
21. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702]
22. 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 4701 and 4702]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1624-108-0

EXPIRATION DATE: 06/30/2013

SECTION: SW04 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:

100 KW COGENERATION UNIT #3 INCLUDING 154 BHP RICH-BURN NATURAL GAS-FIRED NEW MILLENNIUM MOTIVE POWER MODEL GPS-I IC ENGINE WITH 3-WAY CATALYST AND AIR/FUEL CONTROLLER DRIVING A 100 KW ELECTRICAL GENERATOR (WILCOX LEASE)

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. The permittee shall install and operate a nonresettable fuel meter and a nonresettable elapsed operating time meter. In lieu of installing a nonresettable fuel meter, the owner or operator may use a non-resettable elapsed operating time meter in conjunction with the engine manufacturer's maximum rated fuel consumption to determine annual fuel usage. [District Rule 4702]
5. This engine shall be operated and maintained in proper operating condition as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702]
6. This engine shall be operated within the ranges that the source testing has shown result in pollution concentrations within the emissions limits as specified on this permit. [District Rule 4702]
7. Total sulfur content of natural gas combusted shall not exceed 1.0 grain/100 scf. [District Rules 2201 and 4801]
8. Emissions from this IC engine shall not exceed any of the following limits: 9 ppmvd NO_x @ 15% O₂ (equivalent to 0.15 g-NO_x/hp-hr), 0.011 g-SO_x/hp-hr, 0.02 g-PM₁₀/hp-hr, 56 ppmvd CO @ 15% O₂ (equivalent to 0.6 g-CO/hp-hr), or 25 ppmvd VOC @ 15% O₂ (equivalent to 0.15 g-VOC/hp-hr). [District Rules 2201, 4701, and 4702]
9. If the engine 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 2201]
10. Source testing to measure natural gas-combustion NO_x, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702]
11. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rules 4701 and 4702]
12. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 4701 and 4702]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

13. 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]
14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
15. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100; CO (ppmv) - EPA Method 10 or ARB Method 100; VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100; stack gas oxygen - EPA Method 3 or 3A or ARB Method 100; and natural gas fuel sulfur content - ASTM method D 1072, D 3031, D 4084, D 3246, or double GC for H₂S and mercaptans. [District Rules 1081, 2201, 4701, and 4702]
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 engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4701 and 4702]
17. If either the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4701 and 4702]
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 4701 and 4702]
19. 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 15% 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 4701 and 4702]
20. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type and quantity (cubic feet of gas or gallons of liquid) of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 4701 and 4702]
21. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702]
22. 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 4701 and 4702]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1624-149-2

EXPIRATION DATE: 06/30/2013

SECTION: 29 **TOWNSHIP:** 26S **RANGE:** 28E

EQUIPMENT DESCRIPTION:

NON-COMPLIANT DORMANT 3.5 MM BTU/HR NATURAL GAS-FIRED LOCOMOTIVE BOILER (BOWLES LEASE)

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]
2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4307]
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4307 and all other applicable District regulations. [District Rule 4307]
4. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. No air contaminant shall be discharged into the atmosphere for a period of 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]
6. To maintain status as a small producer, permittee's crude oil production shall average less than 6000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rule 3020]
7. If continuous operation oxygen analyzer/controller is utilized, excess O₂ shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2080]
8. Natural-gas sulfur content shall not exceed 1.0 grain S/100 dscf. [District Rule 2201]
9. Formerly S-1123-11-0.

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

APPENDIX C
Pre-Project Equipment Description

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1624-13-8

EXPIRATION DATE: 06/30/2013

SECTION: 05 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:

27.5 MMBTU/HR STRUTHERS NATURAL GAS/LPG/CASING GAS-FIRED STEAM GENERATOR WITH A GIDEON ULTRA LOW NOX BURNER, O2 CONTROLLER AND VARIABLE FLUE GAS RECIRCULATION (FGR) OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN THE E&B HEAVY OIL CENTRAL

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
5. This steam generator is permitted to operate at various unspecified locations within the E&B Heavy Oil Central Stationary Source. [District Rule 2201]
6. 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]
7. This equipment shall not be located within 1,000 feet of any K-12 school. [District Rule 2201 and CHSC 42301.6]
8. The unit shall only be fired on PUC quality natural gas, LPG or casing gas. [District Rule 2201]
9. The sulfur content of fuel combusted shall not exceed 5 grains-S per 100 scf. [District Rule 4320]
10. Emissions from the combustion of natural gas/casing gas, except during start up, shut down, or refractory curing, shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.002 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, 100 ppmvd CO @ 3% O2 or 0.074 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
11. Emissions from the combustion of liquefied petroleum gas (LPG), except during start up, shut down, or refractory curing, shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.0143 lb-SOx/MMBtu, 0.0066 lb-PM10/MMBtu, 100 ppmvd CO @ 3% O2 or 0.074 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
12. Emissions rates shall not exceed any of the following: NOx (as NO2) 7.3 lb/day and 2650 lb/year. [District Rule 2201]
13. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

14. If the unit is fired on natural gas/casing gas and compliance with the 0.002 lb-SOx/MMBtu emission limit is achieved through 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 quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070]
15. Source testing to measure NOx and CO emissions from this unit while fired on natural gas/casing gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]
16. Source testing shall be required to measure NOx, and CO emissions when firing on LPG for a duration of over 100 hours during the 12-month period previous to the source test anniversary date. After demonstrating compliance on two (2) consecutive annual source tests when unit is fired on LPG, 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]
17. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070]
18. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rules 4306 and 4320]
19. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rule 4306 and 4320]
20. A source test to demonstrate compliance with the NOx and CO emission limits shall be performed within 60 days of recommencing operation of the dormant emissions unit. [District Rule 4306 and 4320]
21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
23. 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, 4306, and 4320]
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]
25. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
28. 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, 4306, and 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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 performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320]
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, 4306, and 4320]
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, 4306, and 4320]
32. Permittee shall maintain accurate records of each location the steam generator operates, the dates of operation at each location, and the quantity of fuel consumed at each location. [District Rule 2201]
33. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4305, 4306, and 4320]
34. 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. 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]
36. The permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1624-56-1

EXPIRATION DATE: 06/30/2013

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #1

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. To maintain status as a small producer, permittee's crude oil production shall average less than 6000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rules 3020 & 4623]
3. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623]
4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
6. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623]
7. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623]
8. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]
11. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1624-57-1

EXPIRATION DATE: 06/30/2013

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF PETROLEUM WASH TANK, MIDWAY PREMIER #2

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. To maintain status as a small producer, permittee's crude oil production shall average less than 6000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rules 3020 & 4623]
3. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623]
4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
6. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623]
7. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623]
8. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]
11. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1624-60-1

EXPIRATION DATE: 06/30/2013

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #11

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. To maintain status as a small producer, permittee's crude oil production shall average less than 6000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rules 3020 & 4623]
3. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623]
4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
6. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623]
7. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623]
8. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]
11. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1624-64-1

EXPIRATION DATE: 06/30/2013

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #27

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. To maintain status as a small producer, permittee's crude oil production shall average less than 6000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rules 3020 & 4623]
3. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623]
4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
6. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623]
7. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623]
8. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]
11. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1624-65-1

EXPIRATION DATE: 06/30/2013

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #34

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. To maintain status as a small producer, permittee's crude oil production shall average less than 6000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rules 3020 & 4623]
3. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623]
4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
6. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623]
7. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623]
8. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]
11. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1624-66-1

EXPIRATION DATE: 06/30/2013

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #35

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. To maintain status as a small producer, permittee's crude oil production shall average less than 6000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rules 3020 & 4623]
3. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623]
4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
6. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623]
7. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623]
8. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]
11. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1624-67-1

EXPIRATION DATE: 06/30/2013

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #99

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. To maintain status as a small producer, permittee's crude oil production shall average less than 6000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rules 3020 & 4623]
3. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623]
4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
6. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623]
7. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623]
8. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623]
9. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]
11. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623]

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

APPENDIX D
PM10 Source Test Results

AEROS ENVIRONMENTAL, INC.

Summary Of Results

Vintage Production California, LLC
 Kern Front Facility
 Steam Generator 5

Project 300-5871A
 March 27, 2008
 ATC No. S-1326-338-0

Pollutant	gr/dscf	gr/scf	lb/hr	lb/MMBtu	Permit Limits
Particulate PM-10	0.00107	0.00090	0.150	0.0016	0.005 lb/MMBtu
	0.00044	0.00037	0.068	0.0007	
	0.00042	0.00036	0.068	0.0006	
	<i>Mean</i>	<i>0.00065</i>	<i>0.00054</i>	<i>0.095</i>	
Particulate Total	0.00107	0.00090	0.150	0.0016	N/A
	0.00044	0.00037	0.068	0.0007	
	0.00057	0.00048	0.092	0.0008	
	<i>Mean</i>	<i>0.00070</i>	<i>0.00058</i>	<i>0.103</i>	
Comments: _____					

APPENDIX E
PE1 Tank Calculations

Input Data	
permit number (S-xxxx-xx-xx)	S-1624-66-1
facility tank I.D.	-
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.5
liquid bulk storage temperature, T _b (°F)	90
is this a constant-level tank? (yes, no)	no
will flashing losses occur in this tank (only if first-line tank)? (yes, no)	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	38.6
capacity of tank (bbl)	5,000
conical or dome roof? (c, d)	c
shell height of tank (feet)	24
average liquid height (feet)	9
are the roof and shell the same color? (yes,no)	yes
For roof: color (1: Spec Al, 2: Diff Al, 3: Light, 4: Med, 5: Red, 6: White)	4
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	3
-----This row only used if shell is different color from roof-----	1

Input Data	
maximum daily fluid throughput (bbl)	5,000
maximum annual fluid throughput (bbl)	1,825,000
-----This row only used if flashing losses occur in this tank-----	100
-----This row only used if flashing losses occur in this tank-----	36,500
molecular weight, M _w (lb/lb-mol)	100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insolation factor, I (Btu/ft ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psi)	93.4	0.7850
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psi)	82.6	0.5580
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	88.0	0.6612
roof outage, H _{ro} (feet)		0.4021
vapor space volume, V _v (cubic feet)		18023.70
paint factor, alpha		0.68
vapor density, W _v (lb/cubic foot)		0.0085
daily vapor temperature range, delta T _v (degrees Rankine)		49.04
vapor space expansion factor, K _e		0.1016

Results	# lb/year	# lb/day
Standing Storage Loss	5,681	15.56
Working Loss	91,250	250.00
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	96,931	265.6

Summary Table	
Permit Number	S-1624-66-1
Facility Tank I.D.	-
Tank capacity (bbl)	5,000
Tank diameter (ft)	38.6
Tank shell height (ft)	24
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	5,000
Maximum Annual Fluid Throughput (bbl/year)	1,825,000
Maximum Daily Oil Throughput (bbl/day)	N/A
Maximum Annual Oil Throughput (bbl/year)	N/A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	265.6
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	96,931

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1624-57-1
facility tank I.D.	-
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.5
liquid bulk storage temperature, T _b (°F)	90
is this a constant-level tank? (yes, no)	yes
will flashing losses occur in this tank (only if first-line tank)? (yes, no)	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	38.6
capacity of tank (bbf)	5,000
conical or dome roof? (c, d)	c
shell height of tank (feet)	24
average liquid height (feet)	9
are the roof and shell the same color? (yes, no)	yes
For roof: color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	4
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	3
-----This row only used if shell is different color from roof-----	1

Liquid Input Data		A	B
maximum daily fluid throughput (bbf)			5,000
maximum annual fluid throughput (bbf)			1,825,000
-----This row only used if flashing losses occur in this tank-----			100
-----This row only used if flashing losses occur in this tank-----			38,500
molecular weight, M _w (lb/lb-mol)			100

Calculated Values		A	B
daily maximum ambient temperature, T _{ax} (°F)			77.65
daily minimum ambient temperature, T _{an} (°F)			53.15
daily total solar insolation factor, I (Btu/ft ² -day)			1648.9
atmospheric pressure, P _a (psia)			14.47
water vapor pressure at daily maximum liquid surface temperature (T _{bx}), P _{vx} (psia)	93.4		0.7850
water vapor pressure at daily minimum liquid surface temperature (T _{bn}), P _{vn} (psia)	82.6		0.5580
water vapor pressure at average liquid surface temperature (T _{ba}), P _{va} (psia)	88.0		0.6612
roof outage, H _{ro} (feet)			0.4021
vapor space volume, V _v (cubic feet)			18023.70
paint factor, alpha			0.68
vapor density, W _v (lb/cubic foot)			0.0085
daily vapor temperature range, delta T _v (degrees Rankine)			49.04
vapor space expansion factor, K _e			0.1016

Results	lb/year	lb/day
Standing Storage Loss	5,681	15.56
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	5,681	15.56

Summary Table	
Permit Number	1624-57-1
Facility Tank I.D.	-
Tank capacity (bbf)	5,000
Tank diameter (ft)	38.6
Tank shell height (ft)	24
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbf/day)	5,000
Maximum Annual Fluid Throughput (bbf/year)	1,825,000
Maximum Daily Oil Throughput (bbf/day)	N/A
Maximum Annual Oil Throughput (bbf/year)	N/A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	15.56
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	5,681

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-1624-60-1, '64-1, '65 1, '66-1 and '67-1
facility tank I.D.	--
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.5
liquid bulk storage temperature, T _b (°F)	90
is this a constant-level tank? (yes, no)	no
will flashing losses occur in this tank (only if first-line tank)? (yes, no)	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	21
capacity of tank (bbl)	1,000
conical or dome roof? (c, d)	c
shell height of tank (feet)	18
average liquid height (feet)	9
are the roof and shell the same color? (yes, no)	yes
For roof: color (1: Spec Al, 2: Diff Al, 3: Light, 4: Med, 5: Red, 6: White)	4
condition (1: Good, 2: Poor)	1
--- This row only used if shell is different color from roof ---	3
--- This row only used if shell is different color from roof ---	1

Liquid Input Data	
maximum daily fluid throughput (bbl)	1,000
maximum annual fluid throughput (bb)	365,000
--- This row only used if flashing losses occur in this tank ---	100
--- This row only used if flashing losses occur in this tank ---	36,500
molecular weight, Mw (lb/lb-mol)	100

Calculated Values	A	B
daily maximum ambient temperature, T _{ax} (°F)		77.65
daily minimum ambient temperature, T _{an} (°F)		53.15
daily total solar insolation factor, I (Btu/R ² -day)		1648.9
atmospheric pressure, P _a (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (T _{lx}), P _{vx} (psi)	93.4	0.7850
water vapor pressure at daily minimum liquid surface temperature (T _{ln}), P _{vn} (psi)	82.6	0.5580
water vapor pressure at average liquid surface temperature (T _{la}), P _{va} (psia)	88.0	0.6612
roof outage, H _{ro} (feet)		0.2188
vapor space volume, V _v (cubic feet)		2500.29
paint factor, alpha		0.68
vapor density, W _v (lb/cubic foot)		0.0085
daily vapor temperature range, delta T _v (degrees Rankine)		49.04
vapor space expansion factor, K _e		0.1016

Results	lb/year	lb/day
Standing Storage Loss	788	2.16
Working Loss	18,250	50.00
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	19,038	52.2

Summary Table	
Permit Number	1 and '67-1
Facility Tank I.D.	--
Tank capacity (bbl)	1,000
Tank diameter (ft)	21
Tank shell height (ft)	16
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	1,000
Maximum Annual Fluid Throughput (bbl/year)	365,000
Maximum Daily Oil Throughput (bbl/day)	N/A
Maximum Annual Oil Throughput (bbl/year)	N/A
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	52.2
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	19,038

APPENDIX F
BACT Analysis

BACT Analysis for Steam Generators (S-1327-162-0 through '167-0)

1. BACT Analysis for NO_x Emissions:

Step 1 - Identify All Possible Control Technologies

The District adopted District Rule 4320 on October 16, 2008. The NO_x emission limits requirements in District Rule 4320 are lower than the limits in BACT Guideline 1.2.1 (Steam Generator ≥ 5 MMBtu/hr, Oilfield); which has been rescinded. Therefore, a project specific BACT analysis will be performed to determine BACT for this project. District Rule 4320 includes a compliance option that limits oilfield steam generators with heat input ratings > 20.0 MMBtu/hr to 7 ppm @ 3% O₂ and 9 ppmv for waste gas fired units. These emission limits are Achieved in Practice control technology for the BACT analysis. District Rule 4320 also contains an enhanced schedule with initial and final limit options that allows applicants additional time to meet the requirements of the rule. The enhanced schedule NO_x emission initial limit requirement is 9 ppmv @ 3% O₂ and final limit of 5 ppmv @ 3% O₂. Since this is an enhanced option in the rule, the final limit of 5 ppmv @ 3% O₂ will be considered the Technologically Feasible control technology for the BACT analysis.

The following are possible control technologies:

1. 5 ppmv @ 3% O₂ - Technologically Feasible
2. 7 ppmv @ 3% O₂ - Achieved in Practice
3. 9 ppmv @ 3% O₂ (waste gas fired units) - Technologically Feasible

Step 2 - Eliminate Technologically Infeasible Options

None of the above listed technologies are technologically infeasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. 5 ppmv @ 3% O₂ - Technologically Feasible
2. 7 ppmv @ 3% O₂ - Achieved in Practice
3. 9 ppmv @ 3% O₂ (waste gas fired units) - Technologically Feasible

Step 4 - Cost Effectiveness Analysis

The applicant has proposed a NO_x limit of 5 ppmv @ 3% O₂, therefore a cost analysis for the 5 ppmvd option is not required.

2. BACT Analysis for SO_x Emissions

Step 1 - Identify All Possible Control Technologies

The District adopted District Rule 4320 on October 16, 2008. BACT Guideline 1.2.1 (Steam Generator \geq 5 MMBtu/hr, Oilfield) has been rescinded. Therefore, a project specific BACT analysis will be performed to determine BACT for this project.

The SJVAPCD BACT Clearinghouse Guideline 1.2.1 (1st quarter, 2005) identifies the following technologies:

1. Natural gas, LPG, waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf, or use of a continuously operating SO₂ scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO₂ at stack O₂ - Achieved in Practice

Step 2 - Eliminate Technologically Infeasible Options

None of the above listed technologies are technologically infeasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. **Achieved-In-Practice:** Natural gas, LPG, waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf, or use of a continuously operating SO₂ scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO₂ at stack O₂

Step 4 - Cost Effectiveness Analysis

The applicant has proposed the use of PUC quality natural gas. Since the applicant has chosen the most effective control technology in step 3, a cost effectiveness analysis is not required.

Step 5 - Select BACT

BACT for SO_x is the most effective control option not eliminated in the steps above: natural gas. This BACT is selected and has been proposed by the applicant.

3. BACT Analysis for PM₁₀ Emissions

Step 1 - Identify All Possible Control Technologies

The District adopted District Rule 4320 on October 16, 2008. BACT Guideline 1.2.1 (Steam Generator \geq 5 MMBtu/hr, Oilfield) has been rescinded. Therefore, a project specific BACT analysis will be performed to determine BACT for this project.

The SJVAPCD BACT Clearinghouse Guideline 1.2.1 (1st quarter, 2005) identifies the following technologies:

1. Natural gas, LPG, waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf, or use of a continuously operating SO₂ scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO₂ at stack O₂ - Achieved in Practice

Step 2 - Eliminate Technologically Infeasible Options

None of the above listed technologies are technologically infeasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. Natural gas, LPG, waste gas treated to remove 95% by weight of sulfur compounds or treated such that the sulfur content does not exceed 1 gr of sulfur compounds (as S) per 100 scf, or use of a continuously operating SO₂ scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO₂ at stack O₂ - Achieved in Practice

Step 4 - Cost Effectiveness Analysis

The applicant has proposed the use of natural gas. Since the applicant has chosen the most effective control technology in step 3, a cost effectiveness analysis is not required.

Step 5 - Select BACT

BACT for PM₁₀ is the most effective control option not eliminated in the steps above: natural gas. This BACT is selected and has been proposed by the applicant.

4. BACT Analysis for CO Emissions

Step 1 - Identify All Possible Control Technologies

The District adopted District Rule 4320 on October 16, 2008. BACT Guideline 1.2.1 (Steam Generator ≥ 5 MMBtu/hr, Oilfield) has been rescinded. Therefore, a project specific BACT analysis will be performed to determine BACT for this project.

The SJVAPCD BACT Clearinghouse Guideline 1.2.1 (1st quarter, 2005) identifies the following technologies:

1. 50 ppmvd @ 3% O₂ - Achieved-In-Practice

Step 2 - Eliminate Technologically Infeasible Options

None of the above listed technologies are technologically infeasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. 50 ppmvd @ 3% O₂ - Achieved-In-Practice

Step 4 - Cost Effectiveness Analysis

Only Achieved-In-Practice technologies are identified; therefore, a cost effectiveness analysis is not performed.

Step 5 - Select BACT

Achieved-In-Practice BACT for CO emissions is 50 ppmv @ 3% O₂; therefore, BACT for CO emissions is 50 ppmv @ 3% O₂.

5. BACT Analysis for VOC Emissions

Step 1 - Identify All Possible Control Technologies

The District adopted District Rule 4320 on October 16, 2008. BACT Guideline 1.2.1 (Steam Generator \geq 5 MMBtu/hr, Oilfield) has been rescinded. Therefore, a project specific BACT analysis will be performed to determine BACT for this project.

The SJVAPCD BACT Clearinghouse Guideline 1.2.1 (1st quarter, 2005) identifies the following technologies:

2. Gaseous fuel - Achieved-In-Practice

Step 2 - Eliminate Technologically Infeasible Options

None of the above listed technologies are technologically infeasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. Gaseous fuel - Achieved-In-Practice

Step 4 - Cost Effectiveness Analysis

The applicant has proposed the used of natural gas. Since the applicant has chosen the most effective control technology in step 3, a cost effectiveness analysis is not required.

Step 5 - Select BACT

BACT for VOC is the most effective control option not eliminated in the steps above: gaseous fuel. This BACT is selected and has been proposed by the applicant.

APPENDIX G
HRA/AAQA

San Joaquin Valley Air Pollution Control District Risk Management Review

To: David Torii, AQE– Permit Services
 From: Esteban Gutierrez, AQS– Technical Services
 Date: May 18, 2012
 Facility Name: E&B Natural Resources
 Location: HOC
 Application #(s): S-1624-220-0 thru 225-0
 Project #: S-1121188

A. RMR SUMMARY

RMR Summary				
Categories	Steam GEN (Unit 220-0)	Steam GEN (Unit 221-0)	Steam GEN (Unit 222-0)	Steam GEN (Unit 223-0)
Prioritization Score	0.91	0.91	0.91	0.91
Acute Hazard Index	0.00	0.00	0.00	0.00
Chronic Hazard Index	0.00	0.00	0.00	0.00
Maximum Individual Cancer Risk (10 ⁻⁶)	0.64	0.64	0.64	0.64
T-BACT Required?	No	No	No	No
Special Permit Conditions?	Yes	Yes	Yes	Yes

RMR Summary				
Categories	Steam GEN (Unit 224-0)	Wash tank (Unit 225-0)	Project Totals	Facility Totals
Prioritization Score	0.91	0.01	4.56	>1
Acute Hazard Index	0.00	0.00	0.00	0.02
Chronic Hazard Index	0.00	0.00	0.00	0.73
Maximum Individual Cancer Risk (10 ⁻⁶)	0.64	0.00	3.18	9.63
T-BACT Required?	No	No		
Special Permit Conditions?	Yes	Yes		

Proposed Permit Conditions

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

Unit # 220-0 thru 225-0

1. No Unit shall be closer than 250 meters from any receptor
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

B. RMR REPORT

I. Project Description

Technical Services received a request on May 3, 2012, to perform an Ambient Air Quality Analysis and a Risk Management Review for the installation of 5 new 85MMBtu/hr steam generators and one new 5,000 bbl wash tank..

II. Analysis

Technical Services performed a prioritization using the District's HEARTs database. Since the total project prioritization score was greater than one, a refined health risk assessment was required. Emissions were calculated using Ventura County emission factors for external combustion of natural gas for the steam generators and fugitive oil field emission factors for the wash tank. Emissions were then input into the HEARTs database. The AERMOD model was used, with the parameters outlined below and meteorological data for 2005-2009 from Bakersfield to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the Hot Spots Analysis and Reporting Program (HARP) risk assessment module to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 220-0 thru 224 each			
Source Type	Point	Location Type	Rural
Stack Height (m)	6.1	Closest Receptor (m)	250
Stack Diameter. (m)	1.1	Type of Receptor	Residential
Stack Exit Velocity (m/s)	17.4	Max Hours per Year	8760
Stack Exit Temp. (°K)	388	Fuel Type	NG
Burner Rating (MMBtu/hr)	85		

Analysis Parameters Unit 225-0			
Source Type	Area	Location Type	Urban
X-Length (m)	30	Closest Receptor (m)	250
Y-Length (m)	5	Type of Receptor	Residential
Release Height (m)	5	Pollutant Type	VOC
		Emission Rate yr	87.6

Technical Services performed modeling for criteria pollutants CO, NO_x, SO_x and PM₁₀; as well as a RMR. The emission rates used for criteria pollutant modeling were 6.3 lb/hr CO, 0.52 lb/hr NO_x, 0.26 lb/hr SO_x, and 0.30 lb/hr PM₁₀. These emissions are for each steam Generator, emissions from the tank are all VOC which are not considered For AAQA.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	NA	X	NA	X	X
NO _x	NA	X	X	X	Pass
SO _x	NA	NA	X	NA	Pass
PM ₁₀	X	X	X	NA	Pass
PM _{2.5}	X	X	X	NA	Pass

*Results were taken from the attached PSD spreadsheet.

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

III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk factor associated with the project is less than 1.0 in a million for each unit. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on page 1 of this report must be included for this proposed unit.

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

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Toxic emissions summary
- D. Prioritization score
- E. Facility Summary

APPENDIX H
Compliance Certification

E&B Natural Resources

May 7, 2012

Mr. Leonard Scandura
Manager of Permit Services
San Joaquin Valley Unified APCD
34946 Flyover Court
Bakersfield, CA 93308

**Subject: Project Number 1121188 – (S-1624) Five New Steam Generators -
Compliance Certification**

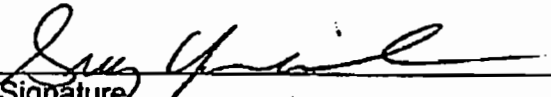
Dear Mr. Scandura:

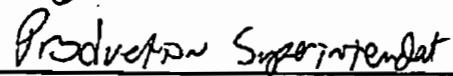
I hereby certify that all major Stationary Sources owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in California, which are subject to emission limitations, are in compliance or on a schedule for compliance with all applicable emission limitations and standards.

Alternative siting analysis is required for any project, which constitutes a New Major Source or a Federal Major Modification.

The current project occurs at existing facilities. The applicant proposes to operate a steam generator to thermally enhance existing wells at the site.

Since the project will provide thermal enhancement to be used at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.


Signature


Title

APPENDIX I
CEQA/BPS

BPS Analysis

Step 1 - Identify BPS for New Steam Generators

Very High Efficiency Steam Generator Design With:

1. A convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%.

And

2. Variable frequency drive high efficiency electrical motors driving the blower and water pump.

Step 2 - Select BPS

Very High Efficiency Steam Generator Design With:

1. A convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer) or a manufacturer's overall thermal efficiency rating of 88%.

And

2. Variable frequency drive high efficiency electrical motors driving the blower and water pump.

Step 3

The following conditions will be included on the permit to ensure compliance with BPS requirements:

- This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA] N
- This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA] N

APPENDIX J

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1624-13-9

LEGAL OWNER OR OPERATOR: E&B NATURAL RESOURCES MGMT
MAILING ADDRESS: ATTN: GREG YOUNGBLOOD
1600 NORRIS ROAD
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL CENTRAL
CA

SECTION: 05 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 27.5 MMBTU/HR STRUTHERS NATURAL GAS/LPG/CASING GAS-FIRED STEAM GENERATOR WITH A GIDEON ULTRA LOW NOX BURNER, O2 CONTROLLER AND VARIABLE FLUE GAS RECIRCULATION (FGR) OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN THE E&B HEAVY OIL CENTRAL: LOWER NOX EMISSIONS TO 7 PPMV @ 3% O2

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. {1407} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
5. This steam generator is permitted to operate at various unspecified locations within the E&B Heavy Oil Central Stationary Source. [District Rule 2201]
6. 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]
7. This equipment shall not be located within 1,000 feet of any K-12 school. [District Rule 2201 and CHSC 42301.6]

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

8-1624-13-9: May 23 2012 8:26AM - TORID : Joint Inspection NOT Required

8. The unit shall only be fired on PUC quality natural gas, LPG or casing gas. [District Rule 2201]
9. The sulfur content of fuel combusted shall not exceed 5 grains-S per 100 scf. [District Rule 4320]
10. Emissions from the combustion of natural gas/casing gas, except during start up, shut down, or refractory curing, shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.0085 lb-NO_x/MMBtu, 0.002 lb-SO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
11. Emissions from the combustion of liquefied petroleum gas (LPG), except during start up, shut down, or refractory curing, shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.0085 lb-NO_x/MMBtu, 0.0143 lb-SO_x/MMBtu, 0.0066 lb-PM₁₀/MMBtu, 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
12. Emissions rates shall not exceed any of the following: NO_x (as NO₂) 7.3 lb/day and 2650 lb/year. [District Rule 2201]
13. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320]
14. If the unit is fired on natural gas/casing gas and compliance with the 0.002 lb-SO_x/MMBtu emission limit is achieved through 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 quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070]
15. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas/casing gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]
16. Source testing shall be required to measure NO_x, and CO emissions when firing on LPG for a duration of over 100 hours during the 12-month period previous to the source test anniversary date. After demonstrating compliance on two (2) consecutive annual source tests when unit is fired on LPG, 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]
17. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070]
18. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rules 4306 and 4320]
19. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rule 4306 and 4320]
20. A source test to demonstrate compliance with the NO_x and CO emission limits shall be performed within 60 days of recommencing operation of the dormant emissions unit. [District Rule 2201, 4306 and 4320]
21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
22. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
23. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320]

24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]
25. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]
27. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
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, 4306, and 4320]
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 performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320]
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, 4306, and 4320]
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, 4306, and 4320]
32. Permittee shall maintain accurate records of each location the steam generator operates, the dates of operation at each location, and the quantity of fuel consumed at each location. [District Rule 2201]
33. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4305, 4306, and 4320]
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]
36. The permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1624-56-3

LEGAL OWNER OR OPERATOR: E&B NATURAL RESOURCES MGMT
MAILING ADDRESS: ATTN: GREG YOUNGBLOOD
1600 NORRIS ROAD
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL CENTRAL
CA

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 5,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #1: INSTALL VAPOR CONTROL SYSTEM SERVED BY PERMIT EXEMPT HEATER(S) TO BE SHARED WITH TANKS S-1624-57-3, '60-3, '64-3, '65-3, '66-3 AND '67-3

CONDITIONS

1. Tank shall vent only to an operational vapor recovery system. [District Rule 2201]
2. This tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of District Rule 4623. [District Rules 2201 and 4623]
3. The vapor control system shall activate and operate at a pressure setting lower than the settings of the pressure relief valves (PRVs) on the individual tanks being served. [District Rule 2201]
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]
5. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. A gas leak is a violation of this permit. [District Rules 2201 and 4623]

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-1624-56-3 : May 23 2012 8:25AM - TDRID : Joint Inspection NOT Required

6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]
7. VOC fugitive emissions from the components in gas and light oil service on tank shall not exceed 0.24 lb/day. [District Rule 2201]
8. Permittee shall maintain accurate component count for tank according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors < 10,000 ppmv. Permittee shall update such records when new components are approved and installed. [District Rule 2201]
9. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201]
10. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623]
11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623]
12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623]
13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623]
14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule [District Rule 4623]
15. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623]
16. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623]
17. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623]

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

18. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623]
19. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623]
20. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623]
21. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623]
22. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623]
23. During sludge removal from a tank containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]
24. Permittee shall only transport removed sludge from a tank containing an organic liquid with a TVP of 1.5 psia or greater, in closed, liquid leak-free containers. [District Rule 4623]
25. Permittee shall store removed sludge from a tank containing an organic liquid with a TVP of 1.5 or greater, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 2020 and 4623]
26. Permittee shall maintain all records of required monitoring data and support information for a period of five years and shall be made available to the District for inspection upon request. [District Rules 2201 and 4623]
27. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1624-57-3

LEGAL OWNER OR OPERATOR: E&B NATURAL RESOURCES MGMT
MAILING ADDRESS: ATTN: GREG YOUNGBLOOD
1600 NORRIS ROAD
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL CENTRAL
CA

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 5,000 BBL FIXED ROOF PETROLEUM WASH TANK, MIDWAY PREMIER #2: CONNECT TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1624-56

CONDITIONS

1. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]
2. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201 and 4623]
3. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]
4. VOC fugitive emissions from the components in gas and light oil service on tank shall not exceed 0.24 lb/day. [District Rule 2201]
5. Permittee shall maintain accurate component count for tank according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors < 10,000 ppmv. Permittee shall update such records when new components are approved and installed. [District Rule 2201]

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-1624-57-3 : May 22 2012 8:25AM - TORID : Joint Inspection NOT Required

6. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201]
7. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623]
8. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623]
9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623]
10. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623]
11. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule [District Rule 4623]
12. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623]
13. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623]
14. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623]
15. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623]
16. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623]
17. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623]

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

18. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623]
19. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623]
20. During sludge removal from a tank containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]
21. Permittee shall only transport removed sludge from a tank containing an organic liquid with a TVP of 1.5 psia or greater, in closed, liquid leak-free containers. [District Rule 4623]
22. Permittee shall store removed sludge from a tank containing an organic liquid with a TVP of 1.5 or greater, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 2020 and 4623]
23. Permittee shall maintain all records of required monitoring data and support information for a period of five years and shall be made available to the District for inspection upon request. [District Rules 2201 and 4623]
24. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
25. ATCs S-1624-56-3 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1624-60-3

LEGAL OWNER OR OPERATOR: E&B NATURAL RESOURCES MGMT
MAILING ADDRESS: ATTN: GREG YOUNGBLOOD
1600 NORRIS ROAD
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL CENTRAL
CA

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #11: CONNECT TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1624-56

CONDITIONS

1. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]
2. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201 and 4623]
3. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]
4. VOC fugitive emissions from the components in gas and light oil service on tank shall not exceed 0.24 lb/day. [District Rule 2201]
5. Permittee shall maintain accurate component count for tank according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors < 10,000 ppmv. Permittee shall update such records when new components are approved and installed. [District Rule 2201]

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-1624-60-3: May 23 2012 8:25AM - TORID : Joint Inspection NOT Required

6. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201]
7. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623]
8. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623]
9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623]
10. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623]
11. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule [District Rule 4623]
12. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623]
13. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623]
14. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623]
15. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623]
16. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623]
17. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623]

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

18. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623]
19. During sludge removal from a tank containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]
20. Permittee shall only transport removed sludge from a tank containing an organic liquid with a TVP of 1.5 psia or greater, in closed, liquid leak-free containers. [District Rule 4623]
21. Permittee shall store removed sludge from a tank containing an organic liquid with a TVP of 1.5 or greater, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 2020 and 4623]
22. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623]
23. Permittee shall maintain all records of required monitoring data and support information for a period of five years and shall be made available to the District for inspection upon request. [District Rules 2201 and 4623]
24. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
25. ATCs S-1624-56-3 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1624-64-3

LEGAL OWNER OR OPERATOR: E&B NATURAL RESOURCES MGMT
MAILING ADDRESS: ATTN: GREG YOUNGBLOOD
1600 NORRIS ROAD
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL CENTRAL
CA

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #27: CONNECT TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1624-56

CONDITIONS

1. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]
2. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201 and 4623]
3. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]
4. VOC fugitive emissions from the components in gas and light oil service on tank shall not exceed 0.24 lb/day. [District Rule 2201]
5. Permittee shall maintain accurate component count for tank according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors < 10,000 ppmv. Permittee shall update such records when new components are approved and installed. [District Rule 2201]

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-1624-64-3 : May 23 2012 8:25AM - TORID : Joint Inspection NOT Required

6. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201]
7. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623]
8. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623]
9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623]
10. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623]
11. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule [District Rule 4623]
12. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623]
13. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623]
14. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623]
15. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623]
16. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623]
17. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623]

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

18. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623]
19. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623]
20. During sludge removal from a tank containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]
21. Permittee shall only transport removed sludge from a tank containing an organic liquid with a TVP of 1.5 psia or greater, in closed, liquid leak-free containers. [District Rule 4623]
22. Permittee shall store removed sludge from a tank containing an organic liquid with a TVP of 1.5 or greater, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 2020 and 4623]
23. Permittee shall maintain all records of required monitoring data and support information for a period of five years and shall be made available to the District for inspection upon request. [District Rules 2201 and 4623]
24. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
25. ATCs S-1624-56-3 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1624-65-3

LEGAL OWNER OR OPERATOR: E&B NATURAL RESOURCES MGMT
MAILING ADDRESS: ATTN: GREG YOUNGBLOOD
1600 NORRIS ROAD
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL CENTRAL
CA

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #34: CONNECT TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1624-56

CONDITIONS

1. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]
2. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201 and 4623]
3. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]
4. VOC fugitive emissions from the components in gas and light oil service on tank shall not exceed 0.24 lb/day. [District Rule 2201]
5. Permittee shall maintain accurate component count for tank according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors < 10,000 ppmv. Permittee shall update such records when new components are approved and installed. [District Rule 2201]

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-1624-65-3 : May 23 2012 8:25AM - TORID : Joint Inspection NOT Required

6. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201]
7. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623]
8. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623]
9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623]
10. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623]
11. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule [District Rule 4623]
12. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623]
13. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623]
14. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623]
15. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623]
16. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623]
17. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623]

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

18. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623]
19. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623]
20. During sludge removal from a tank containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]
21. Permittee shall only transport removed sludge from a tank containing an organic liquid with a TVP of 1.5 psia or greater, in closed, liquid leak-free containers. [District Rule 4623]
22. Permittee shall store removed sludge from a tank containing an organic liquid with a TVP of 1.5 or greater, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 2020 and 4623]
23. Permittee shall maintain all records of required monitoring data and support information for a period of five years and shall be made available to the District for inspection upon request. [District Rules 2201 and 4623]
24. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
25. ATCs S-1624-56-3 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1624-66-3

LEGAL OWNER OR OPERATOR: E&B NATURAL RESOURCES MGMT
MAILING ADDRESS: ATTN: GREG YOUNGBLOOD
1600 NORRIS ROAD
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL CENTRAL
CA

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #35: CONNECT TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1624-56

CONDITIONS

1. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]
2. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201 and 4623]
3. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]
4. VOC fugitive emissions from the components in gas and light oil service on tank shall not exceed 0.24 lb/day. [District Rule 2201]
5. Permittee shall maintain accurate component count for tank according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors < 10,000 ppmv. Permittee shall update such records when new components are approved and installed. [District Rule 2201]

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

8-1924-58-3; May 23 2012 8:25AM - TORID : Joint Inspection NOT Required

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

6. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201]
7. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623]
8. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623]
9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623]
10. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623]
11. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule [District Rule 4623]
12. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623]
13. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623]
14. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623]
15. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623]
16. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623]
17. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623]

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

18. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623]
19. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623]
20. During sludge removal from a tank containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]
21. Permittee shall only transport removed sludge from a tank containing an organic liquid with a TVP of 1.5 psia or greater, in closed, liquid leak-free containers. [District Rule 4623]
22. Permittee shall store removed sludge from a tank containing an organic liquid with a TVP of 1.5 or greater, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 2020 and 4623]
23. Permittee shall maintain all records of required monitoring data and support information for a period of five years and shall be made available to the District for inspection upon request. [District Rules 2201 and 4623]
24. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
25. ATCs S-1624-56-3 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1624-67-3

LEGAL OWNER OR OPERATOR: E&B NATURAL RESOURCES MGMT
MAILING ADDRESS: ATTN: GREG YOUNGBLOOD
1600 NORRIS ROAD
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL CENTRAL
CA

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 1,000 BBL FIXED ROOF PETROLEUM STORAGE TANK, MIDWAY PREMIER #99: CONNECT TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1624-56

CONDITIONS

1. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]
2. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201 and 4623]
3. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]
4. VOC fugitive emissions from the components in gas and light oil service on tank shall not exceed 0.24 lb/day. [District Rule 2201]
5. Permittee shall maintain accurate component count for tank according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors < 10,000 ppmv. Permittee shall update such records when new components are approved and installed. [District Rule 2201]

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-1624-67-3: May 23 2012 8:25AM - TORID: Joint Inspection NOT Required

6. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201]
7. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623]
8. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623]
9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623]
10. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623]
11. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule [District Rule 4623]
12. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623]
13. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623]
14. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623]
15. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623]
16. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623]
17. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623]

18. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623]
19. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623]
20. During sludge removal from a tank containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]
21. Permittee shall only transport removed sludge from a tank containing an organic liquid with a TVP of 1.5 psia or greater, in closed, liquid leak-free containers. [District Rule 4623]
22. Permittee shall store removed sludge from a tank containing an organic liquid with a TVP of 1.5 or greater, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 2020 and 4623]
23. Permittee shall maintain all records of required monitoring data and support information for a period of five years and shall be made available to the District for inspection upon request. [District Rules 2201 and 4623]
24. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
25. ATCs S-1624-56-3 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1624-220-0

LEGAL OWNER OR OPERATOR: E&B NATURAL RESOURCES MGMT
MAILING ADDRESS: ATTN: GREG YOUNGBLOOD
1600 NORRIS ROAD
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL CENTRAL
CA

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN THE E&B HEAVY OIL CENTRAL (GENERATOR 85B)

CONDITIONS

1. No Unit shall be closer than 250 meters from any receptor. [District Rule 4102]
2. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]
4. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]
5. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3]
6. 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]
7. The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320]
8. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320]

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-1624-220-0 : May 23 2012 8:25AM - TORID : Joint Inspection NOT Required

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

9. Emission rates, except during startup and shutdown shall not exceed: NO_x (as NO_x): 5 ppmvd @ 3% O₂ or 0.0061 lb-NO_x/MMBtu. [District Rule 2201, 4305, 4306, and 4320]
10. Emission rates shall not exceed any of the following: SO_x:0.00285 lb/MMBtu; PM₁₀: 0.0035 lb/MMBtu; CO: 50 ppmvd @ 3% O₂ or 0.0370 lb-CO/MMBtu; or VOC: 0.0055 lb/MMBtu. [District Rule 2201]
11. Emissions rate of NO_x shall not exceed 16.5 lb/day nor 4542 lb/yr. [District Rule 2201]
12. 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 4320]
13. A source test to demonstrate compliance with NO_x and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320]
14. 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 2201, 4305, 4306 and 4320]
15. 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]
16. 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 2201, 4305, 4306 and 4320]
17. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 2201, 4305, 4306, 4320]
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
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 analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
21. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320]

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

22. All NO_x, CO, and O₂ 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 NO_x, CO, and O₂ 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 sample 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 4102, 4305, 4306 and 4320]
23. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]
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. Unless otherwise specified in the PTO, 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. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320]
25. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201]
26. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]
27. If the steam generator 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]
28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320]
29. 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]
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. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010]
32. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]
33. Prior to operating equipment under this Authority to Construct, permittee shall surrender NO_x emission reduction credits for the following quantity of emissions: 1st quarter - 5,129 lb, 2nd quarter - 5,129 lb, 3rd quarter - 5,129 lb, and fourth quarter - 5,129 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule]
34. ERC Certificate Numbers S-3786-2, S-3797-2 and 'S-3789-2 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

35. ATCs S-1624-13-9, '56-3, '57-3, '60-3, '64-3, '65-3, '66-3 and '67-3 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]
36. PTOs S-1624-27, '106, '107, '108 and '149 shall be canceled prior to or concurrently with this ATC. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1624-221-0

LEGAL OWNER OR OPERATOR: E&B NATURAL RESOURCES MGMT
MAILING ADDRESS: ATTN: GREG YOUNGBLOOD
1600 NORRIS ROAD
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL CENTRAL
CA

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN THE E&B HEAVY OIL CENTRAL (GENERATOR 85C)

CONDITIONS

1. No Unit shall be closer than 250 meters from any receptor. [District Rule 4102]
2. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]
4. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]
5. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3]
6. 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]
7. The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320]
8. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320]

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-1624-221-0 : May 23 2012 8:25AM - TORID : Joint Inspection NOT Required

9. Emission rates, except during startup and shutdown shall not exceed: NO_x (as NO_x): 5 ppmvd @ 3% O₂ or 0.0061 lb-NO_x/MMBtu. [District Rule 2201, 4305, 4306, and 4320]
10. Emission rates shall not exceed any of the following: SO_x:0.00285 lb/MMBtu; PM₁₀: 0.0035 lb/MMBtu; CO: 50 ppmvd @ 3% O₂ or 0.0370 lb-CO/MMBtu; or VOC: 0.0055 lb/MMBtu. [District Rule 2201]
11. Emissions rate of NO_x shall not exceed 16.5 lb/day nor 4542 lb/yr. [District Rule 2201]
12. 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 4320]
13. A source test to demonstrate compliance with NO_x and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320]
14. 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 2201, 4305, 4306 and 4320]
15. 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]
16. 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 2201, 4305, 4306 and 4320]
17. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 2201, 4305, 4306, 4320]
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
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 analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
21. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320]

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

22. All NO_x, CO, and O₂ 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 NO_x, CO, and O₂ 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 sample 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 4102, 4305, 4306 and 4320]
23. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]
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. Unless otherwise specified in the PTO, 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. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320]
25. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201]
26. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]
27. If the steam generator 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]
28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320]
29. 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]
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. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010]
32. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]
33. Prior to operating equipment under this Authority to Construct, permittee shall surrender NO_x emission reduction credits for the following quantity of emissions: 1st quarter - 5,129 lb, 2nd quarter - 5,129 lb, 3rd quarter - 5,129 lb, and fourth quarter - 5,129 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule]
34. ERC Certificate Numbers S-3786-2, S-3797-2 and 'S-3789-2 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

35. ATCs S-1624-13-9, '56-3, '57-3, '60-3, '64-3, '65-3, '66-3 and '67-3 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]
36. PTOs S-1624-27, '106, '107, '108 and '149 shall be canceled prior to or concurrently with this ATC. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1624-222-0

LEGAL OWNER OR OPERATOR: E&B NATURAL RESOURCES MGMT
MAILING ADDRESS: ATTN: GREG YOUNGBLOOD
1600 NORRIS ROAD
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL CENTRAL
CA

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN THE E&B HEAVY OIL CENTRAL (GENERATOR 85D)

CONDITIONS

1. No Unit shall be closer than 250 meters from any receptor. [District Rule 4102]
2. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]
4. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]
5. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3]
6. 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]
7. The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320]
8. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320]

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-1624-222-0 : May 23 2012 8:25AM - TORID : Joint Inspection NOT Required

9. Emission rates, except during startup and shutdown shall not exceed: NO_x (as NO_x): 5 ppmvd @ 3% O₂ or 0.0061 lb-NO_x/MMBtu. [District Rule 2201, 4305, 4306, and 4320]
10. Emission rates shall not exceed any of the following: SO_x:0.00285 lb/MMBtu; PM₁₀: 0.0035 lb/MMBtu; CO: 50 ppmvd @ 3% O₂ or 0.0370 lb-CO/MMBtu; or VOC: 0.0055 lb/MMBtu. [District Rule 2201]
11. Emissions rate of NO_x shall not exceed 16.5 lb/day nor 4542 lb/yr. [District Rule 2201]
12. 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 4320]
13. A source test to demonstrate compliance with NO_x and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320]
14. 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 2201, 4305, 4306 and 4320]
15. 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]
16. 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 2201, 4305, 4306 and 4320]
17. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 2201, 4305, 4306, 4320]
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
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 analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
21. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320]

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

22. All NO_x, CO, and O₂ 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 NO_x, CO, and O₂ 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 sample 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 4102, 4305, 4306 and 4320]
23. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]
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. Unless otherwise specified in the PTO, 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. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320]
25. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201]
26. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]
27. If the steam generator 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]
28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320]
29. 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]
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. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010]
32. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]
33. Prior to operating equipment under this Authority to Construct, permittee shall surrender NO_x emission reduction credits for the following quantity of emissions: 1st quarter - 5,129 lb, 2nd quarter - 5,129 lb, 3rd quarter - 5,129 lb, and fourth quarter - 5,129 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule]
34. ERC Certificate Numbers S-3786-2, S-3797-2 and 'S-3789-2 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

35. ATCs S-1624-13-9, '56-3, '57-3, '60-3, '64-3, '65-3, '66-3 and '67-3 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]
36. PTOs S-1624-27, '106, '107, '108 and '149 shall be canceled prior to or concurrently with this ATC. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1624-223-0

LEGAL OWNER OR OPERATOR: E&B NATURAL RESOURCES MGMT
MAILING ADDRESS: ATTN: GREG YOUNGBLOOD
1600 NORRIS ROAD
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL CENTRAL
CA

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN THE E&B HEAVY OIL CENTRAL (GENERATOR 85E)

CONDITIONS

1. No Unit shall be closer than 250 meters from any receptor. [District Rule 4102]
2. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]
4. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]
5. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3]
6. 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]
7. The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320]
8. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320]

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-1624-223-0 : May 23 2012 8:25AM - TORID : Joint Inspection NOT Required

9. Emission rates, except during startup and shutdown shall not exceed: NO_x (as NO_x): 5 ppmvd @ 3% O₂ or 0.0061 lb-NO_x/MMBtu. [District Rule 2201, 4305, 4306, and 4320]
10. Emission rates shall not exceed any of the following: SO_x:0.00285 lb/MMBtu; PM₁₀: 0.0035 lb/MMBtu; CO: 50 ppmvd @ 3% O₂ or 0.0370 lb-CO/MMBtu; or VOC: 0.0055 lb/MMBtu. [District Rule 2201]
11. Emissions rate of NO_x shall not exceed 16.5 lb/day nor 4542 lb/yr. [District Rule 2201]
12. 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 4320]
13. A source test to demonstrate compliance with NO_x and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320]
14. 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 2201, 4305, 4306 and 4320]
15. 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]
16. 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 2201, 4305, 4306 and 4320]
17. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 2201, 4305, 4306, 4320]
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
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 analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
21. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320]

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

22. All NO_x, CO, and O₂ 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 NO_x, CO, and O₂ 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 sample 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 4102, 4305, 4306 and 4320]
23. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]
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. Unless otherwise specified in the PTO, 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. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320]
25. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201]
26. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]
27. If the steam generator 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]
28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320]
29. 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]
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. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010]
32. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]
33. Prior to operating equipment under this Authority to Construct, permittee shall surrender NO_x emission reduction credits for the following quantity of emissions: 1st quarter - 5,129 lb, 2nd quarter - 5,129 lb, 3rd quarter - 5,129 lb, and fourth quarter - 5,129 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule]
34. ERC Certificate Numbers S-3786-2, S-3797-2 and 'S-3789-2 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

35. ATCs S-1624-13-9, '56-3, '57-3, '60-3, '64-3, '65-3, '66-3 and '67-3 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]
36. PTOs S-1624-27, '106, '107, '108 and '149 shall be canceled prior to or concurrently with this ATC. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1624-224-0

LEGAL OWNER OR OPERATOR: E&B NATURAL RESOURCES MGMT
MAILING ADDRESS: ATTN: GREG YOUNGBLOOD
1600 NORRIS ROAD
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL CENTRAL
CA

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN THE E&B HEAVY OIL CENTRAL (GENERATOR 85F)

CONDITIONS

1. No Unit shall be closer than 250 meters from any receptor. [District Rule 4102]
2. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]
4. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]
5. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3]
6. 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]
7. The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320]
8. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320]

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-1624-224-0 : May 23 2012 8:25AM - TORID : Joint Inspection NOT Required

9. Emission rates, except during startup and shutdown shall not exceed: NO_x (as NO_x): 5 ppmvd @ 3% O₂ or 0.0061 lb-NO_x/MMBtu. [District Rule 2201, 4305, 4306, and 4320]
10. Emission rates shall not exceed any of the following: SO_x:0.00285 lb/MMBtu; PM₁₀: 0.0035 lb/MMBtu; CO: 50 ppmvd @ 3% O₂ or 0.0370 lb-CO/MMBtu; or VOC: 0.0055 lb/MMBtu. [District Rule 2201]
11. Emissions rate of NO_x shall not exceed 16.5 lb/day nor 4542 lb/yr. [District Rule 2201]
12. 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 4320]
13. A source test to demonstrate compliance with NO_x and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320]
14. 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 2201, 4305, 4306 and 4320]
15. 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]
16. 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 2201, 4305, 4306 and 4320]
17. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 2201, 4305, 4306, 4320]
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
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 analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
21. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320]

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

22. All NO_x, CO, and O₂ 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 NO_x, CO, and O₂ 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 sample 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 4102, 4305, 4306 and 4320]
23. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]
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. Unless otherwise specified in the PTO, 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. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320]
25. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201]
26. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]
27. If the steam generator 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]
28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320]
29. 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]
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. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010]
32. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]
33. Prior to operating equipment under this Authority to Construct, permittee shall surrender NO_x emission reduction credits for the following quantity of emissions: 1st quarter - 5,129 lb, 2nd quarter - 5,129 lb, 3rd quarter - 5,129 lb, and fourth quarter - 5,129 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule]
34. ERC Certificate Numbers S-3786-2, S-3797-2 and S-3789-2 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

35. ATCs S-1624-13-9, '56-3, '57-3, '60-3, '64-3, '65-3, '66-3 and '67-3 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]
36. PTOs S-1624-27, '106, '107, '108 and '149 shall be canceled prior to or concurrently with this ATC. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1624-225-0

LEGAL OWNER OR OPERATOR: E&B NATURAL RESOURCES MGMT

MAILING ADDRESS: ATTN: GREG YOUNGBLOOD
1600 NORRIS ROAD
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL CENTRAL
CA

SECTION: 32 TOWNSHIP: 27S RANGE: 27E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF PETROLEUM STORAGE TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON TANK S-1624-56 (MIDWAY PREMIER)

CONDITIONS

1. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623]
2. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. A gas or liquid leak is a violation of this permit. [District Rules 2201 and 4623]
3. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]
4. VOC fugitive emissions from the components in gas and light oil service on tank shall not exceed 0.40 lb/day. [District Rule 2201]
5. Permittee shall maintain accurate component count for tank according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors < 10,000 ppmv. Permittee shall update such records when new components are approved and installed. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

6-1624-225-0 : May 23 2012 8:25AM - TORID : Joint Inspection NOT Required

6. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201]
7. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623]
8. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623]
9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623]
10. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623]
11. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule [District Rule 4623]
12. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623]
13. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623]
14. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623]
15. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623]
16. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623]
17. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623]

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

18. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623]
19. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623]
20. During sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]
21. Permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623]
22. Permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623]
23. Permittee shall maintain all records of required monitoring data and support information for a period of five years and shall be made available to the District for inspection upon request. [District Rules 2201 and 4623]
24. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
25. ATCs S-1624-56-3 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

DRAFT

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial data. This includes not only sales and purchases but also expenses and income. The document provides a detailed list of items that should be tracked, such as inventory levels, customer orders, and supplier invoices. It also outlines the procedures for recording these transactions, including the use of standardized forms and the importance of double-checking entries for accuracy.

The second part of the document focuses on the analysis of the recorded data. It describes various methods for identifying trends and anomalies in the financial records. This includes comparing current performance with historical data and industry benchmarks. The document also discusses the importance of regular audits to detect and prevent errors or fraud. It provides a step-by-step guide for conducting an audit, from the selection of samples to the final reporting of findings. The document concludes by emphasizing the value of accurate financial records in making informed business decisions and ensuring long-term success.