San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

APR 10 2013

Mr. Jerry Frost
Vintage Production California LLC
9600 Ming Avenue, Suite 300
Bakersfield, CA 93311

Re: Notice of Preliminary Decision – ATC / Certificate of Conformity (Title V Significant Modification)
Facility # S-1327
Project # S-1123645

Dear Mr. Frost:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Vitage Production California LLC's heavy oil production stationary source in the western Kern County fields, which has been issued a Title V permit.Vintage Production California is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The proposed ATCs are subject to the requirements of Rule 2201 – New and Modified Stationary Source Review and Rule 2410 – Prevention of Significant Deterioration.

Vintage is requesting Authorities to Construct (ATC) for six (6) new natural gas-fired 85 MMBtu/hr steam generators and three (3) new natural/waste gas-fired 62.5 MMBtu/hr steam generators.

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

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

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

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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Sincerely,

David Warner
Director of Permit Services

Enclosures

cc: distribution list

Bakersfield Californian

**NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
AN AUTHORITY TO CONSTRUCT AND
THE PROPOSED SIGNIFICANT MODIFICATION OF FEDERALLY
MANDATED OPERATING PERMIT AND PREVENTION OF SIGNIFICANT
DETERIORATION NOTIFICATION**

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 Vintage Production California, LLC operation in the Kern Front Oilfield in CA, which has been issued a Title V permit. Vintage Production California, LLC is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The proposed ATCs are subject to the requirements of Rule 2201 – New and Modified Stationary Source Review and Rule 2410 – Prevention of Significant Deterioration.

Vintage is requesting Authorities to Construct (ATC) for six (6) new natural gas-fired 85 MMBtu/hr steam generators and three (3) new natural/waste gas-fired 62.5 MMBtu/hr steam generators. The proposed modifications will result in a significant emissions increase, subject to the requirements of Rule 2410, of 356,524 tons-CO2e/year of CO_2e. There is no increment consumption of any pollutant.

The analysis of the legal and factual basis for this proposed action, Project #S-1123499, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and at any District office. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested, the District will hold a public hearing regarding proposed issuance of the subject ATCs. For additional information, please contact the District at (661) 392-5500.

Written comments on the proposed project must be submitted by May 15, 2013 to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308-9725.**

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Reauthorization of 8 steam generators and one new steam generator

Facility Name:	Vintage Production California LLC	Date:	April 3, 2013
Mailing Address:	9600 Ming Ave., Suite 300	Engineer:	Richard Edgehill
	Bakersfield, CA 93311	Lead Engineer:	Allan Phillips
Contact Person:	Jerry Frost and Nick Diercks (Enviro Tech Consultants)		
Telephone:	(661) 869-8000 (JF), (661) 377-0073 #13 (ND), (661) 345-8166 (ND, cell)		
Fax:	(661) 869-8059		
E-Mail:	Jerry_Frost@oxy.com		
Application #(s):	S-1327-141-2 through 145-2, S-1327-141-3 through '-145-3, '-162-1 through '-164-1, and '-186-0		
Project #:	1123645		
Deemed Complete:	December 5, 2012		

I. Proposal

Vintage Production California (VPC) has requested ATCs to reauthorize five (5) 85 MMBtu/hr steam generators (S-1327-141 through '-145) and three (3) 62.5 MMBtu/hr steam generators (S-1327-162 through '-164) with an additional location not included in the previous applications, (Sections 34, T25S, R20E) near Lost Hills, and a lower PM10 emissions factor of 0.003 lb/MMBtu for steam generators S-1327-141 through '-145. A new 85 MMBtu/hr steam generator will also be authorized (ATC S-1327-186-0). Additionally, PSD requirements of Rule 2410 will be addressed.

Note that steam generators S-1327-141 through '-145 were previously authorized twice with two different netting options (see table below):

Netting Option	Proposed ATCs	Previous ATCs and project #	Emissions reductions
#1	'-141-2 through '-145-2	'-141-1 through '-145-1 (project 1114449)	Lower NOx limit from 9 ppmv @ 3% O2 to 7 ppmv @ 3% O2 for S-1327-155 through 158, cancel tank PTOs S-1327-107, '-111, and '-115, cancel steam generator '-116
# 2	'-141-3 through '-145-3	'-141-0 through '-145-0 (project 1110750)	Lower NOx limit from 9 ppmv @ 3% O2 to 7 ppmv @ 3% O2 for S-1327-155 through 158, cancel tank PTOs S-1327-107, '-111, and '-115, cancel steam generator PTOs S-1327-116, '-120, '-137, and 138

For ATCs S-1327-141 through '-145, applicant has requested two sets of five ATCs, one for each option.

The project is a Federal Major Modification requiring BACT, offsets, and public notice.

Disposition of Outstanding ATCs

ATC S-1327-141-1 through '-145-1 and '-162-0 through '-164-0 will be canceled and replaced by the proposed ATCs. PTOs S-1327-107-0, '-111-0, '-115-0, '-116-0, '-120-0, '-137-0, and '-138-0 (to be surrendered) are included in **Attachment I.**

VPC received their Title V Permit on December 31, 2012. The project is a Federal Major Modification and therefore it is classified as a Title V Significant Modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. VPC must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410	Prevention of Significant Deterioration (June 16, 2011)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
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) – **not applicable** to new units
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)--**not applicable** – facility is located west of Highway 5
Rule 4405	NOx from Existing Oilfield Steam Generators (December 17, 1992) – **not applicable** to new units
Rule 4406	SOx from Oilfield Steam Generators (December 17, 1992) – **not applicable** to new units
Rule 4623	Storage of Organic Liquids (05/19/05)

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 steam generators were previously authorized at the following locations:

PTO#	Location
S-1327-141 through '-145	SW1/4 of the SE1/4 of the NE1/4 of Section 11, T26S, R20E
S-1327-162-0 through '-164	NW Section 2, T26S, R20E

For this project all of the steam generators will be authorized to operate at the following locations within VPC's heavy oil western stationary source near Lost Hills, CA (new locations in bold type):

PTO#	Location
S-1327-141 through '-145 S-1327-186-0	SE 1/4 of the NE 1/4 Section of Section 11, T26S, R 20E (South Plant) and the SW ¼ of the SE ¼ Section of Section 34, T25S, R 20E (North Plant)
S-1327-162 through '-164	SW ¼ of the NW ¼ Section of Section 2, T26S, R20E (Central Plant)

The equipment will not be 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.

A project location map is provided in **Attachment II**.

IV. Process Description

In thermally enhanced oil recovery (TEOR) operations, steam generators produce steam for injection into heavy crude oil bearing strata via injection wells to reduce the viscosity of the crude oil, thereby facilitating thermally enhanced oil production.

Proposed Project
Five (5) 85 MMBtu/hr ('-141 through '-145) and three (3) 62.5 MMBtu/hr ('-162 through '-164) steam generators will be reauthorized. One 85 MMBtu/hr steam generator ('-186) will be added.

The steam generators will be equipped with ultra-low NOx burners capable of achieving 7 ppmv NOx @ 3% O_2 ('-141 through '-145, '-186) and 9 ppmv NOx @ 3% O_2 with combustion of less than 50% PUC quality natural gas ('-162 through '-164) and 25 ppmv CO @3% O_2. Steam generators S-1327-141 through '-145 and '-186 will combust PUC-quality natural gas with a sulfur content no greater than 1.0 gr S/100scf. Steam generators S-1327-161 through '-164 will be authorized to also combust non-PUC quality gas and will be equipped with a shared sulfur scrubber. PM_{10} emissions from natural gas-fired units will be limited to 0.003 lb/MMBtu (0.0035 lb/MMBtu previously authorized in projects 1114449 and 1110750).

V. Equipment Listing

S-1327-141-2 THROUGH '-145-2: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT) – Netting Option #1

S-1327-141-3 THROUGH '-145-3:85 MMBTU/HR NATURAL GAS–FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT) – Netting Option #2

S-1327-162-1 THROUGH '-164-1: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN GLE ULTRA LOW-NOX BURNER (OR EQUIVALENT) WITH FGR AND TWO-STAGE EXHAUST GAS SOX SCRUBBING SYSTEM FOLLOWED BY A WET ESP SHARED BETWEEN S-1327-163 AND '164

S-1327-186-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

As per District policy APR 1035 Flexibility in Equipment Descriptions in ATCs, some flexibility in the final specifications of the equipment is requested and will be allowed as stated in the following ATC conditions:

The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Y

The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Y

Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Y

No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Y

VI. Emission Control Technology Evaluation

Emissions from gas-fired steam generators include NO_X, CO, VOC, PM_{10}, and SO_X. Low-NO_X burners reduce NO_X formation by producing lower flame temperatures (and longer flames) than conventional burners. Conventional burners thoroughly mix all the fuel and air in a single stage just prior to combustion, whereas low-NO_X burners delay the mixing of fuel and air by introducing the fuel (or sometimes the air) in multiple stages. Generally, in the first combustion stage, the air-fuel mixture is fuel rich. In a fuel rich environment, all the oxygen will be consumed in reactions with the fuel, leaving no excess oxygen available to react with nitrogen to produce thermal NO_X. In the secondary and tertiary stages, the combustion zone is maintained in a fuel-lean environment. The excess air in these stages helps to reduce the flame temperature so that the reaction between the excess oxygen with nitrogen is minimized.

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

'-162 through '-164

SOx emissions will be controlled by either firing on PUC-quality natural gas or on a mixture of PUC-quality natural gas and waste gas. When combusting the latter, the steam generators will be equipped with the SOx scrubbing system with a SOx removal efficiency expected to be 99.9%.

VII. General Calculations

A. Assumptions

- The maximum operating schedule is 24 hours per day (per applicant)
- EPA F-factor for natural gas is 8,578 dscf/MMBtu (40 CFR 60, Appendix B)
- Molar Specific Volume of a gas @ 60 °F is 379.5 ft^3/lb-mol
- Natural Gas Heating Value: 1,000 Btu/scf (District Practice)
- Daily heat input limited to 528 MMBtu for unit S-1327-116 (to be deleted)
- VOC content of hydrocarbons in vapors from separators associated with tanks S-1327-107 and '-111 (to be deleted) is 50% by wt (S-1339-4, project 1031414).
- Annual heat input for existing units S-1327-155 through '-158 is limited to 655,248 MMBtu each, equivalent to 88% utilization (throttle & use)

S-1327-141 through '-145, '-186

- The SGs are fired on natural gas only.
- Maximum Heat Input: 85.0 MMBtu/hr (per applicant)
- Annual heat input is limited to 647,802 MMBtu, equivalent to 87% utilization (throttle & use)

'-162 through '-164

- The SGs are either fired solely on PUC quality natural gas or a mixture of PUC quality natural gas and waste gas
- Units will be reauthorized to combust 3000 Mscf/day of waste gas combined for all three units
- Waste gas H2S concentration is 55,000 ppmv H2S
- Waste gas heating value: 452 MMbtu/scf
- PE2 is established based on full time waste gas firing (worst case NOx and SOx emissions)
- SOx scrubber control efficiency, 99.9%

B. Emission Factors

Pre-Project Emission Factors (EF1)

Tanks S-1327-107 and '-111 (to be deleted)

Fugitive emission factors are taken from Table 2-4, Oil and Gas Production Operations Average Emission Factors, EPA Protocol for Equipment Leak Emission Estimates, November 1995 (EPA-453/R-95-017) – calculations for separators done for project S-1339-4, project 1031414

Tank Emissions are estimated using the District's "Tank Emissions - Fixed Roof Crude Oil less than 26 API" spreadsheet – **Attachment III**.

Tank S-1327-115 (to be deleted)

(Tank emissions calculations done for project S-4073, 1084278 **Attachment III**)

S-1327-116 (to be deleted)

Pollutant	Pre-Project Emission Factors (EF1)			Source
NO_X	36.0 lb-NO_X/MMscf	0.036 lb-NO_X/MMBtu	30 ppmvd NO_X (@ 3%O_2)	Current PTO
SO_X		0.0164 lb SO2/MMBtu*		Current Permit
PM10**				
CO	81.3 lb-CO/MMscf	0.0813 lb-CO/MMBtu	110 ppmv CO @3% O2	Current Permit
VOC	5.5 lb-VOC/MMscf	0.0055 lb-VOC/MMBtu		Current Permit

* SOx = 0.1(S), where S = sulfur content in gr/100 scf = 0.1 (15) = 1.5 lb/1000 gal => (1.5 lb/1000 gal ÷ 0.0915 MMBtu/gal) = 0.0164 lb/MMBtu where, maximum sulfur content of LPG is 15 gr/100 scf (CRC Handbook of Tables for Applied Engineering Science, 2nd Edition, page 390).

** 4 lb/day – listed in PTO S-4073-17-4 permit condition #6

S-1327-120-0, '-137-0, and '-138-0 (to be deleted)

Pollutant	Pre-Project Emission Factors (EF1)			Source
NO_X	18 lb-NO_X/MMscf	0.018 lb-NO_X/MMBtu	15 ppmvd NO_X (@ 3%O_2)	Current PTO
SO_X		0.0164 lb SO2/MMBtu*		Current Permit
PM10		0.0076 lb-PM10/MMBtu		Current Permit
CO	36 lb-CO/MMscf	0.036 lb-CO/MMBtu	50 ppmv CO @3% O2	Current Permit
VOC	3.0 lb-VOC/MMscf	0.003 lb-VOC/MMBtu		Current Permit

* SOx = 0.1(S), where S = sulfur content in gr/100 scf = 0.1 (15) = 1.5 lb/1000 gal => (1.5 lb/1000 gal ÷ 0.0915 MMBtu/gal) = 0.0164 lb/MMBtu where, maximum sulfur content of LPG is 15 gr/100 scf (CRC Handbook of Tables for Applied Engineering Science, 2nd Edition, page 390).

S-1327-155-0 through '-158-0:

Pollutant	Pre-Project Emission Factors (EF1)			Source
NO_X	11.0 lb-NO_X/MMscf	0.011 lb-NO_X/MMBtu	9 ppmvd NO_X (@ 3%O_2)	Current Permit
SO_X	2.85 SO2/day	0.00285 lb SO2/MMBtu		Current Permit
PM10	3.5 lb-PM10/MMscf	0.0035 lb-PM10/MMBtu		Current Permit
CO	18 lb-CO/MMscf	0.018 lb-CO/MMBtu	25 ppmv CO @3% O2	Current Permit
VOC	5.5 lb-VOC/MMscf	0.0055 lb-VOC/MMBtu	13 ppmv VOC @3% O2	Current Permit

Post-Project Emission Factors (EF2)

S-1327-141 through '-145, '-186 and S-1327-155-1 through '-158-1

Pollutant	Post-Project Emission Factors (EF2)			Source
NO_X	8.0 lb-NO_X/MMscf	0.008 lb-NO_X/MMBtu	7 ppmvd NO_X (@ 3%O_2)	Rule 4320 limit
SO_X	2.85 lb-SO_X/MMscf	0.00285 lb SO2/MMBtu		project S-4073, 1093857
PM10	3.0 lb-PM10/MMscf ('-141 through '-145, '-186) 3.5 lb-PM10/MMscf	0.0030 lb-PM10/MMBtu ('-141 through '-145) 0.0035 lb-PM10/MMBtu		'
CO	18 lb-CO/MMscf	0.018 lb-CO/MMBtu	25 ppmv CO @3% O2	'
VOC	5.5 lb-VOC/MMscf	0.0055 lb-VOC/MMBtu	13 ppmv VOC @3% O2	'

S-1327-162 through '-164 (project 1114465)

Pollutant	Emission Factors		Source
NO_X*	0.011 lb-NO_X/MMBtu	9 ppmvd NO_X (@ 3%O_2)	Current ATC, Rule 4320
NO_X**	0.008 lb-NO_X/MMBtu	7 ppmvd NO_X (@ 3%O_2)	Current ATC, Rule 4320
SO_X	0.00285 lb-SO_X/MMBtu		District Standard
SO_X***	0.0206 lb/MMBtu (waste gas)***	55,000 ppmv	
PM10	0.0076 lb-PM10/MMBtu		Current ATC
CO	0.018 lb-CO/MMBtu	25 ppmvd CO (@ 3%O_2)	"
VOC	0.0055 lb-VOC/MMBtu	13 ppmvd VOC (@ 3%O_2)	"

*when firing on waste gas (BACT/Rule 4320 requirement)
**when firing on PUC quality natural gas (BACT/Rule 4320 requirement)
***(55,000 scf H2S/MMscf)(MMscf/452 MMBtu)(1 lb-mole/379 scf H2S)(34 lb-H2S/lb-mole)
(64 lb-SOx/34 lb-H2S)(1 – 0.999) = 0.0206 lb-SOx/MMBtu

C. Calculations

1. Pre Project Potential to Emit (PE1)

Pre-project emissions for SSIPE calculation

Tank S-1327-107 (to be deleted)

Separator Vessel:

Equipment Type	Service	Components	Emission Factor (lb/hr) TOG	hr/day	VOC = 50%TOG	VOCs (lb/day)
Valve	Gas	34	9.92E-03	24	0.5	4.0
Flange	Gas	131	8.59E-04	24	0.5	1.4
Connectors	Gas	272	4.41E-04	24	0.5	1.4
Other	Gas	21	1.94E-02	24	0.5	4.9
					Total	**11.7**

63,000 Gallon Wash Tank:

Tanks Emissions (See Appendix F)		
	Daily (lb/day)	**Annual (lb/yr)**
Standing Storage Loss	1.1	399
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A

Total Emissions:

	Fugitive Components	**Tank**	**PE2**
Daily (lb/day)	11.7	1.1	**12.8**
Annual (lb/yr)	4,271	399	**4,670**

S-1327-111 (to be deleted)

Separator Vessel:

Equipment Type	**Service**	**Components**	**Emission Factor (lb/hr) TOG**	**hr/day**	**VOC = 50%TOG**	**VOCs (lb/day)**
Valve	Gas	34	9.92E-03	24	0.5	4.0
Flange	Gas	127	8.59E-04	24	0.5	1.3
Connectors	Gas	275	4.41E-04	24	0.5	1.5
Other	Gas	21	1.94E-02	24	0.5	4.8
					Total	**11.6**

42,000 Gallon Wash Tank:

Tanks Emissions (See Appendix F)		
	Daily (lb/day)	**Annual (lb/yr)**
Standing Storage Loss	1.0	380
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A

Total Emissions

	Fugitive Components	**Tank**	**PE2**
Daily (lb/day)	11.6	1.0	**12.2**
Annual (lb/yr)	4,234	380	**4,614**

S-1327-115 (to be deleted)

PE1: 15.2 lb/day (5,556 lb/yr)

S-1327-116 (to be deleted)

Pollutant	Daily PE1		
	EF1 (lb/MMBtu)	Heat Input (MMBtu/day)	Daily PE1 (lb/day)
NO_X	0.036	528	19.0
SO_X	0.01640	528	8.7
PM_{10}	see below	528	
CO	0.081	528	42.9
VOC	0.0055	528	2.9

Pollutant	Annual PE			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/day)	Operating Schedule (day/year)	Annual PE1 (lb/year)
NO_X	0.036	528	365	6,938
SO_X	0.01640	528	365	3,161
PM_{10}	see below			
CO	0.081	528	365	15,668
VOC	0.0055	528	365	1,060

PM10 (by permit condition): 4 lb/day, 1460 lb/yr

S-1327-120 (to be deleted)

Pollutant	Daily PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO_X	0.018	23	24	9.9
SO_X	0.01640	23	24	9.1
PM_{10}	0.008	23	24	4.2
CO	0.036	23	24	19.9
VOC	0.003	23	24	1.7

Pollutant	Annual PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE1 (lb/year)
NO_X	0.018	23	8,760	3,627
SO_X	0.01640	23	8,760	3,304
PM_{10}	0.0076	23	8,760	1,531
CO	0.036	23	8,760	7,253
VOC	0.003	23	8,760	604

S-1327-137 and '-138 (each, to be deleted)

Pollutant	Daily PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO_X	0.018	25	24	10.8
SO_X	0.01640	25	24	9.8
PM_{10}	0.0076	25	24	4.6
CO	0.036	25	24	21.6
VOC	0.0030	25	24	1.8

Pollutant	Annual PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE1 (lb/year)
NO_X	0.018	25	8,760	3,942
SO_X	0.01640	25	8,760	3,592
PM_{10}	0.0076	25	8,760	1,664
CO	0.036	25	8,760	7,884
VOC	0.0030	25	8,760	657

S-1327-155 through '-158

Pollutant	Daily Pre-Project Potential to Emit (PE1)											
	Emission Factors			Heat input			Hours per day			Daily PE1		
NO_X	0.0110	(lb-NO_X/MMBtu)	x	85	(MMBtu/hr)	x	24	(hr/day)	=	22.4	(lb-NO_X/day)
SO_X	0.00285	(lb-SO_X/MMBtu)	x	85	(MMBtu/hr)	x	24	(hr/day)	=	5.8	(lb-SO_X/day)
PM_{10}	0.0035	(lb-PM_{10}/MMBtu)	x	85	(MMBtu/hr)	x	24	(hr/day)	=	7.1	(lb-PM_{10}/day)
CO	0.0180	(lb-CO/MMBtu)	x	85	(MMBtu/hr)	x	24	(hr/day)	=	36.7	(lb-CO/day)
VOC	0.0055	(lb-VOC/MMBtu)	x	85	(MMBtu/hr)	x	24	(hr/day)	=	11.2	(lb-VOC/day)

Pollutant	Annual Pre-Project Potential to Emit (PE1)							
	Emission Factors			Annual Max Heat input			Annual PE1	
NO_X	0.0110	(lb-NO_X/MMBtu)	x	655.2	(billion Btu/year)	=	7,208	(lb-NO_X/year)
SO_X	0.00285	(lb-SO_X/MMBtu)	x	655.2	(billion Btu/year)	=	1,867	(lb-SO_X/year)
PM_{10}	0.0035	(lb-PM_{10}/MMBtu)	x	655.2	(billion Btu/year)	=	2,293	(lb-PM_{10}/year)
CO	0.0180	(lb-CO/MMBtu)	x	655.2	(billion Btu/year)	=	11,794	(lb-CO/year)
VOC	0.0055	(lb-VOC/MMBtu)	x	655.2	(billion Btu/year)	=	3,604	(lb-VOC/year)

Netting Option #1 (ATCs S-1327-141-2 through '-145-2)

Annual Emissions (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
S-1327-107					4,670
S-1327-111					4,614
S-1327-115					5,556
S-1327-116	6938	3161	1460	15,668	1060
S-1326-155 through '-158	4 x 7208 = 28,832	4 x 1867 = 7468	4 x 2293 = 9172	4 x 11,794 = 47,176	4 x 3604 = 14,416
Pre-project PE Total	34770	10,629	10,632	62,844	30,316

Netting Option #2 (ATCs S-1327-141-3 through '-145-3)

Annual Emissions (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
S-1327-107					4,670
S-1327-111					4,614
S-1327-115					5,556
S-1327-116	6,938	3,161	1,460	15,668	1,060
S-1327-120	3,627	3,304	1,531	7,253	604
S-1327-137	3,942	3,592	1,664	7,884	657
S-1327-138	3,942	3,592	1,664	7,884	657
S-1326-155 through '-158	4 x 7208 = 28,832	4 x 1867 = 7468	4 x 2293 = 9172	4 x 11,794 = 47,176	4 x 3604 = 14,416
Pre-project PE Total	47,281	21,117	15,491	85,865	32,234

New steam generators S-1327-141 through '-145, '-162 through '-164, and '-186

Since these are being reauthorized (new emissions units), PE1 = 0 for all pollutants.

2. Post Project Potential to Emit (PE2)

Post project emissions for SSIPE calculation

S-1327-141 through '-145, '-186

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO_X	0.008	85	24	16.3
SO_X	0.00285	85	24	5.8
PM_{10}	0.0030	85	24	6.1
CO	0.018	85	24	36.7
VOC	0.0055	85	24	11.2

Pollutant	Annual PE2		
	EF2 (lb/MMBtu)	Heat Input (MMBtu/year)	Annual PE2 (lb/year)
NO_X	0.008	647,802	5,182
SO_X	0.00285	647,802	1,846
PM_{10}	0.0030	647,802	1,943
CO	0.018	647,802	11,660
VOC	0.0055	647,802	3,563

S-1327-155-1 through '-158-1

Pollutant	Daily Post-Project Potential to Emit ((PE2)											
	Emission Factors			Heat input			Hours per day			Daily PE2		
NO_X	0.0080	(lb-NO_X/MMBtu)	x	85	(MMBtu/hr)	x	24	(hr/day)	=	16.3	(lb-NO_X/day)
SO_X	0.00285	(lb-SO_X/MMBtu)	x	85	(MMBtu/hr)	x	24	(hr/day)	=	5.8	(lb-SO_X/day)
PM_{10}	0.0035	(lb-PM_{10}/MMBtu)	x	85	(MMBtu/hr)	x	24	(hr/day)	=	7.1	(lb-PM_{10}/day)
CO	0.0180	(lb-CO/MMBtu)	x	85	(MMBtu/hr)	x	24	(hr/day)	=	36.7	(lb-CO/day)
VOC	0.0055	(lb-VOC/MMBtu)	x	85	(MMBtu/hr)	x	24	(hr/day)	=	11.2	(lb-VOC/day)

Pollutant	Annual Post-Project Potential to Emit PE2							
	Emission Factors			Annual Max Heat input			Annual PE2	
NO_X	0.0080	(lb-NO_X/MMBtu)	x	655	(billion Btu/year)	=	5,242	(lb-NO_X/year)
SO_X	0.00285	(lb-SO_X/MMBtu)	x	655	(billion Btu/year)	=	1,867	(lb-SO_X/year)
PM_{10}	0.0035	(lb-PM_{10}/MMBtu)	x	655	(billion Btu/year)	=	2,293	(lb-PM_{10}/year)
CO	0.0180	(lb-CO/MMBtu)	x	655	(billion Btu/year)	=	11,794	(lb-CO/year)
VOC	0.0055	(lb-VOC/MMBtu)	x	655	(billion Btu/year)	=	3,604	(lb-VOC/year)

'-162 through '-164

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NOx*	0.0110	62.5	24	16.5
SOx**		62.5	24	27.9
PM_{10}	0.0076	62.5	24	11.4
CO	0.018	62.5	24	27.0
VOC	0.0055	62.5	24	8.3

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO_X	0.011	62.5	8,760	6,023
SO_X	0.00000	62.5	8,760	10,184
PM_{10}	0.0076	62.5	8,760	4,161
CO	0.018	62.5	8,760	9,855
VOC	0.0055	62.5	8,760	3,011

*9 ppmv NOx @ 3% O2 (0.011 lb/MMBtu) when combusting < 50% by volume natural gas
7 ppmv NOx @ 3% O2 (0.008 lb/MMBtu) when combusting natural gas
**SOx Emissions (shared limit between '-162 through '-164
(3000 Mscf/day)(0.452 MMBtu/Mscf)(0.0206 lb/MMBtu)

+ [(62.5 MMBtu/hr x 24 hr/day - 3000 Mscf/day x 0.452 MMBtu/Mscf)(0.00285 lb/MMBtu)](0.01)
= 27.9 lb/day SOx (10,184 lb/yr)

S-1327-141 through '-145, '-186 (each)

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO_X	0.008	85	24	16.3
SO_X	0.00285	85	24	5.8
PM_{10}	0.0030	85	24	6.1
CO	0.018	85	24	36.7
VOC	0.0055	85	24	11.2

Pollutant	Annual PE2		
	EF2 (lb/MMBtu)	Heat Input (MMBtu/year)	Annual PE2 (lb/year)
NO_X	0.008	647,802	5,182
SO_X	0.00285	647,802	1,846
PM_{10}	0.0030	647,802	1,943
CO	0.018	647,802	11,660
VOC	0.0055	647,802	3,563

Emissions Profiles are included in **Attachment IV.**

Annual Emissions (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
ATCs S-1327-155-1 through '-158-1	4 x 5242 = 20,968	4 x 1867 = 7,468	4 x 2293 = 9,172	4 x 11,794 = 47,176	4 x 3604 = 14,416
6 proposed SGs S-1372-141 through '-145, '-186	6 x 5182 = 31,092	6 x 1846 = 11,076	1943 x 6 = 11,658	11,660 x 6 = 69,960	3,563 x 6 = 21,378
S-1327-162 through '-164	3 x 6,023 = 18,069	10,184	3 x 4,161 = 12,483	3 x 9,855 = 29,565	3 x 3,011 = 9,033
Total	70,129	28,728	33,313	146,701	44,827

Stationary Source Increase in Potential to Emit (SSIPE)

The SSIPE is equal to PE2 – PE1 for the proposed project.

Netting Option #1 (ATCs S-1327-141-2 through '-145-2)

SSIPE(lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
Post Project PE	70,129	28,728	33,313	146,701	44,827
Pre-Project PE	35,770	10,629	10,632	62,844	30,316
Post – Pre-Project PEs	34,359	18,099	22,681	83,857	14,511

Netting Option #2 (ATCs S-1327-141-3 through '-145-3)

SSIPE(lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
Post Project PE	70,129	28,728	33,313	146,701	44,827
Pre-Project PE	47,281	21,117	15,491	85,865	32,234
Post – Pre-Project PEs	22,848	7,611	17,822	60.836	12,593

Please note the above calculations represent the SSIPE only. Emissions offset quantities are determined separately in Section VIII.

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.

The SSPE calculated by the District calculator (**Attachment V**) is provided below. Note that the facility has no ERCs for on-site reductions of SOx and therefore neglecting ERCs in the SSPE calculation has no effect on offset requirement.

SSPE1 (lb/year)					
Permit Unit	NO_X	SO_X	PM_{10}	CO	VOC
SSPE1	107,769	30,596	38,454	364,070	405,758

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.

Netting Option #1

Post-Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE1	107,769	30,596	38,454	364,070	405,758
SSIPE	34,359	18,099	22,681	83,857	14,511
SSPE2	142,128	48,695	61,135	447,927	420,269

Netting Option #2

Post-Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE1	107,769	30,596	38,454	364,070	405,758
SSIPE	22,848	7,611	17,822	60.836	12,593
SSPE2	130,617	38,207	56,276	424,906	418,351

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."

Major Source Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE1	107,769	30,596	38,454	364,070	405,758
SSPE2*	142,128	48,695	61,135	447,927	420,269
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	Yes	Yes

*worst case-Netting Option #1

As seen in the table above, the facility is an existing Major Source for NOx, CO, and VOC and is not becoming a Major Source for SOx and PM10 as a result of this project.

Rule 2410 Major Source Determination

PSD Major Source Determination (tons/year)							
	NO2	SO2	PM*	PM_{10}	CO	VOC	CO2e**
Pre-Project SSPE	54	15	19	19	182	203	>100,000
PSD Major Source Threshold	250	250	250	250	250	250	100,000
PSD Major Source?	No	No	No	No	No	No	Yes

*PM assumed to equal PM10
**CO2e assumed to be greater than 100,000 tons/yr (see calculations below)

The source is an existing PSD major source for CO2e.

6. Baseline Emissions (BE)

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

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

otherwise,

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

As shown in Section VII.C.5 above, the facility is not a Major Source for SOx, and PM10. Therefore Baseline Emissions (BE) are equal to the Pre-Project Potential to Emit (PE1) for these air contaminants.

NOx, CO, and VOC

Clean Emissions Units, located at a Major Source
Pursuant to Rule 2201, Section 3.12, 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.

The following requirements are applicable in determining whether steam generators proposed to be deleted, S-1327-116, '-120, '-137, and '-138, are Clean Emissions Units*:

BACT Guideline 1.2.1 3rd Quarter 2008

NO_X: 14 ppmvd @ 3% O_2*

Current BACT Requirement

CO: 50 ppmvd @ 3% O_2
VOC: Gaseous fuel

* S-1327-120, '-137, and '-138 permit limit is 15 ppmv @ 3% O2. However source testing has shown that these units meet 14 ppmv @ 3% O2. Therefore, they qualify as Clean Emissions Units for NOx.

Unit S-1327-116 meets the above requirement for VOC only.

Tanks S-1327-107, '-111, and '-115 (to be surrendered)
Tanks '-107, '-111, and '-115 are equipped with pressure vacuum relief valves and therefore meet the requirement of current BACT Guideline 7.3.1, Petroleum and Petrochemical Production – Fixed Roof Organic Liquid Storage or Processing Tank, < 5,000 bbl tank capacity (see **Attachment VI**).

Fully Offset Emissions Units, located at a Major Source
Offsets have previously been provided ATCs S-1327-155-0 through 158-0. Therefore, pursuant to District Rule 2201, Section 3.19, these permitted units are considered as a Fully Offset Emissions Units.

Therefore Baseline Emissions (BE) for NOx CO, and VOC are equal to the Pre-Project Potential to Emit (PE1) for S-1327-120, '-137, '-138, and '-155 through '-158. Baseline emissions for unit S-1327-116 are PE1 for VOC and Historical Actual Emissions (HAE) for NOx and CO. However, unit '-116 is a dormant emissions unit and therefore HAE is assumed to be equal to zero for NOx and CO.

BE (lb/year)					
Units	NO_X	SO_X	PM_{10}	CO	VOC
S-1327-107	0	0	0	0	4670
'111	0	0	0	0	4614
'115	0	0	0	0	5556
'-116	0	3161	1460	0	1060
'-120	3627	3304	1531	7253	604
'-137	3942	3592	1664	7884	657
'-138	3942	3592	1664	7884	657
'-155 through '-158	28,832	7468	9172	47,176	14,416

S-1327-141 through '-145, '-162 through '-164
Since these are new emissions units, BE = PE1 = 0 for all criteria pollutants.

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 facility is a major source for NOx 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.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO_x	70,129	50,000	Yes
VOC	44,827	50,000	No

Since the project's PE2 surpasses the SB 288 Major Modification Thresholds for NOx, the Net Emissions Increase (NEI) a calculation is required to determine if this project constitutes an SB 288 Major Modification. Applicant has requested that the project be processed as a SB 288 Major Modification. Therefore no further discussion is required.

8. Federal Major Modification

Since this facility is not a Major Source for SOx and PM10, this project does not constitute a Federal Major Modification for these air contaminants.

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

The project's combined total emission increases are compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NO_x*	70,129	0	Yes
VOC*	44,827	0	Yes

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

Since there is an increase in NO_x and VOC emissions, this project constitutes a Federal Major Modification, and no further analysis is required.

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to pollutants for which the District is in attainment or for unclasssified, pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10
- Greenhouse gases (GHG): CO2, N2O, CH4, HFCs, PFCs, and SF6

In the case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase.

I. Project Location Relative to Class 1 Area

As demonstrated in the "Rule 2410 Major Source Determination" Section (page 20 above) above, the facility was determined to be a existing major source for PSD. Because the project is not located within 10 km of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Significance of Project Emission Increase

a. Potential to Emit for New or Modified Emission Units

As a screening tool, the potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if total potential to emit from all new and modified units is below this threshold, no further analysis will be needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)						
	NO2	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units SSPE ?	35.1	14.4	73.4	16.7	16.7*	356,524**
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	N	N	N	N	Y	Y

*PM_{10} assumed to equal PM for natural gas fired steam generators

**6 x 85 MMBtu/re + 3 x 62.5 MMBtu/hr = 697.5 MMBtu/hr

697.5 MMBtu/hr x 116.7 lb-CO2e/MMBtu = 81,398 lb-CO2e/hour

81,398 lb-CO2e/hour x 8760 hr/year ÷ 2,000 lb/ton = 356,524 tons-CO2e/year

As demonstrated above, because the project has a total potential to emit from all new and modified emission units greater than PSD significant emission increase thresholds, further analysis is required to determine if the project has an emission increase greater than the PSD significant emission increase thresholds, see step below.

b. Emission Increase for Each Attainment/Unclassified Pollutant

In this step, the emission increase for each attainment/unclassified pollutant is compared to the PSD significant emission increase thresholds, and if emission increase for each attainment pollutant is below this threshold, no futher analysis is needed.

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

For existing emissions units, the increase in emissions is calculated as follows:

Emission Increase = PAE – BAE - UBC

Where: PAE = Projected Actual Emissions, and
BAE = Baseline Actual Emissions
UBC = Unused baseline capacity

Annual Emissions (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
5 proposed SGs S-1372-141 through '-145, '-186	6 x 5182 = 31,092	6 x 1846 = 11,076	1943 x 6 = 11,658	11,660 x 6 = 69,960	3,563 x 6 = 21,378
S-1327-162 through '-164	3 x 6,023 = 18,069	10,184	3 x 4,161 = 12,483	3 x 9,855 = 29,565	3 x 3,011 = 9,033
Total	49,161	21,260	24,141	99,525	30,411

PSD Significant Emission Increase Determination: Emission Increase (tons/year)						
	NO2	SO2	CO	PM	PM10	CO2e
Emission Increases (only)	24.6	10.6	49.8	12.1	12.1	356,524
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	N	N	N	N	N	Y

As demonstrated in the table above, the project emission increases exceed the PSD significant emission increase thresholds for CO2e. Therefore further analysis is required to determine if the project has a net emission increase greater than the PSD sigificant emission increase threshold for this/these specific pollutant(s).

c. Net emission increase for each attainment pollutant with a significant increase

The net emission increase needs to be calculated only for those pollutants with a PSD significant emission increase. As shown above, the project results in a significant net emission increase for CO2e emissions only. As such, the project is subject to Rule 2410 requirements for CO2e only and BACT is required for CO2e.

Conclusion

For projects subject to the requirements of Rule 2410, the following are required:

I. BACT is required for all emission units in the project that have any emission increase and only for those pollutants for which the project has a signficant emission increase (for new major sources) or a significant net

emission increase (for existing major sources), see 40CFR 52.21(j). Please note that in such cases BACT is required for fugitive emission sources as well, even if the source category is not listed in 40 CFR 52.21 (b)(1)(i))

II. Ambient air quality impact analysis (including secondary emissions), see 40CFR 52.21(k), (except for GHG emission increases)

III. Ambient air quality monitoring, see 40CFR 52.21(m), (except for GHG emission increases)

IV. Additional impact analyses, including visibility, soils, vegetation, see 40CFR 52.21(o), (except for GHG emission increases)

V. Public noticing requirements pursuant to Rule 2410 and District guidance

For this project there is a significant net emission increase for CO2e (GHG) emissions only and therefore only item #s I and V above are applicable.

10. 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. The QNEC for the new emissions unit was calculated for each pollutant by dividing annual emissions by 4 quarters/year.

S-1327-141 through '-145, 186

Pollutant	QNEC For each steam generator			
	Annual emissions (lb/year)	divided by	4 quarters/yr =	Quarterly emissions (lb/qtr)
NO_X	5,182	/	4 qtr/year	**1,296**
SOx	1,846	/	4	**462**
PM_{10}	1,943	/	4	**486**
CO	11,660	/	4	**2,915**
VOC	3,563	/	4	**891**

S-1327-162 through '-164

Pollutant	QNEC For each steam generator			
	Annual emissions (lb/year)	divided by	4 quarters/yr =	Quarterly emissions (lb/qtr)
NO_X	6,023	/	4 qtr/year	**1,506**
SOx	10,184	/	4	**2,546**
PM_{10}	4,161	/	4	**1,040**
CO	9,855	/	4	**2,464**
VOC	3,011	/	4	**753**

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 of this evaluation, the project authorizes nine new steam generators each with a PE greater than 2 lb/day for NO_X, SO_X, PM_{10}, CO, and VOC. BACT is triggered for NO_X, SO_X, PM_{10}, CO, and VOC.

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

As discussed in Section I above, there are no modified emissions units associated with this project. 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 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.

2. BACT Guideline

Please note that BACT Guideline 1.2.1 [Steam Generator (≥ 5 MMBtu/hr, Oilfield) has been rescinded. The NO_X emission limit requirement of District Rule 4320 is lower than the Achieved-in-Practice requirement of BACT Guideline 1.2.1 (14 ppmv @ 3% O2) ; therefore a project specific BACT analysis will be performed to determine BACT for this project. More details regarding this are provided in **Attachment VII**.

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 **Attachment VII**), BACT has been satisfied with the following:

NO_X: 7 ppmvd @ 3% O_2 and 9 ppmvd @ 3% O_2 when waste gas fired ('-162 through '-164)

SO_X: Natural gas, LPG and 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 SO_2 scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO_2 at stack O_2.

PM_{10}: Natural gas, LPG and 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 SO_2 scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO_2 at stack O_2.
CO: 25 ppmvd @ 3% O_2
VOC: Gaseous fuel

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the Post Project Stationary Source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

Offset Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
Post Project SSPE (SSPE2)*	142,128	48,695	61,135	447,927	420,269
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Offsets calculations required?	Yes	No	Yes	Yes	Yes

*worst case – Netting Option #1

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for NO_X, PM_{10}, CO, and VOC emissions; therefore offset calculations will be required for this project.

Per Sections 4.7.1 and 4.7.3, the quantity of offsets in pounds per year for NOX 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) = ($\sum$[PE2 – BE] + ICCE) x 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 = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE)

The facility is proposing to install nine (9) new emissions units; therefore Baseline Emissions are equal to zero. All offsets calculations are based on

Offsets Required (lb/year) = ([PE2 – BE]) x DOR

There are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

Project ERC Cerificates

To offset the increases in NOx emissions for the project, the applicant has proposed to use ERC certificates C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1090-2, S-2629-2, S-3038-2, S-3054-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2.

To offset the increases in PM10 emissions for the project, the applicant has proposed to use ERC certificates C-1190-5, N-1082-5, N-1090-5 and S-3593-5 (SOx for PM_{10}).

To offset the increases in VOC emissions for the project, the applicant has proposed to use ERC certificates N-832-1, N-833-1, S-730-1, S-734-1, S-735-1, S-736-1, S-737-1, S-738-1, S-1755-1, S-1756-1, S-1757-1, S-1758-1, S1759-1, S-2310-1, S-3573-1, S-3575-1, S-3576-1, S-3577-1, S-3579-1, S-3582-1 and S-3584-1.

The NOx, PM10, and VOC offsets calculations (ERC tables) which follow indicate that sufficient ERCs have been reserved to fully offset the project increase in NO_X, PM10, and VOC emissions. For convenience and to allow for flexibility, each of the ATCs lists all of the above NOx, PM10, and VOC ERCs (except '-141-3 through '-145-3 Netting Option #2 which does not list VOC ERC certificates).

The following condition is included on all of the ATCs (except as indicated below):

ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, S-3593-5, N-832-1, N-833-1, S-730-1, S-734-1, S-735-1, S-736-1, S-737-1, S-738-1, S-1755-1, S-1756-1, S-1757-1, S-1758-1, S1759-1, S-2310-1, S-3573-1, S-3575-1, S-3576-1, S-3577-1, S-3579-1, S-3582-1 and S-3584-1 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act] Y

For netting Option #2 ATCs S-1327'-141-3 through '-145-3

ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, and S-3593-5 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act] Y

S-1327-141 through '-145

NOx

Netting Option #1

Unit	PE2 – BE (lb/yr)
'-116	0 – 0 = 0
'-155 through '-158	20,968 - 28,832 = -7864
'-141 through '-145	5182 x 5 = + 25,910
Total	18,046

The project is a Federal Major Modification for NOx. Therefore the NOx ERCs are required at a DOR = 1.5 (1.5 x 18,046 = 27,069 lb/yr, 6767 lb/qtr, 1353 lb/qtr-SG)

Pollutant	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
NOx	6767	6767	6767	6767

Netting Option #2

Unit	PE2 – BE (lb/yr)
'-116	0
'-120	- 3627
'-137	- 3942
'-138	- 3942
'-155 through '-159	20,968 - 28,832 = -7864
'-141 through '-145	5182 x 5 = + 25,910
Total	6535

The project is a Federal Major Modification for NOx. Therefore the NOx ERCs are required at a DOR = 1.5 is 6535 x 1.5/4 = 2,451 lbs/qtr (490 lbs/qtr SG)

Pollutant	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
NOx	2,451	2,451	2,451	2,451

ERCs reserved to satisfy the requirements of Netting Option #1 (worst case) are as follows:

Available (normal type), Reserved in PAS (bold type)

ERC	1st QTR	2nd QTR	3rd QTR	4th QTR
N-946-2	4686, **2627**			
S-3585-2	0	9294, **8489**	4654, **4654**	9859, **8169**
S-3586-2	0	1512, **1512**	6228, **6228**	0
S-3588-2	1847, **1847**	0	0	0
Total sum of reserved	4474	10,001	10,882	8169
Offsets Required	6767	6767	6767	6767
Remainder	-2293	3234	4115	0
Transferred from 3rd qtr*	2293			
Remainder**	**0**	**3234**	**4115 – 2293 =1822**	**1402**

*Rule 2201 Section 4.13.8: AER for NOx and VOC that occurred from April through November may be used to offset increases in NOx and VOC during any period of the year.
** used for '-162 through '-164 below

PM10

Netting Option #1 and Netting Option #2*

Unit	PE2 – BE (lb/yr)
'-141 through '-145	1,943 x 5 = 9,715
Total	9,715

*The results of the AAQA require that units '-141 through '-145 be fully offset for PM2.5. SOx ERCs may be used for PM2.5.

Assuming an offset ratio of 1.5 to 1 the quarterly offset requirement is 9,715 x 1.5/4 = 3,643 lb/qtr (729 lb/qtr SG)

Pollutant	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
PM10	3,643	3,643	3,643	3,643

The applicant has stated that the facility plans to use ERC certificates N-949-5 and S-3593-5 (Frito Lay Reductions) to offset the increases in PM10 emissions associated with this project. PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10 (District Draft Policy APR 14XX).

ERC S-3593-5 and ERC N-949-5 are applied at DOR = 1.5:1 as the site of the reductions are greater than 15 miles from S-1327.

Available (normal type), Reserved in PAS (bold type)

Certificate	1st QTR	2nd QTR	3rd QTR	4th QTR
ERC #N-949-5	4000, **3149**	4000, **3149**	4000, **3151**	4000, **3151**
ERC #S-3593-5	494, **494**	494, **494**	492, **492**	492, **492**

VOC

Netting Option #1

Unit	PE2 – BE (lb/yr)
'-107	- 4,670
'-111	- 4,614
'-115	- 5,556
'-116	-1,060
'-141 through '-145	3563 x 5 = + 17,815
Total	1,915

Netting Option #2

Unit	PE2 – BE (lb/yr)
'-107	- 4,670
'-111	- 4,614
'-115	- 5,556
'-116	- 1060
'-120	- 604
'-137	- 657
'-138	- 657
'-141 through '-145	3563 x 5 = + 17,815
Total	-3

ERCs were reserved to satisfy the requirements of Netting Option #1 as it is worst case.

The applicant has stated that the facility plans to use ERC certificate S-3579-1 to offset the increases in VOC emissions associated with this project. At an offset ratio of 1.5:1 the offset requirement is 1.5 x 1,915/4 = 718 lb/qtr (144 lb/qtr SG).

Available (normal type), Reserved in PAS (bold type)

Certificate	1st QTR	2nd QTR	3rd QTR	4th QTR
ERC #S-3579-1	1190, **718**	4465, **718**	5981, **718**	1360, **718**

S-1327-141-2 through '-145-2

Netting Option #1

Proposed Rule 2201 (offset) Condition:

- Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1353 lb/quarter; PM10: 619 lb/quarter, and VOC: 144 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10 . [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act] Y

S-1327-141-3 through '-145-3

Netting Option #2

Proposed Rule 2201 (offset) Conditions

- Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 490 lb/quarter and PM10: 255 lb/quarter. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10 . [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act] Y

S-1327-162 through '-164

NOx:

PE2 (NO_X) = 18,069 lb/year
BE (NO_X) = 0 lb/year
ICCE = 0 lb/year

The project is a Federal Major Modification for NOx. Therefore the NOx ERCs are required at a DOR = 1.5 (1.5 x 18,069 = 27,104 lb/yr, 6776 lb/qtr, 2259 lb/qtr-SG)

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
6776	6776	6776	6776

The ERCs were reserved as follows:

Available (normal type), Reserved in PAS (bold type)

ERC	Quarter			
	1st	2nd	3rd	4th
from '-141 through '-145 above	**0**	**3234**	**1822**	**1402**
C-1087-2	753, **753**	0	0	310, **310**
N-831-2	173, **173**	0	3, **3**	0
N-948-2	1532, **1532**	1530, **1530**	1530, **1530**	1530, **1530**
S-3038-2	337, **337**	265, **265**	428, **428**	492, **492**
S-3054-2	22, **22**	0	0	0
S-3587-2	758, **758**	694, **694**	618, **618**	1641, **1641**
S-3589-2	1837, **1837**	0	0	598, **598**
S-3590-2	0	434, **434**	0	0
S-3591-2	508, **508**	498,**498**	408, **408**	379, **379**
S-3592-2	1283, **856**	275, **275**	1967, **1967**	1412, **1412**
Total sum of reserved:	6776	6930	6776	7764
Offsets Required:	6776	6776	6776	6776
Remainder*	**0**	**154**	**0**	**988**

*used for '-186 below

VOC:

PE2 (VOC) = 9033 lb/year
BE (VOC) = 0 lb/year
ICCE = 0 lb/year

The project is a Federal Major Modification for VOC. Therefore the VOC ERCs are required at a DOR = 1.5 (1.5 x 9033 = 13,550 lb/yr, 3387 lb/qtr, 1129 lb/qtr-SG)

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

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
3387	3387	3387	3387

The ERCs are reserved as follows:

Available and Reserved in PAS (except where indicated)

ERC	Quarter

	1st	2nd	3rd	4th
N-832-1	30	30	32	30
N-833-1	16	16	14	14
S-730-1	69	97	110	67
S-734-1	4	8	8	4
S-735-1	7	11	13	8
S-736-1	80	157	165	81
S-737-1	310	575	603	317
S-738-1	192	375	395	198
S-1755-1	53	109	120	52
S-1756-1	360	778	883	372
S-1757-1	2	7	9	4
S-1758-1	88	193	195	93
S-1759-1	137	267	382	193
S-3573-1	45	45	45	45
S-3575-1	0	0	10	0
S-3576-1	96	221	235	98
S-3577-1	203	463, **208***	491	214
S-3582-1	123	1513, **0***	2068,**1350***	162
S-3584-1	362	290	454	518
Total sum of reserved:	2177	3387	5514	2470
Offsets Required:	3387	3387	3387	3387
Remainder:	-1210	0	2128	-917
Transferred from 3rd qtr	1210		2127 – 917 – 1210	917
Remainder:	**0**	**0**	**0**	**0**

*Available in plain text and reserved in bold text

PM10:

PE2 (PM10) = 12,483 lb/year
BE (PM10) = 0 lb/year
ICCE = 0 lb/year

Assuming an offset ratio of 1.5:1 (Northern Region ERC), the amount of PM10 ERCs that need to be withdrawn is:

Offsets Required (lb/year) = ([12,483 – 0] + 0) x 1.5
= 18,725 lb PM10/yr, 4681 lb/qtr, 1560 lb/qtr/SG)

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

1st Quarter 2nd Quarter 3rd Quarter 4th Quarter

4681 4681 4681 4681

Pursuant to draft District policy APR 1430, SOx ERCs may be used to offset PM10 at an interpollutant ratio of 1.0:1.0. The ERCs reserved are as follows:

Reserved in PAS

ERC	Quarter			
	1st	2nd	3rd	4th
N-1015-5	**4681**	**4681**	**4681**	**4681**

As seen above, the facility has sufficient credits to fully offset the quarterly PM10 emissions increases associated with this project.

Proposed Rule 2201 (offset) Condition:

- Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 2259 lb/quarter; PM10: 1560 lb/quarter, and VOC: 1129 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10 . [District Rule 2201] and Public Resources Code 21000-21177: California Environmental Quality Act Y

S-1327-186
NOx

5182 lb NOx/yr x 1.5/4 =1943/qtr

The ERCs reserved are as follows:

Available (normal type), Reserved in PAS (bold type)

NOx	1st QTR	2nd QTR	3rd QTR	4th QTR
from '-162 through '-164 above	**0**	**154**	**0**	**988**
N-947-2	1825, **1825**			
N-1048-2	275, **118**	275, **275**	275, **275**	275, **275**
S-2629-2	1735, 0	1846, **1514**	2330, **1668**	1762, **680**
Total sum of reserved	1,943	1943	1943	1943
Required Offsets	1,943	1,943	1,943	1,943
Remainder	**0**	**0**	**0**	**0**

*Rule 2201 Section 4.13.8: AER for NOx and VOC that occurred from April through November may be used to offset increases in NOx and VOC during any period of the year.

PM10

PM10: 1943 lb PM10/yr x 1.5 = 2,914 lb/yr (729 lb/qtr)

The ERCs reserved are as follows:

Reserved in PAS (bold type)

Certificate	1st QTR	2nd QTR	3rd QTR	4th QTR
ERC # S-1190-5	**729**	**729**	**729**	**729**

*offspring of C-1164-5

VOC

3563 lb VOC/yr x 1.5 = 5345 lb/yr (1336/qtr)

The ERCs reserved are as follows:

Reserved in PAS (bold type)

Certificate	1st QTR	2nd QTR	3rd QTR	4th QTR
Required offsets	1336	1,336	1336	1336
ERC # S-2310-1	**1121**	**1,607**	**1336**	**1280**
Remainder	-215	0	0	-56
Transferred from 2rd qtr	215	-271		56
	1121 + 215 = 1336	1607 – 271 = 1,336	1336	1280 + 56 = 1336

Proposed Rule 2201 (offset) Condition:

- Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1943 lb/quarter; PM10: 692 lb/quarter, and VOC: 1336 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10 . [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act] Y

CO

'-141 through '-145

Netting Option #1

Unit	PE2 – BE (lb/yr)
'-116	0
'-141 through '-145	58,300
Total	58,300

Netting Option #2

Unit	PE2 – BE (lb/yr)
'-116	0
'-120	-7,253
'-137	-7864
'-138	- 7864
'-141 through '-145	58,300
Total	35,319

'-162 through '-164

CO: 9855 x 3 = 29,565 lb/yr

'-186

0.018 x 647,802 = 11,660 lb CO/yr

Notwithstanding the above, Section 4.6.1 of Rule 2201 states that emissions offsets are not required for increases in carbon monoxide in attainment areas provided the applicant demonstrates to the satisfaction of the APCO that the Ambient Air Quality Standards are not violated in the areas to be affected, and such emissions will be consistent with Reasonable Further Progress, and will not cause or contribute to a violation of Ambient Air Quality Standards. The District performed an Ambient Air Quality Analysis based on emissions from Netting Option #1 which is worst case (discussed later) and determined that this project will not result in or contribute to a violation of an Ambient Air Quality Standard for CO (see **Attachment VIII**). Therefore, CO offsets are not required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:
a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. 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 an SB 288 or Federal Major Modification. Therefore, public noticing for SB 288 or 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	107,769	142,128	20,000 lb/year	No
SO_X	30,596	48,695	54,750 lb/year	No
PM_{10}	38,454	61,135	29,200 lb/year	No
CO	364,070	447,927	200,000 lb/year	No
VOC	405,758	420,269	20,000 lb/year	No

*worst case – Netting Option #1

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not 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.

SSIPE Public Notice Thresholds					
Pollutant	SSPE2* (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x	142,128	107,769	34,359	20,000 lb/year	Yes
SO_x	48,695	30,596	18,099	20,000 lb/year	No
PM_{10}	61,135	38,454	22,681	20,000 lb/year	Yes
CO	447,927	364,070	83,857	20,000 lb/year	Yes
VOC	420,269	405,758	14,511	20,000 lb/year	No

*worst case – Netting Option #1

As demonstrated above, the SSIPEs for NO_X ,PM_{10}, and CO were greater than 20,000 lb/year; therefore public noticing for SSIPE purposes is required.

2. Public Notice Action

As discussed above, public noticing is required for this project for SB288/Federal Major Modification and SSIPE > 20,000 lb/yr purposes. 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-1327-141 through '-145, '-186

The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, gas from thermally enhanced oil recovery (TEOR) operation, gas from tank vapor recovery system or a fuel mixture of any of these fuels. [District Rule 2201] Y

Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201] Y

Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201] Y

Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, SOx (as SO2): 0.00285 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305 and 4306] Y

S-1327-162, '163 and '164:

The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, waste gas (tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation) or a mixture of any of these fuels. [District Rule 2201] Y

Waste gas H2S concentration shall not exceed 55,000 ppmv. [District Rule 2201] Y

Units S-1327-162, '163 and '164 shall not consume greater than a combined total of 3000 Mscf/day of waste gas. [District Rule 2201] Y

When fired solely on PUC quality natural gas emission rates shall not exceed: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Y

When fired mixture of waste gas and PUC quality natural gas emission rates shall not exceed: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 9 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Y

E. Compliance Assurance

1. Source Testing

NOx and CO

This unit is 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 5.0 MMBtu/hr* . Source testing requirements, in accordance with District Rules 4305, 4306, and 4320 will be discussed in Section VIII, District Rules 4305, 4306, and 4320 of this evaluation.

S-1327-162 through '-164

This unit is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase 2*, and District Rule 4306, *Boilers, Steam Generators and Process Heaters, Phase 3*. Source testing requirements, in accordance with District Rules 4305 and 4306, will be discussed in Section VIII, *District Rules 4305 and 4306*, of this evaluation.

District policy APR 1705 requires that combustion equipment served by an electrostatic precipitator be tested for PM10 upon initial start-up and annually thereafter.

The following permit conditions will be listed on permits as follows:

When any unit is connected to scrubber/wet ESP and is burning TEOR/TVR gas, scrubber/wet ESP shall be operating and permittee shall demonstrate compliance with PM10 and sulfur oxide emissions limit by stack source testing within 60 days of initial scrubbing date and annually thereafter. Sulfur removal efficiency of scrubber/wet ESP shall be demonstrated during initial stack source test and calculated with subsequent tests. Ongoing compliance with sulfur oxide emissions limit shall be by calculation using the scrubber liquid pH, the demonstrated sulfur removal efficiency, and the fuel gas sulfur content. Fuel gas sulfur content shall be obtained by sample analysis at least quarterly. [District Rules 2201 and 4320] N

When complying with PM10 and SOx emission limits by testing of stack emissions, testing shall be performed using EPA Methods 5 or 201A, 6, 6B, 8, or ARB 100 or ARB Methods 1-6. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SOx emissions. [District Rules 2201 4320] N

1. Monitoring

Sulfur Monitoring for Rule 4320 Compliance

The following conditions will be included on the ATCs for the steam generators which are authorized to combust natural/TEOR gas:

When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 4305, 4306, and 4320] N

Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rules 1070, 4305, 4306, and 4320] N

If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 4305, 4306, and 4320] N

NOx and CO

As required by *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 5.0 MMBtu/hr*, this unit is subject to monitoring requirements. Monitoring requirements, in accordance with District Rules 4305, 4306, and 4320 will be discussed in Section VIII, District Rules 4305, 4306, and 4320 of this evaluation.

2. Recordkeeping

As required by *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 5.0 MMBtu/hr, this unit is subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rules 4305, 4306, and 4320 will be discussed in Section VIII, *District Rules 4305, 4306, and 4320* of this evaluation.

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

{2983} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis

Section 4.14 of this Rule requires that an ambient air quality analysis (AAQA) be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. Technical Services Division performed modeling for criteria pollutants CO, NOx, SOx and PM10. The results are as follows:

Criteria Pollutant Modeling Results*

Steam Generator	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass[1]	X	X	X	Pass
SO_x	Pass[2]	Pass	X	Pass	Pass
PM_{10}	X	X	X	Pass[3]	Pass[3]
$PM_{2.5}$	X	X	X	Fail[4]	Fail[4]

*Results were taken from the attached PSD spreadsheet.
[1]The project was compared to the 1-hour NO2 National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures. The criteria pollutant 1-hour value passed using TIER I NO_2 NAAQS modeling
[2]The project was compared to the 1-hour SO2 National Ambient Air Quality Standard that became effective on August 23, 2010 using the District's approved procedures.
[3]The maximum predicted concentration for emissions of these criteria pollutants from the proposed unit are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).
[4] Facility is fully offsetting the project PM emissions as per District Rule 2201.

As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO_X, CO, PM10, or SO_X. Refer to **Attachment VIII** of this document for the full AAQA report from Technical Services.

G. Compliance Certification

The compliance certification is required for any project, which constitutes a New Major Source or a Federal Major Modification.

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Federal Major 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 Sections VIII-Rule 2201-C.1.a and VIII-Rule 2201-C.1.b, this project does constitute a Federal, therefore this requirement is applicable. Included in **Attachment IX** is the Compliance Certification Statement.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install 5 new steam generators. Since the new steam generators will 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 2410 Prevention of Significant Deterioration

As shown in Section VII C.8 above the project results in a Significant Emissions Increase for GHG. Therefore, Rule 2410 is applicable and public notice (pursuant to District Rule 2201, § 5.5.1 through 5.5.6 and § 5.9.1.1 through 5.9.1.5) and BACT for GHG is required for all associated units that result in a GHG emissions increase.

Below is a listing of the requirements of Rule 2410, and demonstration that compliance with the requirements is expected.

A. Best Available Control Technology (BACT)

GHG BACT analyses for all emission units was performed (see **Attachment X**), and resulted with GHG BACT being satisfied. The results of these analyses are summarized below:

ATCs S-1327-141-2 through 145-2, S-1327-141-3 through '-145-3, '-162-1 through '-164-1, and '-186-0

GHG: Equipped with variable frequency drive electrical motors driving the blower and water pump and 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)

S-1327- 162-1 through '-164-1

GHG: Equipped with variable frequency drive electrical motors driving the blower and water pump, split flow dual pass water feed configuration, a convection section having at least 128 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by the manufacturer) and at

least six inches of castable refractory or a manufacturer's overall thermal efficiency rating of at least 85%

B. Ambient air quality impact analysis

40 CFR 52.21(k) (as referenced in Rule 2410) requires that applications with significant emission increases would not cause or contribute to a violation of and Federal Ambient air quality standard or any applicable maximum allowable increase over baseline concentration (increment consumption).

EPA's March 2011 guidance titled "PSD and Title V Permitting Guidance for Greenhouse Gases" (pages 47 and 48) states that because there are no ambient air quality standards for GHGs that EPA does not recommend that sources be required to model the impacts of GHG emissions due to a project.

The District concurs with this recommendation. Therefore, no modeling of GHG emission increases is required.

C. Ambient air quality monitoring,

40 CFR 52.21(m) (as referenced in Rule 2410) requires that applications with significant emission increases contain an analysis of air ambient air quality in the area that the project would affect, i.e. ambient air quality monitoring.

EPA's March 2011 guidance titled "PSD and Title V Permitting Guidance for Greenhouse Gases" (pages 47 and 48) states that there is an exemption from ambient air quality monitoring in 40 CFR 52.(i)(5)(iii) for pollutants for which there is not an ambient air quality standard (AAQS), i.e. GHGs. Additionally, notwithstanding the provisions of 40 CFR 52.21 (m)(1)(i) that allows the Administrator to require ambient air monitoring for pollutants for which an AAQS does not exist, EPA does not consider it necessary or appropriate for applicants to perform ambient monitoring of GHGs.

The District concurs with this recommendation. Therefore, no ambient monitoring of GHGs is required.

D. Additional impact analyses, including visibility, soils, vegetation

40 CFR 52.21(o) (as referenced in Rule 2410) requires that applications prepare an analysis on the impairment to visibility, soils, and vegetation that would occur as a result of the proposed modification and the general commercial, residential, industrial, or other growth associated with the project.

EPA's March 2011 guidance titled "PSD and Title V Permitting Guidance for Greenhouse Gases" (pages 47 and 48) states that it is not necessary for applicants to assess impacts due to GHG emission increases as there is no method to quantify

project level on visibility, soils, and vegetation. The only modeling techniques available for emission increases several orders of magnitude greater than project level emission increases.

The District concurs with this recommendation. Therefore, no additional impact analysis for visibility, soils, vegetation or other related growth is required.

E. Public noticing requirements

District Rule 2410 requires that the project's preliminary decision undergo a 30-day public notification process prior to issuance of ATC(s). Therefore, notification of the preliminary decision shall be given by the following methods:

The notice shall state the emissions change and the degree of increment consumption that is expected from the proposed project. The notice shall also state the ability for the public to make a request for a public hearing.

A list of entities to receive the notification is included in **Attachment XII**.

Compliance with Rule 2410 is expected.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. Section 3.29 defines a significant permit modification as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

The project is Federal Major Modification and therefore is also a Title V Significant Modification. As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Included in **Attachment XI** is VPC's Title V Compliance Certification form. Continued compliance with this rule is expected.

Rule 4001 New Source Performance Standards

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

The subject steam generators have a rating of 85 MMBtu/hr and are fired on natural/TEOR gas. 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.

Rule 4101 Visible Emissions

Per Section 5.0, 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). A condition will be placed on the ATC to ensure compliance with the opacity limit.

Therefore, compliance with the requirements of this rule is expected.

Rule 4102 Nuisance

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

California Health & Safety Code 41700 – Health Risk Analysis

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

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

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-1327-141 through '-145, '-162 through '-164, '-185	0.002 per million	No

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

Units 141 thru 145 (each unit)

1. 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]
2. The steam generator must be located in the SE 1/4 of the NE 1/4 Section of Section 11, T26S, R 20E (South Plant) or the SW ¼ of the SE ¼ Section of Section 34, T25S, R 20E (North Plant). [District Rule 4102] N
3. Annual usage shall not exceed 647,000 Btu.

Units 162 thru 164

1. 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]
2. The steam generator must be located in the SW ¼ of the SW ¼ of the NW ¼ Sec of Sec 2 Twn 26 Rng 20 (Central Plant)

Unit 186

1. 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]
2. The steam generator must be located in the SE 1/4 of the NE 1/4 Section of Section 11, T26S, R 20E (South Plant) or the SW ¼ of the SE ¼ Section of Section 34, T25S, R 20E (North Plant). [District Rule 4102] N
3. Annual usage shall not exceed 647,000 Btu.

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
PM_{10} Emission Factor: 0.005 lb-PM_{10}/MMBtu
Percentage of PM as PM_{10} in Exhaust: 100%
Exhaust Oxygen (O_2) Concentration: 3%

Excess Air Correction to F Factor = $\frac{20.9}{(20.9-3)} = 1.17$

$$GL = \left(\frac{0.0076\ lb-PM}{MMBtu} \times \frac{7{,}000\ grain}{lb-PM} \right) / \left(\frac{8{,}578\ ft^3}{MMBtu} \times\ 1.17 \right)$$

$$GL = 0.0053\ \ grain/dscf < 0.1\ grain/dscf$$

Therefore, compliance with the requirements of this rule is expected.

Rule 4301 Fuel Burning Equipment

Rule 4301 limits air contaminant emissions from fuel burning equipment as defined in the rule. Section 3.1 defines fuel burning equipment as "any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer".

Section 5.0 gives the requirements of the rule.

A person shall not discharge into the atmosphere combustion contaminants exceeding in concentration at the point of discharge, 0.1 grain per cubic foot of gas calculated to 12% of carbon dioxide at dry standard conditions.

A person shall not build, erect, install or expand any non-mobile fuel burning equipment unit unless the discharge into the atmosphere of contaminants will not and does not exceed any one or more of the following rates:

- 200 pound per hour of sulfur compounds, calculated as sulfur dioxide (SO_2)
- 140 pounds per hour of nitrogen oxides, calculated as nitrogen dioxide (NO_2)
- Ten pounds per hour of combustion contaminants as defined in Rule 1020 and derived from the fuel.

District Rule 4301 Limits			
Unit	**NO_2**	**Total PM**	**SO_2**
S-1246-353-0 (lb/hr)	0.008 x 85 = 0.68	0.003 x 85 = 0.26	27.4 lb/day/24 hr/day = 1.14
Rule Limit (lb/hr)	140	10	200

The particulate emissions from the steam generators will not exceed 0.1 gr/dscf at 12% CO2 or 10 lb/hr. Further, the emissions of SOx and NOx will not exceed 200 lb/hr or 140 lb/hr, respectively.

Therefore, compliance with the requirements of this rule is expected.

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

The units have a maximum heat input of 62.5 – 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 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 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 units have a maximum heat input of 62.5 – 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

This rule limits NOx, CO, SO_2 and PM_{10} emissions from boilers, steam generators and process heaters rated greater than 5 MMBtu/hr. This rule also provides a compliance option of payment of fees in proportion to the actual amount of NOx emitted over the previous year.

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

Section 5.1 NOx 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.

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 NOx 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
3. Units firing on less than 50%, by volume, PUC quality gas.	Staged Enhanced Schedule Initial Limit 12 ppmv or 0.014 lb/MMBtu; and	July 1, 2010	July 1, 2011
	Final Limit 9 ppmv or 0.011 lb/MMBtu	January 1, 2013	January 1, 2014

The proposed NOx limit for units fired solely on PUC quality natural ('-141 through '-145 and '-186) gas is 7 ppmv.

The proposed NOx limit for units '-162 through '-164 is 7 ppmv except when fired on a mixture of waste gas and PUC quality natural gas where the limit is 9 ppmv.

Therefore, compliance with the emissions limits of Section 5.2 of District Rule 4320 is expected.

A permit condition listing the emissions limits 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/TEOR gas/TVR gas. Units combusting natural gas ('-141 through '-145 and '-187) will combust gas containing no more than 1 gr S/100 scf. Units combusting waste gas with a high sulfur content ('-161 through '-163) will be equipped with a scrubber reducing SO_2 emissions by at least 95% by weight. 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. Vintage 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 or maintain an operational APCO approved Continuous Emission Monitoring System (CEMS) for NO_X, CO and O_2, or implement an APCO-approved alternate monitoring.

VPC has proposed to implement Alternate Monitoring Scheme A (pursuant to District Policy SSP-1105), which requires periodic monitoring of NO_X, CO, and O_2 concentrations at least once a month using a portable analyzer. The following conditions will be placed in the permits to ensure compliance with the requirements of this alternate monitoring plan:

{2395} 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 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] Y

If either the NOx 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 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] Y

All NOx, 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 NOx, 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] Y

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

Section 5.7.6.1 requires that operators complying with Sections 5.4.1.1 or 5.4.1.2 shall provide an annual fuel analysis to the District unless a more frequent sampling and reporting period is included in the Permit To Operate. Sulfur analysis shall be performed in accordance with the test methods in Section 6.2. The following conditions will be placed in the ATCs for compliance with this rule requirement:

Each fuel source shall be tested semi-annually for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which semi-annual testing may resume. [District Rules 2201 and 4320] Y

If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2201and 4320] Y

If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rules 2201 and 4320] Y

'-161 through '-163

Section 5.7.6.2 requires that operators complying with Section 5.4.1.3 by installing and operating a control device with 95% SOx reduction shall propose the key system operating parameters and frequency of the monitoring and recording. The monitoring option proposed shall be submitted for approval by the APCO. The following conditions will be placed in the permits to be in compliance with this rule requirement:

Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rules 2201 and 4320] N

Daily average pH of scrubber liquor (calculated from hourly averages) shall be maintained between 6 and 7 in the first stage scrubber and 7 and 8 in the second stage scrubber, and shall be continuously monitored. [District Rules 2201 and 4320] N

Section 5.7.6.3 requires that operators complying with Section 5.4.1.3 shall perform an annual source test unless a more frequent sampling and reporting period is included in the Permit To Operate. Source tests shall be performed in accordance with the test methods in Section 6.2. The following conditions will be placed in the '-161 through '-163 ATCs for compliance with this rule requirement:

When any unit is connected to scrubber/wet ESP and is burning TEOR/TVR gas, scrubber/wet ESP shall be operating and permittee shall demonstrate compliance with PM10 and sulfur oxide emissions limit by stack source testing within 60 days of initial scrubbing date and annually thereafter. Sulfur removal efficiency of scrubber/wet ESP shall be demonstrated during initial stack source test and calculated with subsequent tests. Ongoing compliance with sulfur oxide emissions limit shall be by calculation using the scrubber liquid pH, the demonstrated sulfur removal efficiency, and the fuel gas sulfur content. Fuel gas sulfur content shall be obtained by sample analysis at least quarterly. [District Rules 2201 and 4320] Y

When complying with PM10 and SOx emission limits by testing of stack emissions, testing shall be performed using EPA Methods 5 or 201A, 6, 6B, 8, or ARB 100 or ARB Methods 1-6. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SOx emissions. [District Rules 2201 4320] Y

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 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 hhv (MMBtu) –ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320]

Section 6.3, Compliance Testing

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

When any unit is connected to scrubber/wet ESP and is burning TEOR/TVR gas, scrubber/wet ESP shall be operating and permittee shall demonstrate compliance with PM10 and sulfur oxide emissions limit by stack source testing within 60 days of initial scrubbing date and annually thereafter. If compliance is demonstrated on two consecutive annual source tests, testing shall be required not less than once every 36 months unless testing is required by scrubber operational mode change as noted above. Annual source testing shall resume if any test fails to show compliance. Sulfur removal efficiency of scrubber/wet ESP shall be demonstrated during initial stack source test and calculated with subsequent tests. Ongoing compliance with sulfur oxide emissions limit shall be by calculation using the scrubber liquid pH, the demonstrated sulfur removal efficiency, and the fuel gas sulfur content. Fuel gas sulfur content shall be obtained by sample analysis at least semi-annually. [District Rules 2201 and 4320]

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

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 permits. Therefore, compliance with District Rule 4320 requirements is expected.

Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO_2, 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:

Volume $SO_2 = \frac{nRT}{P}$

With:

N = moles SO_2
T (Standard Temperature) = 60°F = 520°R
P (Standard Pressure) = 14.7 psi
R (Universal Gas Constant) = $\frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot {}^\circ\text{R}}$

$$\frac{0.0206\,lb - SOx}{MMBtu} \times \frac{MMBtu}{8{,}578\,dscf} \times \frac{1\,lb \cdot mol}{64\,lb} \times \frac{10.73\,psi \cdot ft^3}{lb \cdot mol \cdot {}^\circ R} \times \frac{520^\circ R}{14.7\,psi} \times \frac{1{,}000{,}000 \cdot parts}{million} = 14.2\,\frac{parts}{million}$$

$$SulfurConcentration = 14.2\,\frac{parts}{million}$$ < 2,000 ppmv (or 0.2%)

Therefore, compliance with the requirements of this rule is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

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

- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

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) demonstrates that the project includes Best Performance Standards (BPS) for each class and category of greenhouse gas emissions unit (**Attachment XIII**). The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

To ensure the project achieves the required GHG emission reductions, the following permit condition will be made a condition of project approval:

For units -141 through -145, and -186:

- *Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and 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%. [Public Resources Code 21000-21177: California Environmental Quality Act]*

For units -162 through -164:

- *Steam generator shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump, split flow dual pass water feed configuration,a convection section having at least 128 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer), and at least six inches of castable refractory or a manufacturer's overall thermal efficiency rating of at least 85%. [Public Resources Code 21000-21177: California Environmental Quality Act]*

District CEQA Findings

The District determined that no other agency has broader discretionary approval power over the project and that the District is the first agency to act on the project, therefore establishing the District as the Lead Agency for the project (CCR §15051(b). The District's engineering evaluation of the project (this document) determined that compliance with District rules and permit conditions would reduce and mitigate the project's potential air quality impacts to less than significant.

To ensure the project achieves the required criteria pollutant emission reductions, the following permit conditions will be made a condition of project approval:

For Units -141 through -145 (Option 1):

- *Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,353 lb/quarter; PM10: 729 lb/quarter, and VOC: 144 lb/quarter. Offsets include the applicable offset ratio specified in Section 4.8 Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act]*

For Units -141 through -145 (Option 2):

- *Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 490 lb/quarter and PM10: 729 lb/quarter. Offsets include the applicable offset ratio specified in Section 4.8 Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act]*

For Units -162-1 through -164-1:

- *Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 2,259 lb/quarter; PM10: 1,560 lb/quarter; and VOC: 1,129 lb/quarter. Offsets include the applicable offset ratio specified in Section 4.8 Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act]*

For Unit -186-0:

- *Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,943 lb/quarter; PM10: 729 lb/quarter; and VOC: 1,336 lb/quarter. Offsets include the applicable offset ratio specified in Section 4.8 Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act]*

To ensure that the project will have a less than significant impact on all other environmental resources, the following permit conditions will be made a condition of project approval:

Biological Species

- *A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]*
- *During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]*
- *Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]*
- *During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]*
- *All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to*

remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

- *All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]*
- *No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]*
- *No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]*
- *Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]*
- *Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]*
- *An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]*
- *Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be*

revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

- *In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]*
- *Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]*
- *The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is provided below. [Public Resources Code 21000-21177: California Environmental Quality Act]*

CDFW: Ms. Reagen O'Leary, Environmental Scientist
1234 E. Shaw Avenue
Fresno, CA 93710
Phone: (559) 243-4014

CDFW: Mr. Paul Hoffman, Wildlife Biologist
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670
(530) 934-9309

USFWS: Chief of the Division of Endangered Species
2800 Cottage Way, Suite W2605
Sacramento, CA 95825-1846
(916) 414-6620 or (916) 414-6600.

- *New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should*

also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

Cultural Resources

- *In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]*
- *In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]*

Hazardous Materials

- *Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the* Division of Oil, Gas, and Geothermal Resources *(DOGGR) for compliance with DOGGR's "Well Review Program".*
- *Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned, or damaged wells are discovered.*
- *Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection.*
- *Permittee shall retain written records on-site demonstrating compliance with all applicable Department of Toxic Substances Control (DTSC) regulations, including biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials if necessary.*

Hydrology and Water Quality

- *Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection.*
- *Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection.*

The District prepared an Initial Study which demonstrates that through a combination of project design elements, and permit conditions, project specific environmental impacts will be less than significant. A Mitigated Negative declaration and Notice of Intent to Adopt will be prepared and circulated for public review and comment pursuant to CCR §15072 et seq. The issuance of the Authority to Construct (ATC) constitutes the final decision to approve the project and will not be issued until the District has approved the final environmental document. Pursuant to CCR §15075 a Notice of Determination will be filed within five (5) days of the issuance of the ATC.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful PSD and NSR Public Noticing period, issue ATCs S-1327-141-2 through 145-2, '-141-3 through '-145-3, '-162-1 through '-164-1, and '-186-0. Draft ATCs are included in **Attachment XIV**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1327-141 through '-145, '-162 through '-164, and '-187	3020-02-H	62.5 - 85 MMBtu/hr	$1030.00

Attachments

I. PTOs S-1327-107-0, '-111-0, '-115-0, '-116-0, '-120-0, '-137-0, and '-138-0 (to be surrendered)
II. Project Location Map
III. Tank Emissions Calculations
IV. Emissions Profiles
V. SSPE Calculation
VI. BACT Guideline
VII: BACT Analysis
VIII: HRA and AAQA Modelling
IX: Statewide Compliance Statement
X: GHG BACT Analysis
XI: Title V Compliance Certification form
XII: PSD Entities
XIII: BPS Analysis
XIV: Draft ATCS

ATTACHMENT I
PTOs S-1327-107-0, '-111-0, '-115-0, '-116-0, '-120-0, '-137-0, and '-138-0 (to be surrendered)

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1327-107-1 **EXPIRATION DATE:** 02/28/2017

SECTION: SE02 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
1,500 BBL FIXED ROOF WASH TANK (WILLIAMSON LEASE)

PERMIT UNIT REQUIREMENTS

1. 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] Federally Enforceable Through Title V Permit
2. 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] Federally Enforceable Through Title V Permit
3. 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] Federally Enforceable Through Title V Permit
4. 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] Federally Enforceable Through Title V Permit
5. 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] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions from components in gas service shall not exceed 11.7 lb/day. Fugitive component count and leak emissions are to be calculated using "Oil and Gas Production Operations Average Emission Factors, EPA Protocol for Equipment Leak Emission Factors, November 1995 (EPA-453/R-95-017). [District Rule 2201] Federally Enforceable Through Title V Permit
7. Maximum VOC content of total organic gases (TOG) shall not exceed 50% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Permittee shall maintain with the permit accurate fugitive component counts for the tank and associated equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit
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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1327-111-1 **EXPIRATION DATE:** 02/28/2017

SECTION: SW02 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (ENRON-UNITED LEASE)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank shall operate at constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Throughput shall not exceed 2500 barrels per day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC fugitive emissions from components in gas service shall not exceed 11.6 lb/day. Fugitive component count and leak emissions are to be calculated using "Oil and Gas Production Operations Average Emission Factors, EPA Protocol for Equipment Leak Emission Factors, November 1995 (EPA-453/R-95-017). [District Rule 2201] Federally Enforceable Through Title V Permit
5. Maximum VOC content of total organic gases (TOG) shall not exceed 50% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. 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] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. 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] Federally Enforceable Through Title V Permit
11. Permittee shall maintain with the permit accurate fugitive component counts for the tank and associated equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. 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] Federally Enforceable Through Title V Permit
13. 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] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1327-115-1 **EXPIRATION DATE:** 02/28/2017

SECTION: SE2 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
1,000 BBL FIXED-ROOF CRUDE OIL STORAGE TANK WITH A P/V RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank shall be equipped with an accurate, operational stored liquid temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Temperature of liquid stored shall not exceed 180 øF. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of 0.31 psia or less under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. Crude oil throughput shall not exceed 435 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC emission rate from the tank shall not exceed 15.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
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 Rules 2201and 4623] Federally Enforceable Through Title V Permit
9. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. 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 Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. Permittee shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. Inspection log and all other records shall be retained on-site for a minimum of five (5) years and made available for APCO upon request, except for certain records that need to be submitted as specified in this permit. [District Rules 1070, 2201 and 4623] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1327-116-1 **EXPIRATION DATE:** 02/28/2017

SECTION: SE2 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
NON-COMPLIANT DORMANT 25 MMBTU/HR NATURAL GAS/LPG FIRED STEAM GENERATOR, WITH MAXON KINEDIZER LOW NOX BURNER AND SMARTFIRE CONTROLLER

PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit
4. Daily heat input shall not exceed 528 MMBtu. Permittee shall maintain records of daily heat input and shall make such records available for District inspection. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed the following: NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, CO: 0.0813 lb/MMBtu or 110 ppmv @ 3% O2, VOC: 0.0055 lb/MMBtu, and PM10: 4.0 lb/day. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit
6. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted within 60 days of initial firing on natural gas. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit
7. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted within 60 days of initial firing on LPG. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit
8. Sulfur content of the natural gas and LPG shall not exceed 15 ppmv. [District Rule 2201] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070] Federally Enforceable Through Title V Permit
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. [District Rule 1070] Federally Enforceable Through Title V Permit
11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rule 4305] Federally Enforceable Through Title V Permit

13. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305] Federally Enforceable Through Title V Permit

14. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305] Federally Enforceable Through Title V Permit

15. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305] Federally Enforceable Through Title V Permit

16. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

17. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

18. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

19. 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 Rule 4305] Federally Enforceable Through Title V Permit

20. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305] Federally Enforceable Through Title V Permit

21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

23. Permittee shall maintain records of fuel gas sulfur concentration. [District Rule 1070] Federally Enforceable Through Title V Permit

24. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4305] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1327-120-1 **EXPIRATION DATE:** 02/28/2017

SECTION: VAR **TOWNSHIP:** VAR **RANGE:** VAR

EQUIPMENT DESCRIPTION:
23.0 MMBTU/HR NATCO SERIAL #S8709 NATURAL GAS/LPG/WASTE GAS-FIRED STEAM GENERATOR (HSG #45, DIS# 21088-66) WITH A NORTH AMERICAN MODEL 6121 BURNER, DIFFUSER PLATE, AND FGR

PERMIT UNIT REQUIREMENTS

1. The steam generator is approved to be operated at the following locations: Sections 2, 3, 11, 12, T26S/R20E; and Sections 33, 34, T25S/R20E [District Rule 2201] Federally Enforceable Through Title V Permit
2. The unit shall not be located within 1,000 feet of any K-12 school. [CH&SC 42301.6]
3. Permittee shall notify the District Compliance Division in writing of each location at which this steam generator is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
4. 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] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. The unit shall only be fired on natural gas, LPG, or waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.00515 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.036 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070] Federally Enforceable Through Title V Permit
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. [District Rule 1070] Federally Enforceable Through Title V Permit
11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. If FGR system on unit is used intermittently, monitoring shall consist of use of a portable analyzer. If FGR system on unit is continuously used, monitoring shall consist of either use of a portable analyzer or monitoring of FGR rate based on parameters established during initial compliance source testing. If FGR system on unit is not used, monitoring shall consist of either use of a portable analyzer or monitoring of stack O2 and burner mechanical adjustments. The alternate monitoring scheme selected for this unit shall be established prior to implementation of this Authority to Construct. [District Rule 4306] Federally Enforceable Through Title V Permit

13. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

14. If periodic monitoring of NOX, CO, and O2 concentrations is utilized and the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

15. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

16. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. If periodic determination of FGR rate by O2 measurement is utilized, the flue gas recirculation rate shall be determined at least on a weekly basis by measuring the stack O2% by volume (Os), and windbox O2% by volume (Ow) using the following equation: FGR rate = {Ow - 20.9)/(Os - 20.9)} x 100%. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last week. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. If periodic determination of FGR rate by O2 measurement is utilized, the minimum flue gas recirculation rate shall be established by source testing this unit or other representative units per Rule 4305 and as approved by the District. The normal range/level shall be no lower than the minimum flue gas recirculation rate with which compliance with applicable NOx and CO emission limits has been demonstrated through source testing at a similar firing rate. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

19. If periodic determination of FGR rate by O2 measurement is utilized, and the flue gas recirculation rate is less than the normal range/level, the permittee shall return the flue gas recirculation rate to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the flue gas recirculation rate is not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new flue gas recirculation rate. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. If periodic determination of FGR rate by O2 measurement is utilized, the permittee shall maintain records of the date and time of oxygen concentration measurements, the measured oxygen concentrations, the calculated flue gas recirculation rate, and the firing rate at the time of the oxygen concentration measurements. The records shall also include a description of any corrective action taken to maintain the flue gas recirculation rate within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. If monitoring of burner mechanical adjustments and O2 concentration is utilized, the stack O2 concentration measurement and inspection of [list mechanical adjustments/settings] shall be conducted at least on a weekly basis. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last week. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. If monitoring of burner mechanical adjustments and O2 concentration is utilized, the normal range/level of stack O2 concentration and visible mechanical burner settings shall be established by source testing this unit or other representative units per Rule 4305 and as approved by the District. The normal range/level shall be that for which compliance with applicable NOx and CO emission limits has been demonstrated through source testing at a similar firing rate. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. If monitoring of burner mechanical adjustments and O2 concentration is utilized, normal range or level for the stack O2 concentration and burner mechanical settings shall be re-established during each source test required by this permit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. If monitoring of burner mechanical adjustments and O2 concentration is utilized, and either the stack O2 concentration or visible mechanical burner settings are less than the normal range/level, the permittee shall return the stack O2 concentration and visible mechanical burner settings to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the stack O2 concentration and visible mechanical burner settings are not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour, and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new stack O2 concentration and visible mechanical burner settings. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. If monitoring of burner mechanical adjustments and O2 concentration is utilized, the permittee shall maintain records of the date and time of O2 measurements and burner adjustments, the measured O2 concentrations (% by volume) and firing rate at the time of O2 measurement, and the observed setting(s) for the burner. The records must also include a description of any corrective action taken to maintain the O2 concentration and the burner mechanical settings within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. If periodic determination of FGR rate by O2 measurement or monitoring of burner mechanical adjustments and O2 concentration is utilized, during the 36-month source testing interval, the owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

27. If periodic determination of FGR rate by O2 measurement or monitoring of burner mechanical adjustments and O2 concentration is utilized, and the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4306] Federally Enforceable Through Title V Permit

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted within 60 days of initial firing on natural gas or waste gas. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

30. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted within 60 days of initial firing on LPG. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

31. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

34. 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 and 4306] Federally Enforceable Through Title V Permit

35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

36. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

37. The permittee shall notify the District of the alternative monitoring method selected prior to or concurrently with implementation of this ATC. [District Rule 2080] Federally Enforceable Through Title V Permit

38. The permittee shall maintain records of each location at which the equipment was operated, the dates operated at each location, and the hours of operation at each location. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

39. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

40. 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] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1327-137-1 **EXPIRATION DATE:** 02/28/2017

EQUIPMENT DESCRIPTION:
25 MMBTU/HR NATURAL GAS/LPG/WASTE GAS-FIRED STEAM GENERATOR EQUIPPED WITH GIDEON MODEL MGW-25 LOW NOX BURNER, FGR, AND AIR/FUEL RATIO CONTROLLER

PERMIT UNIT REQUIREMENTS

1. The steam generator is approved to be operated at the following locations: Sections 2, 3, 11, 12, T26S/R20E; and Sections 33, 34, T25S/R20E [District Rule 2201] Federally Enforceable Through Title V Permit
2. The unit shall not be located within 1,000 feet of any K-12 school. [CH&SC 42301.6]
3. Permittee shall notify the District Compliance Division in writing of each location at which this steam generator is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
4. 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] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. The unit shall only be fired on natural gas, LPG, or waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.0164 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.036 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070] Federally Enforceable Through Title V Permit
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. [District Rule 1070] Federally Enforceable Through Title V Permit
11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

13. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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

15. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted within 60 days of introduction of natural gas to steam generator. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

18. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted within 60 days of introduction of waste gas to steam generator. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

19. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted within 60 days of introduction of LPG to steam generator. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

20. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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] Federally Enforceable Through Title V Permit

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 and 4306] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of each location at which the equipment was operated, the dates operated at each location, and the hours of operation at each location. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1327-138-1 **EXPIRATION DATE:** 02/28/2017

EQUIPMENT DESCRIPTION:
25 MMBTU/HR NATURAL GAS/LPG/WASTE GAS-FIRED STEAM GENERATOR EQUIPPED WITH GIDEON MODEL MGW-25 LOW NOX BURNER, FGR, AND AIR/FUEL RATIO CONTROLLER

PERMIT UNIT REQUIREMENTS

1. The steam generator is approved to be operated at the following locations: Sections 2, 3, 11, 12, T26S/R20E; and Sections 33, 34, T25S/R20E [District Rule 2201] Federally Enforceable Through Title V Permit
2. The unit shall not be located within 1,000 feet of any K-12 school. [CH&SC 42301.6]
3. Permittee shall notify the District Compliance Division in writing of each location at which this steam generator is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
4. 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] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. The unit shall only be fired on natural gas, LPG, or waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.0164 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.036 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070] Federally Enforceable Through Title V Permit
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. [District Rule 1070] Federally Enforceable Through Title V Permit
11. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

13. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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

15. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted within 60 days of introduction of natural gas to steam generator. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

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20. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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] Federally Enforceable Through Title V Permit

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 and 4306] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of each location at which the equipment was operated, the dates operated at each location, and the hours of operation at each location. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

28. 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] Federally Enforceable Through Title V Permit

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

ATTACHMENT II
Project Location Map

Vintage Production California LLC - Lost Hills Facility
25S 20E
26S 20E
25S 21E
26S 21E
Google earth

ATTACHMENT III
Tank Emissions Calculations

From project EE
- 4073, 1084278

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-4073-16-1
facility tank I.D.	--
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.31
liquid bulk storage temperature, Tb (°F)	200
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)	21.2
capacity of tank (bbl)	1,000
conical or dome roof? (c, d)	c
shell height of tank (feet)	16
average liquid height (feet)	10
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

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Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		435
maximum annual fluid throughput (bbl)		158,775
-----This row only used if flashing losses occur in this tank-----		435
-----This row only used if flashing losses occur in this tank-----		158,775
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, Tax (°F)		77.65
daily minimum ambient temperature, Tan (°F)		53.15
daily total solar insulation factor, I (Btu/ft^2-day)		1648.9
atmospheric pressure, Pa (psia)		14.47
water vapor pressure at daily maximum liquid surface temperature (Tlx), Pvx (psia	155.0	4.2359
water vapor pressure at daily minimum liquid surface temperature (Tln), Pvn (psia	144.2	3.2442
water vapor pressure at average liquid surface temperature (Tla), Pva (psia)	149.6	3.6918
roof outage, Hro (feet)		0.2208
vapor space volume, Vv (cubic feet)		2195.89
paint factor, alpha		0.68
vapor density, Wv (lb/cubic foot)		0.0047
daily vapor temperature range, delta Tv (degrees Rankine)		49.04
vapor space expansion factor, Ke		0.1669

Results	lb/year	lb/day
Standing Storage Loss	634	1.74
Working Loss	4,922	13.49
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	5,556	15.2

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Post Project

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-4073-8-0
facility tank I.D.	Williamson
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.5
liquid bulk storage temperature, Tb (°F)	180
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)	21.5
capacity of tank (bbl)	1,500
conical or dome roof? (c, d)	c
shell height of tank (feet)	24
average liquid height (feet)	22
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)	6
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

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Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		150
maximum annual fluid throughput (bbl)		54,750
----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, Tax (°F)		77.65
daily minimum ambient temperature, Tan (°F)		53.15
daily total solar insulation factor, I (Btu/ft^2-day)		1648.9
atmospheric pressure, Pa (psia)		14.47
(psia)	152.2	3.8429
(psia)	141.4	3.0065
water vapor pressure at average liquid surface temperature (Tla), Pva (psia)	146.8	3.4539
roof outage, Hro (feet)		0.2240
vapor space volume, Vv (cubic feet)		807.41
paint factor, alpha		0.89
vapor density, Wv (lb/cubic foot)		0.0077
daily vapor temperature range, delta Tv (degrees Rankine)		58.73
vapor space expansion factor, Ke		0.1783

Results	lb/year	lb/day
Standing Storage Loss	399	1.09
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	399	1.1

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Summary Table	
Permit Number	S-4073-8-0
Facility Tank I.D.	Williamson
Tank capacity (bbl)	1,500
Tank diameter (ft)	21.6
Tank shell height (ft)	24
Conical or Dome Roof	Conical
Maximum Daily Fluid Throughput (bbl/day)	150
Maximum Annual Fluid Throughput (bbl/year)	54,750
Maximum Daily Oil Throughput (bbl/day)	100
Maximum Annual Oil Throughput (bbl/year)	---
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	1.1
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	399

Post Project

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-4073-12
facility tank I.D.	
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.8
liquid bulk storage temperature, Tb (°F)	180
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)	21
capacity of tank (bbl)	1,000
conical or dome roof? (c, d)	c
shell height of tank (feet)	16
average liquid height (feet)	14
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)	5
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 (bbl)		2,500
maximum annual fluid throughput (bbl)		912,500
----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, Tax (°F)		77.85
daily minimum ambient temperature, Tan (°F)		53.15
daily total solar insulation factor, I (Btu/ft^2-day)		1648.9
atmospheric pressure, Pa (psia)		14.47
(psia)	152.2	3.9429
(psia)	141.4	3.0065
water vapor pressure at average liquid surface temperature (Tla), Pva (psia)	146.8	3.4539
roof outage, Hro (feet)		0.2188
vapor space volume, Vv (cubic feet)		769.49
paint factor, alpha		0.89
vapor density, Wv (lb/cubic foot)		0.0077
daily vapor temperature range, delta Tv (degrees Rankine)		58.73
vapor space expansion factor, Ke		0.1763

Results	lb/year	lb/day
Standing Storage Loss	380	1.04
Working Loss	N/A	N/A
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	380	1.0

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Summary Table	
Permit Number	S-4073-12
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)	2,600
Maximum Annual Fluid Throughput (bbl/year)	912,600
Maximum Daily Oil Throughput (bbl/day)	100
Maximum Annual Oil Throughput (bbl/year)	---
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	1.0
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	380

ATTACHMENT IV
Emissions Profiles

Permit #: S-1327-141-2	**Last Updated**
Facility: VINTAGE PRODUCTION CALIFORNIA	04/02/2013 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	5182.0	1846.0	1943.0	11660.0	3563.0
Daily Emis. Limit (lb/Day)	16.3	5.8	6.1	36.7	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1295.0	461.0	485.0	2915.0	890.0
Q2:	1295.0	461.0	486.0	2915.0	891.0
Q3:	1296.0	462.0	486.0	2915.0	891.0
Q4:	1296.0	462.0	486.0	2915.0	891.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5		1.5		1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:	1353.0		729.0		144.0
Q2:	1353.0		729.0		144.0
Q3:	1353.0		729.0		144.0
Q4:	1353.0		729.0		144.0

Application Emissions

Permit #: S-1327-141-3	Last Updated
Facility: VINTAGE PRODUCTION CALIFORNIA	04/02/2013 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	5182.0	490.0	1943.0	11660.0	3563.0
Daily Emis. Limit (lb/Day)	16.3	5.8	6.1	36.7	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1295.0	461.0	485.0	2915.0	890.0
Q2:	1295.0	461.0	486.0	2915.0	891.0
Q3:	1296.0	462.0	486.0	2915.0	891.0
Q4:	1296.0	462.0	486.0	2915.0	891.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5		1.5		
Quarterly Offset Amounts (lb/Qtr)					
Q1:	490.0		729.0		
Q2:	490.0		729.0		
Q3:	490.0		729.0		
Q4:	490.0		729.0		

Application Emissions

Permit #: S-1327-142-2	Last Updated
Facility: VINTAGE PRODUCTION CALIFORNIA	04/02/2013 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	5182.0	1846.0	1943.0	11660.0	3563.0
Daily Emis. Limit (lb/Day)	16.3	5.8	6.1	36.7	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1295.0	461.0	485.0	2915.0	890.0
Q2:	1295.0	461.0	486.0	2915.0	891.0
Q3:	1296.0	462.0	486.0	2915.0	891.0
Q4:	1296.0	462.0	486.0	2915.0	891.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5		1.5		1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:	1353.0		729.0		144.0
Q2:	1353.0		729.0		144.0
Q3:	1353.0		729.0		144.0
Q4:	1353.0		729.0		144.0

Application Emissions

Permit #: S-1327-142-3	**Last Updated**
Facility: VINTAGE PRODUCTION CALIFORNIA	04/02/2013 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	5182.0	1846.0	1943.0	11660.0	3563.0
Daily Emis. Limit (lb/Day)	16.3	5.8	6.1	36.7	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1295.0	461.0	485.0	2915.0	890.0
Q2:	1295.0	461.0	486.0	2915.0	891.0
Q3:	1296.0	462.0	486.0	2915.0	891.0
Q4:	1296.0	462.0	486.0	2915.0	891.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5		1.5		
Quarterly Offset Amounts (lb/Qtr)					
Q1:	490.0		729.0		
Q2:	490.0		729.0		
Q3:	490.0		729.0		
Q4:	490.0		729.0		

Application Emissions

Permit #: S-1327-143-2	**Last Updated**
Facility: VINTAGE PRODUCTION CALIFORNIA	04/02/2013 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	5182.0	1846.0	1943.0	11660.0	3563.0
Daily Emis. Limit (lb/Day)	16.3	5.8	6.1	36.7	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1295.0	461.0	485.0	2915.0	890.0
Q2:	1295.0	461.0	486.0	2915.0	891.0
Q3:	1296.0	462.0	486.0	2915.0	891.0
Q4:	1296.0	462.0	486.0	2915.0	891.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5		1.5		1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:	1353.0		729.0		144.0
Q2:	1353.0		729.0		144.0
Q3:	1353.0		729.0		144.0
Q4:	1353.0		729.0		144.0

Permit #: S-1327-143-3	**Last Updated**
Facility: VINTAGE PRODUCTION CALIFORNIA	04/02/2013 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	5182.0	1846.0	1943.0	11660.0	3563.0
Daily Emis. Limit (lb/Day)	16.3	5.8	6.1	36.7	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1295.0	461.0	485.0	2915.0	890.0
Q2:	1295.0	461.0	486.0	2915.0	891.0
Q3:	1295.0	462.0	486.0	2915.0	891.0
Q4:	1295.0	462.0	486.0	2915.0	891.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5		1.5		
Quarterly Offset Amounts (lb/Qtr)					
Q1:	490.0		729.0		
Q2:	490.0		729.0		
Q3:	490.0		729.0		
Q4:	490.0		729.0		

Application Emissions

Permit #: S-1327-144-2	**Last Updated**
Facility: VINTAGE PRODUCTION CALIFORNIA	04/02/2013 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	5182.0	1846.0	1943.0	11660.0	3563.0
Daily Emis. Limit (lb/Day)	16.3	5.8	6.1	36.7	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1295.0	461.0	485.0	2915.0	890.0
Q2:	1295.0	461.0	486.0	2915.0	891.0
Q3:	1296.0	462.0	486.0	2915.0	891.0
Q4:	1296.0	462.0	486.0	2915.0	891.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5		1.5		1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:	1353.0		729.0		144.0
Q2:	1353.0		729.0		144.0
Q3:	1353.0		729.0		144.0
Q4:	1353.0		729.0		144.0

Application Emissions

Permit #: S-1327-144-3	Last Updated
Facility: VINTAGE PRODUCTION CALIFORNIA	04/02/2013 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	5182.0	1846.0	1943.0	11660.0	3563.0
Daily Emis. Limit (lb/Day)	16.3	5.8	6.1	36.7	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1295.0	461.0	485.0	2915.0	890.0
Q2:	1295.0	461.0	486.0	2915.0	891.0
Q3:	1296.0	462.0	486.0	2915.0	891.0
Q4:	1296.0	462.0	486.0	2915.0	891.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5		1.5		
Quarterly Offset Amounts (lb/Qtr)					
Q1:	490.0		729.0		
Q2:	490.0		729.0		
Q3:	490.0		729.0		
Q4:	490.0		729.0		

Application Emissions

Permit #: S-1327-145-2	**Last Updated**
Facility: VINTAGE PRODUCTION CALIFORNIA	04/02/2013 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	5182.0	1846.0	1943.0	11660.0	3563.0
Daily Emis. Limit (lb/Day)	16.3	5.8	6.1	36.7	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1295.0	461.0	485.0	2915.0	890.0
Q2:	1295.0	461.0	486.0	2915.0	891.0
Q3:	1296.0	462.0	486.0	2915.0	891.0
Q4:	1296.0	462.0	486.0	2915.0	891.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5		1.5		1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:	1353.0		729.0		144.0
Q2:	1353.0		729.0		144.0
Q3:	1353.0		729.0		144.0
Q4:	1353.0		729.0		144.0

Application Emissions

Permit #: S-1327-145-3
Facility: VINTAGE PRODUCTION CALIFORNIA

Last Updated
04/02/2013 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	5182.0	1846.0	1943.0	11660.0	3563.0
Daily Emis. Limit (lb/Day)	16.3	5.8	6.1	36.7	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1295.0	461.0	485.0	2915.0	890.0
Q2:	1295.0	461.0	486.0	2915.0	891.0
Q3:	1295.0	462.0	486.0	2915.0	891.0
Q4:	1295.0	462.0	486.0	2915.0	891.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5		1.5		
Quarterly Offset Amounts (lb/Qtr)					
Q1:	490.0		729.0		
Q2:	490.0		729.0		
Q3:	490.0		729.0		
Q4:	490.0		729.0		

Application Emissions

Permit #: S-1327-162-1	Last Updated
Facility: VINTAGE PRODUCTION CALIFORNIA	04/02/2013 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	6023.0	10184.0	4161.0	9855.0	3011.0
Daily Emis. Limit (lb/Day)	16.5	27.9	11.4	27.0	8.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1505.0	2546.0	1040.0	2463.0	752.0
Q2:	1506.0	2546.0	1041.0	2464.0	753.0
Q3:	1506.0	2546.0	1041.0	2464.0	753.0
Q4:	1506.0	2546.0	1041.0	2464.0	753.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5		1.5		1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:	2259.0		1560.0		1129.0
Q2:	2259.0		1560.0		1129.0
Q3:	2259.0		1560.0		1129.0
Q4:	2259.0		1560.0		1129.0

Application Emissions

Permit #: S-1327-163-1	**Last Updated**
Facility: VINTAGE PRODUCTION CALIFORNIA	04/02/2013 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	6023.0	10184.0	4161.0	9855.0	3011.0
Daily Emis. Limit (lb/Day)	16.5	27.9	11.4	27.0	8.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1505.0	2546.0	1040.0	2463.0	752.0
Q2:	1506.0	2546.0	1041.0	2464.0	753.0
Q3:	1506.0	2546.0	1041.0	2464.0	753.0
Q4:	1506.0	2546.0	1041.0	2464.0	753.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5		1.5		1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:	2259.0		1560.0		1129.0
Q2:	2259.0		1560.0		1129.0
Q3:	2259.0		1560.0		1129.0
Q4:	2259.0		1560.0		1129.0

Permit #: S-1327-164-1	**Last Updated**
Facility: VINTAGE PRODUCTION CALIFORNIA	04/02/2013 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	6023.0	10184.0	4161.0	9855.0	3011.0
Daily Emis. Limit (lb/Day)	16.5	27.9	11.4	27.0	8.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1505.0	2546.0	1040.0	2463.0	752.0
Q2:	1505.0	2546.0	1041.0	2464.0	753.0
Q3:	1505.0	2546.0	1041.0	2464.0	753.0
Q4:	1505.0	2546.0	1041.0	2464.0	753.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5		1.5		1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:	2259.0		1560.0		1129.0
Q2:	2259.0		1560.0		1129.0
Q3:	2259.0		1560.0		1129.0
Q4:	2259.0		1560.0		1129.0

Application Emissions

Permit #: S-1327-186-0	Last Updated
Facility: VINTAGE PRODUCTION CALIFORNIA	03/20/2013 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	5182.0	1846.0	1943.0	11660.0	3563.0
Daily Emis. Limit (lb/Day)	16.3	5.8	6.1	36.7	11.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1295.0	461.0	485.0	2915.0	890.0
Q2:	1295.0	461.0	486.0	2915.0	891.0
Q3:	1296.0	462.0	486.0	2915.0	891.0
Q4:	1296.0	462.0	486.0	2915.0	891.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio	1.5		1.5		1.5
Quarterly Offset Amounts (lb/Qtr)					
Q1:	1943.0		729.0		1336.0
Q2:	1943.0		729.0		1336.0
Q3:	1943.0		729.0		1336.0
Q4:	1943.0		729.0		1336.0

ATTACHMENT V
SSPE Calculation

Detailed SSPE Report

Region	*Facility*	*Unit*	*Mod*	*NOx*	*SOx*	*PM10*	*CO*	*VOC*	*Number of Outstanding ATCs*
S	1327	0	1						0
S	1327	32	8	3469	899	2397	11668	1734	4
S	1327	34	6	3657	574	1531	6678	604	1
S	1327	35	3	4380	1560	5475	38325	1643	0
S	1327	36	3						1
S	1327	37	3						1
S	1327	38	3						1
S	1327	41	2	0	0	0	0	0	0
S	1327	42	8	2110	42	248	11479	1955	1
S	1327	55	1	0	0	0	0	60	0
S	1327	56	1	0	0	0	0	87	0
S	1327	57	1	0	0	0	0	183	0
S	1327	58	1	0	0	0	0	329	0
S	1327	59	1	0	0	0	0	694	0
S	1327	60	1	0	0	0	0	694	0
S	1327	70	1	4344	86	511	23634	5152	1
S	1327	80	1	0	0	0	0	1993	0
S	1327	81	1	0	0	0	0	1993	0
S	1327	82	1	0	0	0	0	150	0
S	1327	83	1	9898	438	1169	53911	9168	0
S	1327	84	1	0	0	0	0	169	0
S	1327	85	1	0	0	0	0	170	0
S	1327	86	1	0	0	0	0	170	0
S	1327	87	1	0	0	0	0	434	0
S	1327	88	1	0	0	0	0	1328	0
S	1327	89	1	0	0	0	0	1561	0

Notes:

Blank values for a particular permit unit do not necessarily relfect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each poliutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	1327	90	1	0	0	0	0	0	0
S	1327	91	1	0	0	0	0	1052	0
S	1327	92	1	0	0	0	0	1240	0
S	1327	102	1	0	0	0	0	2476	0
S	1327	103	1	0	0	0	0	922	0
S	1327	104	1	0	0	0	0	1419	0
S	1327	105	1	0	0	0	0	22616	0
S	1327	106	1	0	0	0	0	1419	0
S	1327	107	1	0	0	0	0	4507	0
S	1327	108	1	0	0	0	0	1732	0
S	1327	109	1						0
S	1327	110	2	0	0	0	0	0	0
S	1327	111	1	0	0	0	0	4470	0
S	1327	112	1	0	0	0	0	4798	0
S	1327	113	1	0	0	0	0	1362	0
S	1327	114	1	0	0	0	0	220	0
S	1327	115	1	0	0	0	0	5556	0
S	1327	116	1	7884	624	1460	17805	1205	0
S	1327	117	1	0	0	0	0	1583	0
S	1327	118	1	0	0	0	0	1583	0
S	1327	119	1	0	0	0	0	724	0
S	1327	120	1	3627	1038	1531	7253	604	0
S	1327	121	1					344	0
S	1327	122	1					603	0
S	1327	123	1					603	0
S	1327	124	1	0	0	0	0	1522	0
S	1327	125	1	0	0	0	0	724	0
S	1327	126	2	0	0	0	0	0	2
S	1327	127	1	0	0	0	0	0	0

Notes:

Blank values for a particular permit unit do not necessarily relfect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	1327	128	1	0	0	0	0	0	0
S	1327	129	1	0	0	0	0	0	0
S	1327	130	1	5242	1867	2293	11794	3604	0
S	1327	131	1	5242	1867	2293	11794	3604	0
S	1327	132	1	5242	1867	2293	11794	3604	0
S	1327	133	1	5242	1867	2293	11794	3604	0
S	1327	134	1	5242	1867	2293	11794	3604	0
S	1327	135	1	5242	1867	2293	11794	3604	0
S	1327	136	1	5242	1867	2293	11794	3604	0
S	1327	137	1	3942	3592	1664	7884	657	0
S	1327	138	1	3942	3592	1664	7884	657	0
S	1327	139	1						0
S	1327	140	1						0
S	1327	146	1	0	0	0	0	0	0
S	1327	155	3	5242	1867	2293	11794	3604	0
S	1327	159	1	0	0	0	0	0	0
S	1327	160	1	0	0	0	0	0	0
S	1327	169	1	12852	534	1512	69929	12382	0
S	1327	170	1	0	0	0	0	50	0
S	1327	171	1	0	0	0	0	76	0
S	1327	172	1	0	0	0	0	37	0
S	1327	173	1	0	0	0	0	37	0
S	1327	174	1	51	0	2	23	2	0
S	1327	175	1	0	0	0	0	73	0
S	1327	187	0						0
S	1327	188	0					5990	0
S	1327	189	0					59806	0
S	1327	190	0					59806	0
S	1327	191	0					29787	0

Notes:

Blank values for a particular permit unit do not necessarily relfect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

Region	Facility	Unit	Mod	NOx	SOx	PM10	CO	VOC	Number of Outstanding ATCs
S	1327	192	0						0
S	1327	193	0						0
S	1327	194	0					39003	0
S	1327	195	0					74377	0
S	1327	196	0	5677	2681	946	13245	631	0
	SSPE (lbs)			107769	30596	38454	364070	405758	

Notes:

Blank values for a particular permit unit do not necessarily relfect zero emissions. For units with blank values, the PE must still be determined based on physical PE or as limited by permit condition.

For permits that show outstanding ATCs, consult PAS ATC Emission Profile records to determine what the highest PE is for each pollutant.

ATCs for new units (e.g. S-XXXX-X-0) must be added in separately.

ERC's for onsite reductions must be added in separately per Rule 2201 as well.

ATTACHMENT VI
BACT Guideline

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.3.1*

Last Update: 10/1/2002

Petroleum and Petrochemical Production - Fixed Roof Organic Liquid Storage or Processing Tank, < 5,000 bbl Tank capacity **

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	PV-vent set to within 10% of maximum allowable pressure	99% control (Waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of noncondensable vapors to gas pipeline; reinjection to formation (if appropriate wells are available); or equal).	

** Converted from Determinations 7.1.11 (10/01/02).

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is requried for all determinations that are not achieved in practice or contained in an EPA approved State implementation Plan.

***This is a Summary Page for this Class of Source - Permit Specific BACT Determinations on Next Page(s)**

ATTACHMENT VII
BACT Analysis

BACT Analysis for Steam Generators S-1327-141 through '-145

Top Down BACT Analysis for the Steam Generator

Oxides of nitrogen (NO_X) are generated from the high temperature combustion of the natural gas fuel. A majority of the NO_X emissions are formed from the high temperature reaction of nitrogen and oxygen in the inlet air. The rest of the NO_X emissions are formed from the reaction of fuel-bound nitrogen with oxygen in the inlet air.

1. BACT Analysis for NO_X Emissions:

a. Step 1 - Identify all control technologies

The District adopted District Rule 4320 on October 16, 2008. The NO_X emission limit requirements in District Rule 4320 are lower than the current BACT limits; 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 greater than 20 MMBtu/hr to 7 ppm @ 3% O_2. This emission limit is Achieved in Practice control technology for the BACT analysis. District Rule 4320 also contains an enhanced schedule option that allows applicants additional time to meet the requirements of the rule. The enhanced schedule NO_X emission limit requirement is 5 ppmv @ 3% O_2. Since this is an enhanced option in the rule, it will be considered the Technologically Feasible control technology for the BACT analysis.

The SJVUAPCD BACT Clearinghouse guideline 1.2.1 has been rescinded. Therefore a new BACT analysis is required. The following are possible control technologies:

1) 5 ppmvd @ 3% O_2 with SCR
2) 7 ppmvd @ 3% O_2

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

1) 5 ppmvd @ 3% O_2 with SCR
2) 7 ppmvd @ 3% O_2

d. Step 4 - Cost Effectiveness Analysis

A cost effective analysis is required for technologically feasible control options that are not proposed. The applicant is proposing a NO_X limit of 7 ppmvd @ 3% O_2; therefore, a cost effective analysis is required for the 5 ppmvd option (SCR).

BACT Analysis for Steam Generators S-1327-162 through '-164

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% O_2 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% O_2 and final limit of 5 ppmv @ 3% O_2. Since this is an enhanced option in the rule, the final limit of 5 ppmv @ 3% O_2 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 NOx limit of 7 ppmv @ 3% O_2 and 9 ppmv when waste gas fired therefore a cost analysis for the 5 ppmvd with SCR (0.0062 lb/MMBTU) option is required.

SCR Cost Effectiveness Analysis (from project S1246, 1111128, 4 x 85 MMBtu/hr SGs) – assume equal SCR costs for 85 and 62.5 MMBtu/hr steam generators (this was also assumed for project S-1327, 1114465 (ATCs S-1327-162-0 through '-164-0)

Assumptions:

'-141 through '-145

Industry standard (IS) assumed to be a NO_X emission rate of 15 ppmv @ 3% O_2 in accordance with District Rule 4306.

Unit's maximum emissions are defined by the burner size multiplied by the emissions factor and a maximum annual operating schedule of 8,760 hr/year.

Calculations:

Industrial Standard NO_X Emissions = 85 MMBtu/hr x 0.018 lb/MMBtu x 8760 hrs/year

= 13,403 lb/year

Tech. Feasible NO_X Emissions = 85 MMBtu/hr x 0.006 lb/MMBtu x 8760 hrs/year

= 4,468 lb/year

NOx reduction due to SCR:

Total reduction = Emissions $_{(15\ ppmv)}$ – Emissions $_{(5\ ppmv)}$
Total reduction = 13,403 lb/yr – 4468 lb/yr
Total reduction = 8935 lb/yr = 4.5 ton/yr

'-162 through '-164

Assumptions:

Industry standard (IS) is assumed to be a NOx emission rate of 15 ppmv @3% O2 in accordance with Rule 4306

Unit's maximum emissions are defined by the burner size multiplied by the emissions rate and a maximum annual operating schedule of 8,760 hours

Calculations:

Industry Std NOx Emissions = 62.5 MMBtu/hr x 0.018 lb/MMBtu x 8,760 hr/yr
= 9855 lb/yr

Feasible NOx Emissions = 62.5 MMBtu/hr x 0.0062 lb/MMBtu x 8,760 hr/yr
= 3395 lb/yr

NOx reduction due to SCR:

Total reduction = Emissions $_{(15\ ppmv)}$ – Emissions $_{(5\ ppmv)}$
Total reduction = 9855 lb/yr – 3395 lb/yr
Total reduction = 6460 lb/yr = 3.2 ton/yr

Selective Catalytic Reduction system (Detailed costs follow the BACT Analysis Section):

Capital Cost (PCL): (includes all purchased equipment, taxes, freight, and installation of SCR for an 85 MMBtu/hr unit) – detailed costs follow.

Total Estimated Capital Cost: **$785,000** (October 30, 2012 estimate in attached to email)

Equivalent Annual Capital Cost (Capital Recovery)

$$A = P \frac{i(1+i)^n}{(1+i)^n - 1}$$ where;

A = Equivalent Annual Control Equipment Capital Cost
P = Present value of the control equipment, including installation cost
i = interest rate (use 10%, or demonstrate why alternate is more representative of the specific operation).
n = equipment life (assume 10 years or demonstrate why alternate is more representative of the specific operation)

Where

P = $785,000
i = 10%,
n = 10 years

A = $121,211

The annual operating cost is estimated to be $125,000/yr

Total annualized cost = $127,720/yr + $135,000/yr
= $257,720

Cost effectiveness (worst case 85 MMBtu/hr SGs, most tons reduced):

Cost effectiveness = $257,720/ 4.5 tpy
Cost effectiveness = $57,271/ ton

The cost effectiveness is greater than the $24,500/ton cost effectiveness threshold of the District BACT policy. Therefore the use of SCR with ammonia injection is not cost effective and is not required as BACT.

e. Step 5 - Select BACT

'-141 through '-145, '-186

BACT for NO_X emissions from this oil field steam generator is a NO_X limit of 7 ppmvd @ 3% O_2. The applicant has proposed to install an oil field steam generator with a NO_X limit of 7 ppmvd @ 3% O_2; therefore BACT for NO_X emissions is satisfied.

'-162 through '-164

BACT for NOx emissions from the oilfield steam generator is 7 ppmv @ 3% O2 and 9 ppmv when waste gas fired. The applicant has proposed to install the steam generators each with a NOx emission limit of ppmv @ 3% O2 and 9 ppmv when waste gas fired; therefore, BACT for NOx emissions is satisfied.

2. BACT Analysis for SO_X Emissions:

Oxides of sulfur (SO_X) emissions occur from the combustion of the sulfur, which is present in the fuel.

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 1.2.1, 1st quarter 2005, identifies for achieved in practice BACT for SO_X emissions from oil field steam generators ≥5 MMBtu/hr as follows:

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 SO_2 scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO_2 at stack O_2

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options 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 SO_2 scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO_2 at stack O_2

d. Step 4 - Cost Effectiveness Analysis

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for SO_X emissions from this oil field steam generator is natural gas fuel with a sulfur content ≤1 gr-S/100 scf. The applicant has proposed to install an oil field steam generator fired on TEOR/natural/TVR gas scrubbed to reduce sulfur by 95% or to ≤1 gr-S/100 scf; therefore BACT for SO_X emissions is satisfied.

3. BACT Analysis for PM_{10} Emissions:

Particulate matter (PM_{10}) emissions result from the incomplete combustion of various elements in the fuel.

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 1.2.1, 1st quarter 2005, identifies for achieved in practice BACT for CO_{10} emissions from oil field steam generators ≥5 MMBtu/hr as follows:

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 SO_2 scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO_2 at stack O_2

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options 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 SO_2 scrubber and either achieving 95% by weight control of sulfur compounds or achieving an emission rate of 30 ppmvd SO_2 at stack O_2

d. Step 4 - Cost Effectiveness Analysis

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for PM_{10} emissions from this oil field steam generator is natural gas fuel with a sulfur content ≤1 gr-S/100 scf. The applicant has proposed to install an oil field steam generator fired on TEOR/natural/TVR gas scrubbed to reduce sulfur by 95% or to a sulfur content ≤1 gr-S/100 scf; therefore BACT for PM_{10} emissions is satisfied.

4. BACT Analysis for CO Emissions:

Carbon monoxide (CO) emissions are generated from the incomplete combustion of air and fuel.

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 1.2.1, 1st quarter 2005, identifies for achieved in practice BACT for CO emissions from oil field steam generators ≥5 MMBtu/hr as follows:

1) 50 ppmvd @ 3% O_2

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

1) 50 ppmvd @ 3% O_2

d. Step 4 - Cost Effectiveness Analysis

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for CO emissions from this oil field steam generator is a CO limit of 50ppmvd @ 3% O_2. The applicant has proposed to install an oil field steam generator with a CO limit of 25 ppmvd @ 3% O_2; therefore BACT for CO emissions is satisfied.

5. BACT Analysis for VOC Emissions:

Volatile organic compounds (VOC) emissions are generated from the incomplete combustion of the fuel.

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 1.2.1, 1st quarter 2005, identifies for achieved in practice BACT for VOC emissions from oil field steam generators ≥5 MMBtu/hr as follows:

1) Gaseous fuel

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

1) Gaseous fuel

d. Step 4 - Cost effectiveness analysis

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for VOC emissions from this oil field steam generator is gaseous fuel. The applicant has proposed to install an oil field steam generator fired on gaseous fuel; therefore BACT for PM_{10} emissions is satisfied.

ATTACHMENT VIII
HRA and AAQA Modelling

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Richard Edgehill – Permit Services
From:	Trevor Joy – Technical Services
Date:	March 26, 2013
Facility Name:	Vintage Production California LLC
Location:	Township 26 S, Range 20 E
Application #(s):	S-1327 units: 141 thru 145, 162 thru 164, 186-0, 107, 111, 115, 116, and 151 thru 158
Project #:	1123645

A. RMR SUMMARY

RMR Summary					
Categories	**Steam Generator (Units 141 thru 145)**	**Steam Generator (Units 162 thru 164)**	**Steam Generator (Unit 186-0)**	**Project Totals**	**Facility Totals**
Prioritization Score	0.0[1]	0.0[1]	0.0	0.0	>1
Acute Hazard Index	N/A	N/A	0.0006	0.0006	0.002
Chronic Hazard Index	N/A	N/A	0.0003	0.0003	0.001
Maximum Individual Cancer Risk (10^{-6})	N/A	N/A	0.002	0.002	0.01
T-BACT Required?	**No**	**No**	**No**		
Special Permit Conditions?	**Yes**	**Yes**	**Yes**		

[1]The prioritization score was review as part of a previous project – the facility score was less than 1. No futher analysis was required.

Proposed Permit Conditions

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

Units 141 thru 145 (each unit)

1. 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]
2. The steam generator must be located in the SW ¼ of the SE ¼ Sec of Sec 34 Twn 25 Rng 20 (North Plant) or SE ¼ of the NE ¼ Sec of Sec 11 Twn 26 Rng 20 (South Plant)
3. Annual usage shall not exceed 647,000 Btu.

Units 162 thru 164

1. 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]
2. The steam generator must be located in the SW ¼ of the NW ¼ Sec of Sec 2 Twn 26 Rng 20 (Central Plant)

Unit 186

1. 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]
2. The steam generator must be located in the SW ¼ of the SE ¼ Sec of Sec 34 Twn 25 Rng 20 (North Plant) or SE ¼ of the NE ¼ Sec of Sec 11 Twn 26 Rng 20 (South Plant)
3. Annual usage shall not exceed 647,000 Btu.

B. RMR REPORT

I. Project Description

Technical Services received a request on December 12, 2012 to perform: a Risk Management Review for unit 186-0 (a new steam generator), and an AAQA with units 141-145, 162-164, and 186 all included in the analysis. On March 21, 2013 the facility revised the project request to allow units 141 thru 145 and unit 186 to operate at either the North Plant or the South Plant.

II. Analysis

For unit 186-0, Technical Services performed a prioritization using the District's HEARTs database. Since the total facility prioritization score was greater than one, a refined health risk assessment was required. Emissions were calculated using the District's "Petroleum Steam Generator-Natural Gas & CVRG" emission factors and input into the HEARTs database. The AERMOD model was used, with the parameters outlined below and meteorological data for 2004-2008 from Missouri Triangle 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. Also, as part of this project, the facility will cancel units 107, 111, 116, and 151-158.

The following parameters were used for the review:

Analysis Parameters Unit 186-0			
Source Type	Point	**Location Type**	Rural
Stack Height (m)	6.1	**Closest Receptor (m)**	2671
Stack Diameter. (m)	1.07	**NG Usage (MMBtu/hr)**	85
Stack Exit Velocity (m/s)	13.3	**NG Usage (MMBtu/yr)**	647,800
Stack Exit Temp. (°K)	394	**Fuel Type**	NG
Rain Cap/Pressure Plate	No	**Exhaust Discharge**	Vertical

AAQA: For units 141-145, 162-164, and 186.

Technical Services also performed modeling for criteria pollutants CO, NOx, Sox, PM_{10}, and $PM_{2.5}$; as well as the RMR. The emissions rates used for criteria pollutant modeling were:

Units 141-145 (each)	NOx	Sox	CO	PM10	PM2.5
Lbs/hr	0.68	0.24	1.53	0.25	0.25
Lbs/yr	5,182	1,846	11,660	1,943	1,943

Units 162-164 (each)	NOx	Sox	CO	PM10	PM2.5
Lbs/hr	0.69	1.14	2.2	0.48	0.48
Lbs/yr	6,023	10,184	9,855	4,161	4,161

Unit 186	NOx	Sox	CO	PM10	PM2.5
Lbs/hr	0.68	0.24	2.2	0.25	0.25
Lbs/yr	5,957	2,122	13,403	2,234	2,234

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Steam Generator	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass[1]	X	X	X	Pass
SO_x	Pass[2]	Pass	X	Pass	Pass
PM_{10}	X	X	X	Pass[3]	Pass[3]
$PM_{2.5}$	X	X	X	Fail[4]	Fail[4]

*Results were taken from the attached PSD spreadsheet.
[1]The project was compared to the 1-hour NO2 National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures. The criteria pollutant 1-hour value passed using TIER I NO_2 NAAQS modeling
[2]The project was compared to the 1-hour SO2 National Ambient Air Quality Standard that became effective on August 23, 2010 using the District's approved procedures.
[3]The maximum predicted concentration for emissions of these criteria pollutants from the proposed unit are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).
[4] Facility is fully offsetting the project PM emissions as per District Rule 2201.

The following parameters were used for the review:

Analysis Parameters Units 141-145			
Source Type	Point	**Location Type**	Rural
Stack Height (m)	6.1	**Stack Diameter. (m)**	1.07
Stack Exit Velocity (m/s)	17.4	**Burner Rating (MMBtu/hr)**	85
Rain Cap/Pressure Plate	No	**Exhaust Discharge**	Vertical
Stack Exit Temp. (°K)	388		

Analysis Parameters Units 162-164			
Source Type	Point	**Location Type**	Rural
Stack Height (m)	8.2	**Stack Diameter. (m)**	0.91
Stack Exit Velocity (m/s)	38.8	**Burner Rating (MMBtu/hr)**	62.5
Rain Cap/Pressure Plate	No	**Exhaust Discharge**	Vertical
Stack Exit Temp. (°K)	388.7		

Analysis Parameters Unit 186-0			
Source Type	Point	**Location Type**	Rural
Stack Height (m)	6.1	**Stack Diameter. (m)**	1.07
Stack Exit Velocity (m/s)	13.3	**Burner Rating (MMBtu/hr)**	85
Rain Cap/Pressure Plate	No	**Exhaust Discharge**	Vertical
Stack Exit Temp. (°K)	394		

III. Conclusion

The emissions from the proposed equipment ***will*** cause or contribute significantly to a violation of the State and National AAQS. The facility is fully offsetting the project PM emissions as per District Rule 2201.

The acute and chronic hazard indices were below 1.0; and the cancer risk is less than or equal to 1.0 in a million. **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.

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
F. AAQA
G. AAQA Summary

ATTACHMENT IX
Statewide Compliance Statement

COMPLIANCE STATEMENT

Vintage Production California LLC, certifies 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.

Signature of Responsible Official

4/24/14
Date

Alan E. White

Name of Responsible Official

Operations Manager

Title of Responsible Official

ATTACHMENT X
GHG BACT Analysis

BACT Analysis for GHG Emissions

GHG emissions are emitted due to the combustion of fuel and may be emitted indirectly, as a result of electrical power usage.

The USEPA's PSD program issues permits to sources for attainment pollutants and includes GHG as a regulated pollutant. Since the USEPA has not established a national ambient air quality standard for GHG, it is not considered a nonattainment pollutant and is, therefore, considered an attainment pollutant and regulated under the PSD program. Since GHG is regulated under the PSD program the BACT process will follow the steps outlined in the Clean Air Act (CAA) discussed in this section.

The CAA § 169(3) defines BACT as:

> ...an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under the Clean Air Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant...

Pursuant to USEPA's "PSD and Title V Permitting Guidance for Greenhouse Gases" the "Top-Down BACT Process" consists of these five basic steps:

1. Identify all available control technologies;
2. Eliminate all technically infeasible options;
3. Rank remaining control technologies by control effectiveness;
4. Evaluate most effective controls and document results;
   a. The energy, environmental, and econornic impacts are evaluated starting with the top ranked option.

5. Select BACT based on economic, environmental, and/or energy impacts.

   a. The highest ranked option not eliminated from step 4 is selected as BACT.

Since greenhouse gas is comprised of multiple gases, the objective of this analysis will be to identify control technologies with the lowest emission of a CO_2 equivalent (CO_2e)

using the Global Warming Potentials (GWP) identified for the Intergovernmental Panel on Climate Change (IPCC) in the 1996 Second Assessment Report[1].

Though it is recognized that reductions in GHG from fossil fuel fired equipment will result in reductions of other criteria pollutants, as the products of combustion, evaluation of GHG control measures will not include the effect on other criteria pollutants except in cases where an increase in criteria pollutants may be expected as a consequence of the proposed measure (e.g. elimination of FGR which would reduce the fuel demand for a steam generator but with the consequence of increasing NO_X emissions, that is a precursor to ozone, which the SJVAPCD is in extreme non-attainment for).

Step 1 - Identify All Possible Control Technologies

When fired on >50% PUC-quality natural gas, commercial propane, and/or LPG:

- A convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by the manufacturer) or a manufacturer's overall thermal efficiency rating of 88% – Achieved in Practice
- Variable frequency drive high efficiency electrical motors driving the blower and water pump – Achieved in Practice
- Additional economizer – Technologically Feasible
- Reduced FGR rate and SCR – Technologically Feasible

When fired on <50% PUC-quality natural gas, commercial propane, and/or LPG:

- Split flow dual pass water feed configuration, a convection section having at least 128 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by the manufacturer) and at least six inches of castable refractory or a manufacturer's overall thermal efficiency rating of at least 85% – Achieved in Practice
- Variable frequency drive high efficiency electrical motors driving the blower and water pump – Achieved in Practice
- Additional economizer – Technologically Feasible
- Reduced FGR rate and SCR – Technologically Feasible

Step 2 - Eliminate Technologically Infeasible Options

- Additional economizer – Technologically Feasible

[1] The Kyoto Protocol fixed the use of GWP values published by the IPCC in 1996 in its SAR, which remains the internationally recognized values today and are used to calculate GHG reductions in the SJVAPCD Best Performance Standards for oilfield steam generators.

Additional waste-heat can be transferred from the exhaust gasses to the steam by installing an extra economizer, further increasing the thermal efficiency of the steam generator.

Economizers are useful in steam generators that produce a higher quality and lower volume steam. With purified, de-ionized highly filtered water, high quality steam is possible. In oilfield operations neither clean nor de-ionized water is available nor is high quality steam used or useful.

An additional economizer will lower the exhaust gas temperature by transferring the heat energy from exhaust gas to produced steam to increase the quality. However, exhaust gas temperatures must be maintained sufficiently high enough to minimize condensation that can result in exhaust stack corrosion; therefore, adding an economizer to a steam generator is technologically infeasible for oilfield applications.

- Reduced FGR rate and SCR – Technologically Feasible

Flue gas recirculation mixes a portion of the exhaust gas with the oxygen-rich incoming air in the burner's combustion zone. The added exhaust gas absorbs heat from the combustion process, lowering the peak combustion temperature below the threshold where excessive NO_X is formed. Proven FGR technology has been used in steam generators for years to meet the District's standards for low NO_X emissions. While FGR clearly lowers NO_X levels, additional fuel is required to produce the same amount of steam, which reduces the overall thermal efficiency of the unit and creates more GHG emissions per unit of steam output. Therefore, limiting the FGR rate might be a means of reducing GHG emissions.

While reducing the FGR rate on a steam generator will decrease GHG emissions, it will also increase NO_X emissions. Since maintaining reductions in criteria pollutants, and specifically NO_X for which the SJVAPCD is in extreme non-attainment, the reduction of GHG will not be considered for an increase in NO_X emissions. Any increase in NO_X emissions must be mitigated.

The only alternative method for reducing NOx emissions might be SCR, which could make a reduction in the FGR rate feasible. SCR reduces NOx emissions without the need for such extensive FGR. However the SCR system itself results in higher exhaust stack resistance and electric power to operate ammonia or urea injection pumps that offset the energy efficiency gains attributed to the reduced FGR requirement. Therefore, this equipment is not technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Since an oilfield steam generator can operate simultaneously with a minimum convection section heat transfer area requirement (or thermal efficiency rating)

and variable frequency drive, high efficiency, electric motors driving the blower and water pump, these options will be combined and listed as follows:

When fired on >50% PUC-quality natural gas, commercial propane, and/or LPG:

- Variable frequency drive high efficiency electrical motors driving the blower and water pump; **and,** 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%

When fired on <50% PUC-quality natural gas, commercial propane, and/or LPG:

- Variable frequency drive high efficiency electrical motors driving the blower and water pump; **and,** split flow dual pass water feed configuration, a convection section having at least 128 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by the manufacturer) and at least six inches of castable refractory or a manufacturer's overall thermal efficiency rating of at least 85%

Since there is only one option remaining for each type of fuel burned, ranking the control technologies isn't necessary.

Step 4 – Evaluate Controls

The only control technology in the ranking list from Step 3 has been achieved in practice. Therefore, an evaluation of controls is not required.

Step 5 - Select BACT

The following is a summary of the District's BACT determination for CO_2e control:

Steam generators S-1327-162 through '-164 will combust gas containing high concentrations of H2S which requires a lower heat transfer surface area (128 square feet of heat transfer surface area per MMBtu/hr) to avoid condensation of acid gas. It is not feasible to enlarge the heat trtansfer surface area when burning PUC natural gas. Therefore BACT is satisfied with the following ('-141 through '-145 and '-186 1st requirement and '-162 through '-164 2nd requirement):

Pollutant	BACT
CO_2e	Variable frequency drive high efficiency electrical motors driving the blower and water pump; **and,** When Firing On: • PUC quality natural gas, commercial propane, and/or LPG: 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%; or, • <50% PUC quality natural gas, commercial propane, and/or LPG: split flow dual pass water feed configuration, a convection section having at least 128 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by the manufacturer) and at least six inches of castable refractory or a manufacturer's overall thermal efficiency rating of at least 85%

ATTACHMENT XI
Title V Compliance Certification form

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

[X] SIGNIFICANT PERMIT MODIFICATION
[ ] MINOR PERMIT MODIFICATION
[ ] ADMINISTRATIVE AMENDMENT

COMPANY NAME: VINTAGE PRODUCTION CALIFORNIA LLC	FACILITY ID: S - 1327
1. Type of Organization:[X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name:	
3. Agent to the Owner:	

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

SMK Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).

SMK Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.

SMK Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

SMK Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

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

Shawn Kerns — 1/15/13

Signature of Responsible Official — Date

Shawn M. Kerns

Name of Responsible Official (please print)

President and General Manager

Title of Responsible Official (please print)

Mailing Address: Central Regional Office * 1990 E. Gettysburg Avenue * Fresno, California 93726-0244 * (559) 230-5900 * FAX (559) 230-6061

ATTACHMENT XII
PSD Entities

Distribution List

EPA/CARB – ALL PROJECTS

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

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

Counties

Lorelei H. Oviatt, AICP
County of Kern
2700 "M" Street, Suite 100
Bakersfield, CA 933301

Federal Land Managers

Tonnie Cummings
Air Resources Specialist
National Park Service, Pacific West Region
612 E. Reserve Street
Vancouver, WA 98661
Phone: 360—816—6201
Fax: 360—816—6365

Email: Tonnie_Cummings@nps.gov – **prefers email notification**

Trent Procter
US Forest Service Land Management
Sequoia National Forest
1839 South Newcomb Street
Porterville, CA 93257-2035

Email – tprocter@fs.fed.us – **prefers email notification**

Indian Governing Bodies

Santa Rosa Rancheria
c/o Tribal Council
PO Box 8
Lemoore, CA 93245

Santa Ynez Tribe
c/o Tribal Council
PO Box 517
Santa Ynez, CA 93460

Prefer email notification to:
FreddyRomero1959@yahoo.com
Scohen@santaynezchumash.org
Freddy Romero tele 805-688-7997

Tule Indian Tribe
c/o Tribal Council
186 N. Reservation Road
Porterville, CA 93257

Air Districts

Antelope Valley AQMD
c/o APCO
43301 Division Street, Suite 206
Lancaster, CA 93535

Eastern Kern APCD
c/o APCO
2700 "M" Street, Suite 302
Bakersfield, CA 93301

Great Basin APCD
c/o APCO
157 Short Street, Suite 6,
Bishop, CA 93514

Monterey Bay Unified ACPD
c/o APCO
24580 Silver Cloud Ct
Monterey, CA 93940

San Luis Obispo County APCD
c/o APCO
3433 Roberto Court
San Luis Obispo, CA 93401

Santa Barbara County APCD
c/o APCO
260 N. San Antonio Road #A
Santa Barbara, CA 93110-1315

South Coast AQMD
c/o APCO
21865 Copley Drive
Diamond Bar, CA 91765

Ventura County APCD
c/o APCO
669 County Square Dr., 2nd Fl.
Ventura, CA 93003

ATTACHMENT XIII
BPS Analysis

San Joaquin Valley
Unified Air Pollution Control District

Best Performance Standard (BPS) x.x.xx

Date: 6/24/10

Class	Steam Generators
Category	Oilfield
Best Performance Standard	**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.
Percentage Achieved GHG Emission Reduction Relative to Baseline Emissions	13.0%

District Project Number	C-1100391
Evaluating Engineer	Steve Roeder
Lead Engineer	Arnaud Marjollet
Initial Public Notice Date	April 28, 2010
Final Public Notice Date	May 28, 2010
Determination Effective Date	June 24, 2010

ATTACHMENT XIV
Draft ATCS

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1327-141-2 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: SE34 **TOWNSHIP:** 25S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT) - NETTING OPTION #1

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and 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%. [Rule 2410 and Public Resources Code 21000-21177: California Environmental Quality Act]
4. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director/APCO

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DAVID WARNER, Director of Permit Services
S-1327-141-2 : Apr 8 2013 10:29AM – EDGEHILR : Joint Inspection NOT Required

5. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

6. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

7. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE

15. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

16. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

18. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]

19. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is as follows: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014 CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE

22. In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the Division of Oil, Gas, and Geothermal Resources (DOGGR) for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

24. Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned, or damaged wells are discovered. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Permittee shall retain written records on-site demonstrating compliance with all applicable Department of Toxic Substances Control (DTSC) regulations, including biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials if necessary. [Public Resources Code 21000-21177: California Environmental Quality Act]

27. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. The steam generator must be located in the SE 1/4 of the NE 1/4 Section of Section 11, T26S, R 20E (South Plant) or the SW ¼ of the SE ¼ Section of Section 34, T25S, R 20E (North Plant). [District Rule 4102]

30. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

31. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

32. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

33. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

35. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

36. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

37. Permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

38. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

39. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

40. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201] Federally Enforceable Through Title V Permit

41. Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

44. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

45. The fuel higher heating value for each fuel shall be certified annually by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

48. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

49. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

50. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

51. 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

52. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

53. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

54. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

55. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

56. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

57. 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] Federally Enforceable Through Title V Permit

58. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

59. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

60. 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, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

61. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1353 lb/quarter; PM10: 729 lb/quarter, and VOC: 144 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

62. ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, S-3593-5, N-832-1, N-833-1, S-730-1, S-734-1, S-735-1, S-736-1, S-737-1, S-738-1, S-1755-1, S-1756-1, S-1757-1, S-1758-1, S1759-1, S-2310-1, S-3573-1, S-3575-1, S-3576-1, S-3577-1, S-3579-1, S-3582-1 and S-3584-1 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

63. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201] Federally Enforceable Through Title V Permit

64. PTOs S-1327-107-0, '-111-0, '-115-0, and '-116-0 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

65. ATC S-1327-141-1 is hereby canceled. [District Rule 2201]

66. ATC S-1327-141-3 shall be cancelled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1327-141-3 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: SE34 **TOWNSHIP:** 25S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT) - NETTING OPTION #2

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and 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%. [Rule 2410 and Public Resources Code 21000-21177: California Environmental Quality Act]
4. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director/APCO

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DAVID WARNER, Director of Permit Services
S-1327-141-3 , Apr 8 2013 10:28AM – EDGEHILR : Joint Inspection NOT Required

5. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

6. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

7. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

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15. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

16. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

18. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]

19. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is as follows: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014 CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE

22. In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the Division of Oil, Gas, and Geothermal Resources (DOGGR) for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

24. Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned, or damaged wells are discovered. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Permittee shall retain written records on-site demonstrating compliance with all applicable Department of Toxic Substances Control (DTSC) regulations, including biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials if necessary. [Public Resources Code 21000-21177: California Environmental Quality Act]

27. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. The steam generator must be located in the SE 1/4 of the NE 1/4 Section of Section 11, T26S, R 20E (South Plant) or the SW ¼ of the SE ¼ Section of Section 34, T25S, R 20E (North Plant). [District Rule 4102]

30. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

31. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

32. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

33. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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

35. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

36. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

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CONDITIONS CONTINUE ON NEXT PAGE

37. Permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

38. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

39. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

40. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201] Federally Enforceable Through Title V Permit

41. Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

44. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

45. The fuel higher heating value for each fuel shall be certified annually by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

48. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

49. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

50. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

51. 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

52. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

53. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

54. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

55. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

56. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

57. 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] Federally Enforceable Through Title V Permit

58. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

59. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

60. 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, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

61. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 490 lb/quarter and PM10: 729 lb/quarter. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10 . [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

62. ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, and S-3593-5 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

63. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201] Federally Enforceable Through Title V Permit

64. PTOs S-1327-107-0, '-111-0, '-115-0, '-116-0, '-120-0, '-137-0, and '-138-0 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

65. ATC S-1327-141-2 shall be cancelled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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PERMIT NO: S-1327-142-2 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: SE34 **TOWNSHIP:** 25S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT) - NETTING OPTION #1

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and 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%. [Rule 2410 and Public Resources Code 21000-21177: California Environmental Quality Act]
4. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services
S-1327-142-2 : Apr 8 2013 10:29AM – EDGEHILR : Joint Inspection NOT Required

5. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

6. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

7. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

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15. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

16. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

18. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]

19. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is as follows: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014 CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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22. In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]
23. Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the Division of Oil, Gas, and Geothermal Resources (DOGGR) for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]
24. Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned, or damaged wells are discovered. [Public Resources Code 21000-21177: California Environmental Quality Act]
25. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]
26. Permittee shall retain written records on-site demonstrating compliance with all applicable Department of Toxic Substances Control (DTSC) regulations, including biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials if necessary. [Public Resources Code 21000-21177: California Environmental Quality Act]
27. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]
28. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]
29. The steam generator must be located in the SE 1/4 of the NE 1/4 Section of Section 11, T26S, R 20E (South Plant) or the SW ¼ of the SE ¼ Section of Section 34, T25S, R 20E (North Plant). [District Rule 4102]
30. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
31. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit
32. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
33. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
34. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
35. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
36. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

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37. Permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

38. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

39. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

40. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201] Federally Enforceable Through Title V Permit

41. Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

44. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

45. The fuel higher heating value for each fuel shall be certified annually by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

48. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

49. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

50. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

51. 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

52. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

53. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

54. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

55. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

56. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

57. 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] Federally Enforceable Through Title V Permit

58. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

59. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

60. 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, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

61. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1353 lb/quarter; PM10: 729 lb/quarter, and VOC: 144 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

62. ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, S-3593-5, N-832-1, N-833-1, S-730-1, S-734-1, S-735-1, S-736-1, S-737-1, S-738-1, S-1755-1, S-1756-1, S-1757-1, S-1758-1, S1759-1, S-2310-1, S-3573-1, S-3575-1, S-3576-1, S-3577-1, S-3579-1, S-3582-1 and S-3584-1 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit
63. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201] Federally Enforceable Through Title V Permit
64. PTOs S-1327-107-0, '-111-0, '-115-0, and '-116-0 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit
65. ATC S-1327-142-1 is hereby canceled. [District Rule 2201]
66. ATC S-1327-142-3 shall be cancelled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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PERMIT NO: S-1327-142-3 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: SE34 **TOWNSHIP:** 25S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT) - NETTING OPTION #2

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and 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%. [Rule 2410 and Public Resources Code 21000-21177: California Environmental Quality Act]
4. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services
S-1327-142-3 : Apr 8 2013 10:29AM – EDGEHILR : Joint Inspection NOT Required

5. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

6. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

7. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE

15. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

16. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

18. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]

19. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is as follows: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014 CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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22. In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the Division of Oil, Gas, and Geothermal Resources (DOGGR) for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

24. Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned, or damaged wells are discovered. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Permittee shall retain written records on-site demonstrating compliance with all applicable Department of Toxic Substances Control (DTSC) regulations, including biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials if necessary. [Public Resources Code 21000-21177: California Environmental Quality Act]

27. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. The steam generator must be located in the SE 1/4 of the NE 1/4 Section of Section 11, T26S, R 20E (South Plant) or the SW ¼ of the SE ¼ Section of Section 34, T25S, R 20E (North Plant). [District Rule 4102]

30. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

31. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

32. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

33. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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

35. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

36. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

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CONDITIONS CONTINUE ON NEXT PAGE

37. Permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

38. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

39. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

40. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201] Federally Enforceable Through Title V Permit

41. Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

44. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

45. The fuel higher heating value for each fuel shall be certified annually by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

48. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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49. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

50. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

51. 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

52. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

53. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

54. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

55. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

56. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

57. 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] Federally Enforceable Through Title V Permit

58. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

59. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

60. 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, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

61. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 490 lb/quarter and PM10: 729 lb/quarter. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10 . [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

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62. ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, and S-3593-5 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

63. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201] Federally Enforceable Through Title V Permit

64. PTOs S-1327-107-0, '-111-0, '-115-0, '-116-0, '-120-0, '-137-0, and '-138-0 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

65. ATC S-1327-142-2 shall be cancelled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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PERMIT NO: S-1327-143-2 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: SE34 **TOWNSHIP:** 25S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT) - NETTING OPTION #1

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and 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%. [Rule 2410 and Public Resources Code 21000-21177: California Environmental Quality Act]
4. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services
S-1327-143-2 : Apr 8 2013 10:29AM – EDGEHILR : Joint Inspection NOT Required

5. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

6. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

7. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

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15. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

16. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

18. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]

19. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is as follows: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014 CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE

22. In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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25. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

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29. The steam generator must be located in the SE 1/4 of the NE 1/4 Section of Section 11, T26S, R 20E (South Plant) or the SW ¼ of the SE ¼ Section of Section 34, T25S, R 20E (North Plant). [District Rule 4102]

30. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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39. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

40. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201] Federally Enforceable Through Title V Permit

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43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

44. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

45. The fuel higher heating value for each fuel shall be certified annually by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

48. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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49. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

50. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

51. 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

52. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

53. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

54. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

55. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

56. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

57. 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] Federally Enforceable Through Title V Permit

58. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

59. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

60. 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, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

61. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1353 lb/quarter; PM10: 729 lb/quarter, and VOC: 144 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

62. ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, S-3593-5, N-832-1, N-833-1, S-730-1, S-734-1, S-735-1, S-736-1, S-737-1, S-738-1, S-1755-1, S-1756-1, S-1757-1, S-1758-1, S1759-1, S-2310-1, S-3573-1, S-3575-1, S-3576-1, S-3577-1, S-3579-1, S-3582-1 and S-3584-1 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

63. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201] Federally Enforceable Through Title V Permit

64. PTOs S-1327-107-0, '-111-0, '-115-0, and '-116-0 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

65. ATC S-1327-143-1 is hereby canceled. [District Rule 2201]

66. ATC S-1327-143-3 shall be cancelled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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PERMIT NO: S-1327-143-3 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: SE34 **TOWNSHIP:** 25S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT) - NETTING OPTION #2

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and 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%. [Rule 2410 and Public Resources Code 21000-21177: California Environmental Quality Act]
4. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director/APCO

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DAVID WARNER, Director of Permit Services
S-1327-143-3 : Apr 8 2013 10:29AM – EDGEHILR : Joint Inspection NOT Required

5. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

6. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

7. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

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15. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

16. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

18. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]

19. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is as follows: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014 CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE

22. In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the Division of Oil, Gas, and Geothermal Resources (DOGGR) for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

24. Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned, or damaged wells are discovered. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Permittee shall retain written records on-site demonstrating compliance with all applicable Department of Toxic Substances Control (DTSC) regulations, including biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials if necessary. [Public Resources Code 21000-21177: California Environmental Quality Act]

27. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. The steam generator must be located in the SE 1/4 of the NE 1/4 Section of Section 11, T26S, R 20E (South Plant) or the SW ¼ of the SE ¼ Section of Section 34, T25S, R 20E (North Plant). [District Rule 4102]

30. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

31. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

32. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

33. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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

35. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

36. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

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37. Permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

38. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

39. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

40. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201] Federally Enforceable Through Title V Permit

41. Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

44. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

45. The fuel higher heating value for each fuel shall be certified annually by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

48. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

49. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

50. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

51. 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

52. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

53. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

54. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

55. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

56. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

57. 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] Federally Enforceable Through Title V Permit

58. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

59. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

60. 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, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

61. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 490 lb/quarter and PM10: 729 lb/quarter. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10 . [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

62. ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, and S-3593-5 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

63. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201] Federally Enforceable Through Title V Permit

64. PTOs S-1327-107-0, '-111-0, '-115-0, '-116-0, '-120-0, '-137-0, and '-138-0 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

65. ATC S-1327-143-2 shall be cancelled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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PERMIT NO: S-1327-144-2 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: SE34 **TOWNSHIP:** 25S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT) - NETTING OPTION #1

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and 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%. [Rule 2410 and Public Resources Code 21000-21177: California Environmental Quality Act]
4. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services
S-1327-144-2 : Apr 8 2013 10:29AM – EDGEHILR : Joint Inspection NOT Required

5. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

6. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

7. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE

15. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

16. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

18. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]

19. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is as follows: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014 CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE

22. In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the Division of Oil, Gas, and Geothermal Resources (DOGGR) for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

24. Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned, or damaged wells are discovered. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Permittee shall retain written records on-site demonstrating compliance with all applicable Department of Toxic Substances Control (DTSC) regulations, including biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials if necessary. [Public Resources Code 21000-21177: California Environmental Quality Act]

27. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. The steam generator must be located in the SE 1/4 of the NE 1/4 Section of Section 11, T26S, R 20E (South Plant) or the SW ¼ of the SE ¼ Section of Section 34, T25S, R 20E (North Plant). [District Rule 4102]

30. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

31. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

32. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

33. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

35. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

36. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

37. Permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

38. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

39. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

40. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201] Federally Enforceable Through Title V Permit

41. Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

44. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

45. The fuel higher heating value for each fuel shall be certified annually by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

48. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

49. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

50. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

51. 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

52. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

53. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

54. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

55. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

56. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

57. 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] Federally Enforceable Through Title V Permit

58. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

59. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

60. 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, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

61. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1353 lb/quarter; PM10: 729 lb/quarter, and VOC: 144 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

62. ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, S-3593-5, N-832-1, N-833-1, S-730-1, S-734-1, S-735-1, S-736-1, S-737-1, S-738-1, S-1755-1, S-1756-1, S-1757-1, S-1758-1, S1759-1, S-2310-1, S-3573-1, S-3575-1, S-3576-1, S-3577-1, S-3579-1, S-3582-1 and S-3584-1 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

63. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201] Federally Enforceable Through Title V Permit

64. PTOs S-1327-107-0, '-111-0, '-115-0, and '-116-0 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

65. ATC S-1327-144-1 is hereby canceled. [District Rule 2201]

66. ATC S-1327-144-3 shall be cancelled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1327-144-3 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: SE34 **TOWNSHIP:** 265 **RANGE:** 20E

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT) - NETTING OPTION #2

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and 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%. [Rule 2410 and Public Resources Code 21000-21177: California Environmental Quality Act]
4. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services
S-1327-144-3 : Apr 8 2013 10:29AM – EDGEHILR : Joint Inspection NOT Required

5. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

6. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

7. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE

15. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

16. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

18. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]

19. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is as follows: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014 CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE

22. In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the Division of Oil, Gas, and Geothermal Resources (DOGGR) for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

24. Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned, or damaged wells are discovered. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Permittee shall retain written records on-site demonstrating compliance with all applicable Department of Toxic Substances Control (DTSC) regulations, including biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials if necessary. [Public Resources Code 21000-21177: California Environmental Quality Act]

27. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. The steam generator must be located in the SE 1/4 of the NE 1/4 Section of Section 11, T26S, R 20E (South Plant) or the SW ¼ of the SE ¼ Section of Section 34, T25S, R 20E (North Plant). [District Rule 4102]

30. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

31. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

32. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

33. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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

35. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

36. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

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CONDITIONS CONTINUE ON NEXT PAGE

37. Permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

38. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

39. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

40. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201] Federally Enforceable Through Title V Permit

41. Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

44. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

45. The fuel higher heating value for each fuel shall be certified annually by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

48. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

49. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

50. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

51. 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

52. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

53. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

54. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

55. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

56. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

57. 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] Federally Enforceable Through Title V Permit

58. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

59. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

60. 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, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

61. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 490 lb/quarter and PM10: 729 lb/quarter. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10 . [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

62. ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, and S-3593-5 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

63. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201] Federally Enforceable Through Title V Permit

64. PTOs S-1327-107-0, '-111-0, '-115-0, '-116-0, '-120-0, '-137-0, and '-138-0 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

65. ATC S-1327-144-2 shall be cancelled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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PERMIT NO: S-1327-145-2 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: SE34 **TOWNSHIP:** 25S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT) - NETTING OPTION #1

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and 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%. [Rule 2410 and Public Resources Code 21000-21177: California Environmental Quality Act]
4. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services
S-1327-145-2 : Apr 8 2013 10:29AM – EDGEHILR : Joint Inspection NOT Required

5. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

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7. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE

15. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

16. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

18. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]

19. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is as follows: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014 CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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22. In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]
23. Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the Division of Oil, Gas, and Geothermal Resources (DOGGR) for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]
24. Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned, or damaged wells are discovered. [Public Resources Code 21000-21177: California Environmental Quality Act]
25. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]
26. Permittee shall retain written records on-site demonstrating compliance with all applicable Department of Toxic Substances Control (DTSC) regulations, including biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials if necessary. [Public Resources Code 21000-21177: California Environmental Quality Act]
27. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]
28. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]
29. The steam generator must be located in the SE 1/4 of the NE 1/4 Section of Section 11, T26S, R 20E (South Plant) or the SW ¼ of the SE ¼ Section of Section 34, T25S, R 20E (North Plant). [District Rule 4102]
30. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
31. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit
32. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
33. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
34. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
35. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
36. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

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37. Permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

38. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

39. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

40. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201] Federally Enforceable Through Title V Permit

41. Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

44. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

45. The fuel higher heating value for each fuel shall be certified annually by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

48. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

49. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

50. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

51. 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

52. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

53. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

54. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

55. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

56. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

57. 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] Federally Enforceable Through Title V Permit

58. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

59. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

60. 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, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

61. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1353 lb/quarter; PM10: 729 lb/quarter, and VOC: 144 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

62. ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, S-3593-5, N-832-1, N-833-1, S-730-1, S-734-1, S-735-1, S-736-1, S-737-1, S-738-1, S-1755-1, S-1756-1, S-1757-1, S-1758-1, S1759-1, S-2310-1, S-3573-1, S-3575-1, S-3576-1, S-3577-1, S-3579-1, S-3582-1 and S-3584-1 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

63. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201] Federally Enforceable Through Title V Permit

64. PTOs S-1327-107-0, '-111-0, '-115-0, and '-116-0 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

65. ATC S-1327-145-1 is hereby canceled. [District Rule 2201]

66. ATC S-1327-145-3 shall be cancelled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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PERMIT NO: S-1327-145-3 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: SE34 **TOWNSHIP:** 25S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN MODEL 4231-85-GLE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND OXYGEN CONTROLLER (OR EQUIVALENT) - NETTING OPTION #2

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and 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%. [Rule 2410 and Public Resources Code 21000-21177: California Environmental Quality Act]
4. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director/APCO

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DAVID WARNER, Director of Permit Services
S-1327-145-3 : Apr 8 2013 10:29AM – EDGEHILR : Joint Inspection NOT Required

5. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

6. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

7. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

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15. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

16. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

18. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]

19. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is as follows: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014 CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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22. In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the Division of Oil, Gas, and Geothermal Resources (DOGGR) for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

24. Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned, or damaged wells are discovered. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Permittee shall retain written records on-site demonstrating compliance with all applicable Department of Toxic Substances Control (DTSC) regulations, including biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials if necessary. [Public Resources Code 21000-21177: California Environmental Quality Act]

27. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. The steam generator must be located in the SE 1/4 of the NE 1/4 Section of Section 11, T26S, R 20E (South Plant) or the SW ¼ of the SE ¼ Section of Section 34, T25S, R 20E (North Plant). [District Rule 4102]

30. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

31. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

32. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

33. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

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

35. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

36. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

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37. Permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

38. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

39. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

40. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201] Federally Enforceable Through Title V Permit

41. Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

44. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

45. The fuel higher heating value for each fuel shall be certified annually by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

48. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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49. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

50. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

51. 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

52. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

53. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

54. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

55. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

56. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

57. 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] Federally Enforceable Through Title V Permit

58. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

59. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

60. 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, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

61. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 490 lb/quarter and PM10: 729 lb/quarter. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10 . [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

62. ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, and S-3593-5 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

63. ATC shall be implemented concurrently with or subsequent to ATCs S-1327-155-1 through '-158-1. [District Rule 2201] Federally Enforceable Through Title V Permit

64. PTOs S-1327-107-0, '-111-0, '-115-0, '-116-0, '-120-0, '-137-0, and '-138-0 shall be canceled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

65. ATC S-1327-145-2 shall be cancelled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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PERMIT NO: S-1327-162-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: NW2 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/TEOR GAS FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN GLE ULTRA LOW-NOX BURNER (OR EQUIVALENT) WITH FGR AND TWO-STAGE EXHAUST GAS SOX SCRUBBING SYSTEM FOLLOWED BY A WET ESP SHARED WITH S-1327-163 AND '164

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Steam generator shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump, split flow dual pass water feed configuration,a convection section having at least 128 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer), and at least six inches of castable refractory or a manufacturer's overall thermal efficiency rating of at least 85%. [Public Resources Code 21000-21177: California Environmental Quality Act]
4. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services
S-1327-162-1 : Apr 8 2013 10:28AM – EDGEMILR : Joint Inspection NOT Required

5. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

6. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

7. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

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15. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

16. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

18. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]

19. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is as follows: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014 CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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22. In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the Division of Oil, Gas, and Geothermal Resources (DOGGR) for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

24. Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned, or damaged wells are discovered. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Permittee shall retain written records on-site demonstrating compliance with all applicable Department of Toxic Substances Control (DTSC) regulations, including biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials if necessary. [Public Resources Code 21000-21177: California Environmental Quality Act]

27. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. The steam generator must be located in the SW ¼ of the NW ¼ Section of Section 2, T26S, R20E (Central Plant). [District Rule 4102]

30. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

31. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

32. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

33. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. If modifications to units S-1327-162, '163 and '164 result in their emissions (current emissions plus modification's emissions for all three units combined) exceeding any of the following thresholds: 10 ton-NOx/year, 10 ton-VOC/year, 27.4 tons ton-SOx/year, or 15 ton-PM10/year, a CEQA environmental review shall be required. [Public Resources Code 21000-21177: California Environmental Quality Act]

35. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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CONDITIONS CONTINUE ON NEXT PAGE

36. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

37. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

38. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of waste gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

39. PUC quality natural gas and waste gas shall be combined prior to the burner and shall not be fed separately to the burner. [District Rule 4320] Federally Enforceable Through Title V Permit

40. Burner nozzles may be changed when unit is converted to fire solely on PUC quality natural or from solely PUC quality natural gas firing to firing on a mixture of PUC quality natural gas and waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit

41. FGR shall be utilized when unit is fired solely on PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Exhaust from unit shall be directed to two stage SOx scrubber authorized herein except when unit is fired solely on PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit

43. SO2 scrubber exhaust shall be vented to operational wet electrostatic precipitator prior to being exhausted to atmosphere. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit

44. Two stage scrubber, including wet electrostatic precipitator, control efficiency shall be maintained at least 99.9% by weight sulfur compounds or greater. [District Rule 2201] Federally Enforceable Through Title V Permit

45. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

46. Daily average pH of scrubber liquor (calculated from hourly averages) shall be maintained between 6 and 7 in the first stage scrubber and 7 and 8 in the second stage scrubber, and shall be continuously monitored. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

47. 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] Federally Enforceable Through Title V Permit

48. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur; ASTM D1072; ASTM D3246, double GC for H2S and mercaptans or ASTM D6228; and methane content: ASTM D1945. [District Rule4320] Federally Enforceable Through Title V Permit

49. Each fuel source shall be tested semi-annually for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which semi-annual testing may resume. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

50. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2201and 4320] Federally Enforceable Through Title V Permit

51. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

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52. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

53. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, waste gas (tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation) or a mixture of any of these fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

54. Waste gas H2S concentration shall not exceed 55,000 ppmv. [District Rule 2201] Federally Enforceable Through Title V Permit

55. Units S-1327-162, '163 and '164 shall not consume greater than a combined total of 3000 Mscf/day of waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit

56. When fired solely on PUC quality natural gas emission rates shall not exceed: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

57. When fired mixture of waste gas and PUC quality natural gas emission rates shall not exceed: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 9 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

58. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

59. When any unit is connected to scrubber/wet ESP and is burning TEOR/TVR gas, scrubber/wet ESP shall be operating and permittee shall demonstrate compliance with PM10 and sulfur oxide emissions limit by stack source testing within 60 days of initial scrubbing date and annually thereafter. If compliance is demonstrated on two consecutive annual source tests, testing shall be required not less than once every 36 months unless testing is required by scrubber operational mode change as noted above. Annual source testing shall resume if any test fails to show compliance. Sulfur removal efficiency of scrubber/wet ESP shall be demonstrated during initial stack source test and calculated with subsequent tests. Ongoing compliance with sulfur oxide emissions limit shall be by calculation using the scrubber liquid pH, the demonstrated sulfur removal efficiency, and the fuel gas sulfur content. Fuel gas sulfur content shall be obtained by sample analysis at least semi-annually. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

60. When complying with PM10 and SOx emission limits by testing of stack emissions, testing shall be performed using EPA Methods 5 or 201A, 6, 6B, 8, or ARB 100 or ARB Methods 1-6. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SOx emissions. [District Rules 2201 4320] Federally Enforceable Through Title V Permit

61. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

62. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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63. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

64. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

65. 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

66. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months or when the fuel source is changed. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

67. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

68. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

69. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

70. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

71. SOx emissions for source test purposes shall be determined using EPA Method 6, EPA Method 6C, EPA Method 8, or ARB 100. [District Rule 2201] Federally Enforceable Through Title V Permit

72. 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] Federally Enforceable Through Title V Permit

73. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

74. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

75. 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, 2201, 4305, 4306, 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

76. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 2259 lb/quarter; PM10: 1560 lb/quarter, and VOC: 1129 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10 . [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

77. ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, S-3593-5, N-832-1, N-833-1, S-730-1, S-734-1, S-735-1, S-736-1, S-737-1, S-738-1, S-1755-1, S-1756-1, S-1757-1, S-1758-1, S1759-1, S-2310-1, S-3573-1, S-3575-1, S-3576-1, S-3577-1, S-3579-1, S-3582-1 and S-3584-1 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

78. ATC S-1327-162-0 is hereby canceled. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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PERMIT NO: S-1327-163-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: NW2 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/TEOR GAS FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN GLE ULTRA LOW-NOX BURNER (OR EQUIVALENT) WITH FGR SERVED BY SOX SCRUBBING SYSTEM LISTED ON S-1327-162

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Steam generator shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump, split flow dual pass water feed configuration,a convection section having at least 128 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer), and at least six inches of castable refractory or a manufacturer's overall thermal efficiency rating of at least 85%. [Public Resources Code 21000-21177: California Environmental Quality Act]
4. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services
S-1327-163-1 : Apr 6 2013 10:28AM – EDGEHILR : Joint Inspection NOT Required

5. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

6. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

7. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

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15. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

16. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

18. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]

19. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is as follows: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014 CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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22. In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the Division of Oil, Gas, and Geothermal Resources (DOGGR) for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

24. Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned, or damaged wells are discovered. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Permittee shall retain written records on-site demonstrating compliance with all applicable Department of Toxic Substances Control (DTSC) regulations, including biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials if necessary. [Public Resources Code 21000-21177: California Environmental Quality Act]

27. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. The steam generator must be located in the SW ¼ of the NW ¼ Section of Section 2, T26S, R20E (Central Plant). [District Rule 4102]

30. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

31. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

32. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

33. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. If modifications to units S-1327-162, '163 and '164 result in their emissions (current emissions plus modification's emissions for all three units combined) exceeding any of the following thresholds: 10 ton-NOx/year, 10 ton-VOC/year, 27.4 tons ton-SOx/year, or 15 ton-PM10/year, a CEQA environmental review shall be required. [Public Resources Code 21000-21177: California Environmental Quality Act]

35. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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36. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

37. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

38. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of waste gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

39. PUC quality natural gas and waste gas shall be combined prior to the burner and shall not be fed separately to the burner. [District Rule 4320] Federally Enforceable Through Title V Permit

40. Burner nozzles may be changed when unit is converted to fire solely on PUC quality natural or from solely PUC quality natural gas firing to firing on a mixture of PUC quality natural gas and waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit

41. FGR shall be utilized when unit is fired solely on PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Exhaust from unit shall be directed to two stage SOx scrubber authorized herein except when unit is fired solely on PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit

43. SO2 scrubber exhaust shall be vented to operational wet electrostatic precipitator prior to being exhausted to atmosphere. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit

44. Two stage scrubber, including wet electrostatic precipitator, control efficiency shall be maintained at least 99.9% by weight sulfur compounds or greater. [District Rule 2201] Federally Enforceable Through Title V Permit

45. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

46. Daily average pH of scrubber liquor (calculated from hourly averages) shall be maintained between 6 and 7 in the first stage scrubber and 7 and 8 in the second stage scrubber, and shall be continuously monitored. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

47. 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] Federally Enforceable Through Title V Permit

48. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur; ASTM D1072; ASTM D3246, double GC for H2S and mercaptans or ASTM D6228; and methane content: ASTM D1945. [District Rule4320] Federally Enforceable Through Title V Permit

49. Each fuel source shall be tested semi-annually for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which semi-annual testing may resume. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

50. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2201and 4320] Federally Enforceable Through Title V Permit

51. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

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52. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

53. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, waste gas (tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation) or a mixture of any of these fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

54. Waste gas H2S concentration shall not exceed 55,000 ppmv. [District Rule 2201] Federally Enforceable Through Title V Permit

55. Units S-1327-162, '163 and '164 shall not consume greater than a combined total of 3000 Mscf/day of waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit

56. When fired solely on PUC quality natural gas emission rates shall not exceed: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

57. When fired mixture of waste gas and PUC quality natural gas emission rates shall not exceed: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 9 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

58. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

59. When any unit is connected to scrubber/wet ESP and is burning TEOR/TVR gas, scrubber/wet ESP shall be operating and permittee shall demonstrate compliance with PM10 and sulfur oxide emissions limit by stack source testing within 60 days of initial scrubbing date and annually thereafter. If compliance is demonstrated on two consecutive annual source tests, testing shall be required not less than once every 36 months unless testing is required by scrubber operational mode change as noted above. Annual source testing shall resume if any test fails to show compliance. Sulfur removal efficiency of scrubber/wet ESP shall be demonstrated during initial stack source test and calculated with subsequent tests. Ongoing compliance with sulfur oxide emissions limit shall be by calculation using the scrubber liquid pH, the demonstrated sulfur removal efficiency, and the fuel gas sulfur content. Fuel gas sulfur content shall be obtained by sample analysis at least semi-annually. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

60. When complying with PM10 and SOx emission limits by testing of stack emissions, testing shall be performed using EPA Methods 5 or 201A, 6, 6B, 8, or ARB 100 or ARB Methods 1-6. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SOx emissions. [District Rules 2201 4320] Federally Enforceable Through Title V Permit

61. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

62. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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63. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

64. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

65. 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

66. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months or when the fuel source is changed. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

67. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

68. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

69. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

70. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

71. SOx emissions for source test purposes shall be determined using EPA Method 6, EPA Method 6C, EPA Method 8, or ARB 100. [District Rule 2201] Federally Enforceable Through Title V Permit

72. 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] Federally Enforceable Through Title V Permit

73. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

74. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

75. 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, 2201, 4305, 4306, 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

76. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 2259 lb/quarter; PM10: 1560 lb/quarter, and VOC: 1129 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10 . [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

77. ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, S-3593-5, N-832-1, N-833-1, S-730-1, S-734-1, S-735-1, S-736-1, S-737-1, S-738-1, S-1755-1, S-1756-1, S-1757-1, S-1758-1, S1759-1, S-2310-1, S-3573-1, S-3575-1, S-3576-1, S-3577-1, S-3579-1, S-3582-1 and S-3584-1 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

78. ATC S-1327-163-0 is hereby canceled. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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PERMIT NO: S-1327-164-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: NW2 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/TEOR GAS FIRED STEAM GENERATOR EQUIPPED WITH NORTH AMERICAN GLE ULTRA LOW-NOX BURNER (OR EQUIVALENT) WITH FGR SERVED BY SOX SCRUBBING SYSTEM LISTED ON S-1327-162

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Steam generator shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump, split flow dual pass water feed configuration,a convection section having at least 128 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer), and at least six inches of castable refractory or a manufacturer's overall thermal efficiency rating of at least 85%. [Public Resources Code 21000-21177: California Environmental Quality Act]
4. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services
S-1327-164-1 : Apr 8 2013 10:29AM -- EDGEHILR : Joint Inspection NOT Required

5. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

6. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

7. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

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15. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

16. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

18. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]

19. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is as follows: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014 CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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22. In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the Division of Oil, Gas, and Geothermal Resources (DOGGR) for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

24. Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned, or damaged wells are discovered. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Permittee shall retain written records on-site demonstrating compliance with all applicable Department of Toxic Substances Control (DTSC) regulations, including biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials if necessary. [Public Resources Code 21000-21177: California Environmental Quality Act]

27. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. The steam generator must be located in the SW ¼ of the NW ¼ Section of Section 2, T26S, R20E (Central Plant). [District Rule 4102]

30. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

31. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

32. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

33. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. If modifications to units S-1327-162, '163 and '164 result in their emissions (current emissions plus modification's emissions for all three units combined) exceeding any of the following thresholds: 10 ton-NOx/year, 10 ton-VOC/year, 27.4 tons ton-SOx/year, or 15 ton-PM10/year, a CEQA environmental review shall be required. [Public Resources Code 21000-21177: California Environmental Quality Act]

35. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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36. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

37. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

38. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of waste gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

39. PUC quality natural gas and waste gas shall be combined prior to the burner and shall not be fed separately to the burner. [District Rule 4320] Federally Enforceable Through Title V Permit

40. Burner nozzles may be changed when unit is converted to fire solely on PUC quality natural or from solely PUC quality natural gas firing to firing on a mixture of PUC quality natural gas and waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit

41. FGR shall be utilized when unit is fired solely on PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Exhaust from unit shall be directed to two stage SOx scrubber authorized herein except when unit is fired solely on PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit

43. SO2 scrubber exhaust shall be vented to operational wet electrostatic precipitator prior to being exhausted to atmosphere. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit

44. Two stage scrubber, including wet electrostatic precipitator, control efficiency shall be maintained at least 99.9% by weight sulfur compounds or greater. [District Rule 2201] Federally Enforceable Through Title V Permit

45. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

46. Daily average pH of scrubber liquor (calculated from hourly averages) shall be maintained between 6 and 7 in the first stage scrubber and 7 and 8 in the second stage scrubber, and shall be continuously monitored. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

47. 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] Federally Enforceable Through Title V Permit

48. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur; ASTM D1072; ASTM D3246, double GC for H2S and mercaptans or ASTM D6228; and methane content: ASTM D1945. [District Rule4320] Federally Enforceable Through Title V Permit

49. Each fuel source shall be tested semi-annually for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which semi-annual testing may resume. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

50. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2201and 4320] Federally Enforceable Through Title V Permit

51. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

52. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

53. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, waste gas (tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation) or a mixture of any of these fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

54. Waste gas H2S concentration shall not exceed 55,000 ppmv. [District Rule 2201] Federally Enforceable Through Title V Permit

55. Units S-1327-162, '163 and '164 shall not consume greater than a combined total of 3000 Mscf/day of waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit

56. When fired solely on PUC quality natural gas emission rates shall not exceed: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

57. When fired mixture of waste gas and PUC quality natural gas emission rates shall not exceed: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 9 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

58. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

59. When any unit is connected to scrubber/wet ESP and is burning TEOR/TVR gas, scrubber/wet ESP shall be operating and permittee shall demonstrate compliance with PM10 and sulfur oxide emissions limit by stack source testing within 60 days of initial scrubbing date and annually thereafter. If compliance is demonstrated on two consecutive annual source tests, testing shall be required not less than once every 36 months unless testing is required by scrubber operational mode change as noted above. Annual source testing shall resume if any test fails to show compliance. Sulfur removal efficiency of scrubber/wet ESP shall be demonstrated during initial stack source test and calculated with subsequent tests. Ongoing compliance with sulfur oxide emissions limit shall be by calculation using the scrubber liquid pH, the demonstrated sulfur removal efficiency, and the fuel gas sulfur content. Fuel gas sulfur content shall be obtained by sample analysis at least semi-annually. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

60. When complying with PM10 and SOx emission limits by testing of stack emissions, testing shall be performed using EPA Methods 5 or 201A, 6, 6B, 8, or ARB 100 or ARB Methods 1-6. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SOx emissions. [District Rules 2201 4320] Federally Enforceable Through Title V Permit

61. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

62. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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63. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

64. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

65. 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

66. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months or when the fuel source is changed. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

67. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

68. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

69. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

70. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

71. SOx emissions for source test purposes shall be determined using EPA Method 6, EPA Method 6C, EPA Method 8, or ARB 100. [District Rule 2201] Federally Enforceable Through Title V Permit

72. 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] Federally Enforceable Through Title V Permit

73. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

74. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

75. 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, 2201, 4305, 4306, 4320] Federally Enforceable Through Title V Permit

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76. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 2259 lb/quarter; PM10: 1560 lb/quarter, and VOC: 1129 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10 . [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

77. ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, S-3593-5, N-832-1, N-833-1, S-730-1, S-734-1, S-735-1, S-736-1, S-737-1, S-738-1, S-1755-1, S-1756-1, S-1757-1, S-1758-1, S1759-1, S-2310-1, S-3573-1, S-3575-1, S-3576-1, S-3577-1, S-3579-1, S-3582-1 and S-3584-1 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

78. ATC S-1327-164-0 is hereby canceled. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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PERMIT NO: S-1327-186-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL WESTERN, KERN COUNTY
CA

SECTION: NE11 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Steam generator shall be equipped with variable frequency drive electrical motors driving the blower and water pump and 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%. [Rule 2410 and Public Resources Code 21000-21177: California Environmental Quality Act]
4. 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]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director/APCO

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DAVID WARNER, Director of Permit Services
S-1327-186-0 : Apr 8 2013 10:28AM – EDGEHILR : Joint Inspection NOT Required

5. A Qualified Biologist will conduct a focused pre-construction survey to determine the presence/absence of potential impacts on sensitive species prior to the onset of ground disturbance. The survey shall be conducted in accordance with the standard protocol of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). If more than 30 days pass before the onset of ground disturbance, an additional survey shall be conducted by a Qualified Biologist within 30 days prior to the onset of ground disturbance. Permittee shall make all biological surveys available to District staff upon request. [Public Resources Code 21000-21177: California Environmental Quality Act]

6. During construction activities, standardized avoidance measures shall be implemented to preclude take of special status species. If standardized avoidance measures cannot be achieved Permittee will consult with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to develop alternative compliance measures and/or obtain an Incidental Take Permit. If standardized avoidance measures fail and there is a take of a threatened or endangered species Permittee will notify USFWS, CDFW, and District immediately. Permittee shall make available to the District any documentation required by USFWS and CDFW. [Public Resources Code 21000-21177: California Environmental Quality Act]

7. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways. In the event that construction activities should occur during night time, a 10-mph speed limit shall be observed from dusk until dawn. Off-road traffic outside of designated project areas should be prohibited. [Public Resources Code 21000-21177: California Environmental Quality Act]

8. During construction activities, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials. If the holes or trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted in Measure BIO-15. [Public Resources Code 21000-21177: California Environmental Quality Act]

9. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at a construction site for one (1) or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the U.S. Fish and Wildlife Service (USFWS) has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. [Public Resources Code 21000-21177: California Environmental Quality Act]

10. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

11. No firearms shall be allowed on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

12. No pets, such as dogs or cats, shall be permitted on the project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

13. Use of rodenticides and herbicides in the project sites shall be restricted. If use of these compounds is deemed necessary, Permittee shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency (US EPA), California Department of Food and Agriculture (CDFA), and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service (USFWS). If rodent control must be conducted, zinc phosphide shall be used. [Public Resources Code 21000-21177: California Environmental Quality Act]

14. Permittee shall appoint a representative to be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the U.S. Fish and Wildlife Service (USFWS). [Public Resources Code 21000-21177: California Environmental Quality Act]

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15. An employee education program shall be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site. [Public Resources Code 21000-21177: California Environmental Quality Act]

16. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and revegetation experts. [Public Resources Code 21000-21177: California Environmental Quality Act]

17. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. [Public Resources Code 21000-21177: California Environmental Quality Act]

18. Any contractor, employee, or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative identified in Measure BIO-10 above. This representative shall contact the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or, Mr. Paul Hoffman, Wildlife Biologist. Contact information for CDFW and USFWS is provided below in Measure BIO-15: [Public Resources Code 21000-21177: California Environmental Quality Act]

19. The Sacramento Fish and Wildlife Office and California Department of Fish and Wildlife (CDFW) shall be notified in writing within three (3) working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. Contact information is as follows: CDFW: Ms. Reagen O'Leary, Environmental Scientist 1234 E. Shaw Avenue Fresno, CA 93710 Phone: (559) 243-4014 CDFW: Mr. Paul Hoffman, Wildlife Biologist 1701 Nimbus Road, Suite A Rancho Cordova, CA 95670 (530) 934-9309 USFWS: Chief of the Division of Endangered Species 2800 Cottage Way, Suite W2605 Sacramento, CA 95825-1846 (916) 414-6620 or (916) 414-6600. [Public Resources Code 21000-21177: California Environmental Quality Act]

20. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the U.S. Fish and Wildlife Service (USFWS) at the following address: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846. [Public Resources Code 21000-21177: California Environmental Quality Act]

21. In the event that archaeological/paleontological resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the Permittee shall notify and retain a qualified archaeologist/paleontologist to assess and provide an evaluation of the significance of the find. A qualified archaeologist/paleontologist shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and the Native American Heritage Commission (NAHC). In addition, should archaeological/paleontological resources be discovered, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

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22. In the event that human remains are discovered during ground-disturbing activities, all work within 100 feet of the find shall cease and the discovery shall immediately be reported to the County Coroner (CC) and Native American Heritage Commission (NAHC) for further assessment. Permittee shall identify appropriate measures for treatment or disposition of the remains in consultation with the CC and NAHC. In addition, should human remains be discovered during ground-disturbing activities, Permittee shall provide the District a written report in relation to the nature of the find. [Public Resources Code 21000-21177: California Environmental Quality Act]

23. Prior to ground disturbance activities, Permittee shall provide the District documentation identifying all wells in the vicinity of the project site have been submitted to the Division of Oil, Gas, and Geothermal Resources (DOGGR) for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

24. Permittee shall retain written records on-site and notify DOGGR in the event unknown, unrecorded, abandoned, or damaged wells are discovered. [Public Resources Code 21000-21177: California Environmental Quality Act]

25. Any wells discovered or exposed during construction activities will be tested for flammable vapors. Permittee shall retain these records onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

26. Permittee shall retain written records on-site demonstrating compliance with all applicable Department of Toxic Substances Control (DTSC) regulations, including biennial hazardous waste reports for the use, discharge, and transport of potentially hazardous materials if necessary. [Public Resources Code 21000-21177: California Environmental Quality Act]

27. Permittee shall comply with all applicable Division of Oil, Gas, and Geothermal Resources (DOGGR) Underground Injection Control (UIC) requirements. Permittee shall retain any records deemed necessary by DOGGR onsite and the records shall be made available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

28. Permittee shall comply with all applicable Regional Water Quality Control Board (RWQCB) water quality standard and waste discharge regulations. Permittee shall retain any permits/records deemed necessary by the RWQCB on-site and shall make these permits/records available to the District upon inspection. [Public Resources Code 21000-21177: California Environmental Quality Act]

29. The steam generator must be located in the SE 1/4 of the NE 1/4 Section of Section 11, T26S, R 20E (South Plant) or the SW ¼ of the SE ¼ Section of Section 34, T25S, R 20E (North Plant). [District Rule 4102]

30. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

31. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

32. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

33. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

34. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

35. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

36. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

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37. Permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

38. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

39. The unit shall only be fired on gaseous fuel that includes PUC quality natural gas, tank vapor recovery gas, and gas produced during thermally enhanced oil recovery (TEOR) operation or a mixture of any of these fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

40. Sulfur content in the gaseous fuel shall not exceed 1.0 grain per 100 dry standard cubic feet. [District Rule 2201] Federally Enforceable Through Title V Permit

41. Heat input to this unit shall not exceed 647,802 MMBtu in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed: PM10: 0.003 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmvd NOx @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

44. Sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD, double GC for H2S and mercaptans, performed in the laboratory. Should the applicant decide to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

45. The fuel higher heating value for each fuel shall be certified annually by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

46. Source testing to measure fuel combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

47. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

48. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

49. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

50. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

51. 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 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

52. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

53. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

54. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

55. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

56. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

57. 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] Federally Enforceable Through Title V Permit

58. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

59. The permittee shall maintain cumulative monthly records of heat input in MMBtu to demonstrate compliance with the permitted annual heat input rate. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

60. 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, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

61. Prior to operating equipment under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: NOx: 1943 lb/quarter; PM10: 729 lb/quarter, and VOC: 1336 lb/qtr. Offsets include the applicable offset ratio specified in Section 4.8 of Rule 2201 (as amended 4/21/11). PM10 may be offset using SOx at an interpollutant offset ratio of 1.0 tons SOx/ton PM10. [District Rule 2201 and Public Resources Code 21000-21177: California Environmental Quality Act] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

62. ERC Certificate Numbers C-1087-2, N-831-2, N-946-2, N-947-2, N-948-2, N-1048-2, S-2629-2, S-3038-2, S-3054-2, S-3585-2, S-3586-2, S-3587-2, S-3588-2, S-3589-2, S-3590-2, S-3591-2, S-3592-2 , C-1190-5, N-949-5, N-1015-5, S-3593-5, N-832-1, N-833-1, S-730-1, S-734-1, S-735-1, S-736-1, S-737-1, S-738-1, S-1755-1, S-1756-1, S-1757-1, S-1758-1, S1759-1, S-2310-1, S-3573-1, S-3575-1, S-3576-1, S-3577-1, S-3579-1, S-3582-1 and S-3584-1 (or certificates split from theses certificates) 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 and Public Resources Code 21000-21177: California Environmental Quality Act]] Federally Enforceable Through Title V Permit

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