San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

DEC 18 2014

Ms. Jennifer Hart
Vintage Production California, LLC
9600 Ming Avenue, Suite 300
Bakerfield, CA, 93311

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1326
Project # S-1143901

Dear Ms. Hart:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. Vintage proposes to install a flare

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authority to Construct with a Certificate of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authority 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.

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

Thank you for your cooperation in this matter.

Sincerely,

Arnaud Marjollet
Director of Permit Services

AM:SD/cc

Enclosures

cc: Mike Tollstrup, CARB (w/enclosure) via email
cc: Gerardo C. Rios, EPA (w/enclosure) via email

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San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

VOC Destruction Device

Facility Name: Vintage Production California, LLC
Mailing Address: 9300 Ming Avenue
Bakersfield, CA 93311
Contact Person: Jennifer Hart
Telephone: (661) 869-8065
Fax: (661) 869-8170
E-Mail: Jennifer_hart@oxy.com

Application #(s): S-1326-456-0
Project #: S1143901
Deemed Complete: October 30, 2014

Engineer: Steve Davidson
Lead Engineer: Allan Phillips

AP SWR AQE
NOV 24 2014

I. Proposal

Vintage Production California, LLC (Vintage) has requested Authority to Construct (ATC) permits for the installation of a Coyote North Ltd. Model CNTOX6 (Coyote) or District approved equivalent volatile organic compound (VOC) destruction device (VDD).

Vintage has a Title V Permit. This modification can be classified as a Title V significant permit modification pursuant to Rule 2520, 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. Vintage must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
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 4311	Flares (6/18/09)
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 equipment will be located in the Mount Poso oilfield, in the Southeast quarter of Section 9, T27S, R.28W in Vintage's Heavy Oil Central stationary source. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

The VDD will be connected to the gas collection /distribution system (a.k.a field gas header). The system supplies fuel gas to equipment throughout the field. When Fuel-burning equipment is shut down or if all or part of the field gas header itself is shut down, the VDD will be used to incinerate the excess gas. Vintage anticipates such an occurrence no more than 60 days per year.

V. Equipment Listing

S-1326-456-0: 30.0 MMBTU/HR COYOTE NORTH LTD MODEL CNTOX6 VOC DESTRUCTION DEVICE (OR EQUIVALENT) AUTHORIZED SERVING THE GAS COLLECTION/DISTRIBUTION PIPELINE (A.K.A. FIELD GAS HEADER)

VI. Emission Control Technology Evaluation

Coyote North Ltd. Incinerator uses a dual air intake process for combustion. Air is mixed concentrically with the fuel at the burner tip and air is also naturally drafted through the bottom air intakes. Coyote North Ltd.'s Multifarious Burner System allows for an adjustable mixing ratio between primary and secondary air at the burner nozzle. This creates the optimum flame and the highest destruction efficiency at over 99.9%. Only natural air induction is required; therefore, no blowers or fans are required.

VII. General Calculations

A. Assumptions

Combustion:

- The maximum quantity of gas combusted in each new VDD will be limited to 720 MMBtu/day and 43,200 MMBtu/year.
- The combusted gas will have a sulfur content less than 0.5 gr/100 scf, (Applicant); equivalent to 0.0014 lb/SOx/MMBtu
- There is no pilot light associated with the VDD

Fugitive Emission:

- Facility will operate 24 hours per day, 7 days per week, and 52 weeks per year.
- Only fugitive VOCs emitted from components in gas service are calculated. (See Appendix B)
- Fugitive emissions from heavy oil liquid service components are negligible.
- Leak is defined as 2000 ppmv
- Leak Fraction is 0

B. Emission Factors

Combustion Emissions:

	Emission Factor (lb/MMBtu)	Source
NO_X	0.023	Manufacturer
SO_X	0.0143	(based on 5.0 gr-scf & 1000 Btu/scf)
PM_{10}	0.008	FYI – 83
CO	0.008	Manufacturer
VOC	0.004	Manufacturer

Fugitive Emissions:

- The fugitive emissions for all tanks are calculated using USEPA Protocol for Equipment Leak Emission Estimates, Table 5-7, (November 1995): emissions were calculated based on average leak rate equations.
- The percentage of VOCs of the total hydrocarbons is 100%.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since this is a new emissions unit, PE1 = 0 for all pollutants.

2. Post Project Potential to Emit (PE2)

Combustion:

Daily Post Project Emissions			
Pollutant	Emissions Factor (lb/MMbtu)	Maximum Daily Combustion (MMBtu/day)	PE2 Total (lb/day)
NO_X	0.023	720	16.6
SO_X	0.0143	720	10.3
PM_{10}	0.008	720	5.8
CO	0.008	720	5.8
VOC	0.004	720	2.9

Annual Post Project Emissions			
Pollutant	Emissions Factor (lb/MMbtu)	Maximum Annual Combustion (MMBtu/year)	PE2 Total (lb/yr)
NO_X	0.023	43,200	994
SO_X	0.014	43,200	618
PM_{10}	0.008	43,200	346
CO	0.008	43,200	346
VOC	0.004	43,200	173

Fugitive Emissions:

Post Project Fugitive Emissions		
Pollutant	Daily Emission (lb/day)	Annual Emissions (lb/year)
VOC	0.064	23

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.

Facility emissions are already above the Offset and Major Source Thresholds for all pollutants; therefore, SSPE1 calculations are not necessary.

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.

This source is an existing Major Source for all pollutants and will remain so.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

The facility conceeds it is an existing PSD major source.

6. Baseline Emissions (BE)

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

Pursuant to District Rule 2201, BE = PE1 for:

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

otherwise,

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

Since this is a new emissions units, BE = PE1 = 0 for all 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 all pollutants, 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	994	50,000	N
SO_x	618	80,000	N
PM_{10}	346	30,000	N
VOC	196	50,000	N

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

8. Federal Major Modification

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

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

Step 1

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*	994	0	Y
VOC*	173	0	Y
PM_{10}	346	30,000	N
$PM_{2.5}$	346	20,000	N
SO_x	618	80,000	N

Since there is an increase in NO_x and VOC emissions; therefore, 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 any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are emitted in this project are: (See 52.21 (b) (23) definition of significant)

I. Project Location Relative to Class 1 Area

As demonstrated in the "PSD Major Source Determination" Section above, the facility was determined to be a existing PSD Major Source. Because the project is not located within 10 km (6.2 miles) 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. Project Emission Increase – Significance Determination

a. Evaluation of Calculated Post-project Potential to Emit for New or Modified Emissions Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the post-project potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if the total potentials to emit from all new and modified units are below the applicable thresholds, no futher PSD analysis is needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)					
	NO2	SO2	CO	PM	PM10
Total PE from New and Modified Units	0.5	0.3	0.2	0.2	0.2
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	n	n	n	n	n

As demonstrated above, because the post-project total potentials to emit from all new and modified emission units are below the PSD significant emission increase thresholds, this project is not subject to the requirements of Rule 2410 and no further discussion is required.

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. Detailed QNEC calculations are included in Appendix A.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

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

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

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

As seen in Section VII.C.2 above, the applicant is proposing to install a VDD with a PEs greater than 2 lb/day for NO_X, SO_X, PM_{10}, CO, and VOC. Therefore, BACT is triggered for NO_X, SO_X, PM_{10}, VOC and CO.

2. BACT Guideline

BACT Guideline 1.4.1, applies to the VDD (see projects S1133536 and S1142021). [waste gas flare – 15.3 MMbtu/hr, serving a tank vapor control system] (See Appendix C)

3. Top-Down BACT Analysis

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

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

NOx: use of a VDD
SOx: use of a VDD
PM_{10}: use of a VDD

CO: use of a VDD
VOC: use of a VDD

B. Offsets

1. Offset Applicability

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

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

Offset Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE2	>20,000	>54,750	>29,200	>200,000	>20,000
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	y	y	y	y	y

2. Quantity of Offsets Required

As seen above, the facility is an existing NSR Major Source for NO_X, SO_X, PM_{10}, CO, VOC, and the SSPE2 is greater than the offset thresholds for these pollutants; therefore, offset calculations will be required for this project.

However, Section 4.6.1 of Rule 2201 states that emissions offsets are not required for increases in CO in attainment areas provided the applicant demonstrates to the satisfaction of the APCO that the Ambient Air Quality (AAQ) Standards are not violated in the areas to be affected, such emissions will be consistent with Reasonable Further Progress, and will not cause or contribute to a violation of AAQ Standards. The District performed an AAQ Analysis and determined that this project will not result in or contribute to a violation of an AAQ Standard for CO (see Appendix D). Therefore, CO offsets are not required for this project.

The quantity of offsets in pounds per year 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) = (Σ[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 = PE1 for:

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

otherwise,

BE = HAE

The facility is proposing to install new emissions units; therefore their BEs = 0. Also, there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

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

Offsets Required (lb/year)						
	Total PE2	BE	ICCE	Offsets Required (PE2 – BE – ICCE)	at offset ratio of 1.5:1	Offsets Required at 1.5:1 (lb/qtr)
NO_X	994	0	0	994	1,491	373
SO_X	618	0	0	618	927	232
PM_{10}	346	0	0	346	519	130
VOC	173	0	0	173	260	65

The applicant has stated that the facility plans to use the following ERC certificates which have had the following offsets reserved:

NOx				
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
N-1165-2	300	309	300	65
C-1291-2	73	64	73	308
Total Reserved	373	373	373	373

SOx				
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
ERC N-1150-5	232	232	232	232
Total Reserved	232	232	232	232

PM_{10}				
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
N-1169-4	130	130	130	130
Total Reserved	2,175	2,175	2,175	2,175

	VOC			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
ERC N-1193-1	65	65	65	65
Total Reserved	65	65	65	65

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

Proposed Rule 2201 (offset) Conditions (for each steam generator):

- Prior to operating equipment under this Authority to Construct, permittee shall surrender **NO_X** emission reduction credits for the following quantity of emissions: 1st quarter – 373 lb, 2nd quarter – 373 lb, 3rd quarter – 373 lb, and fourth quarter – 373 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
- ERC Certificate Number N-1165-2 and C-1291-2 (or a certificate split from these 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]
- Prior to operating equipment under this Authority to Construct, permittee shall surrender **SO_X** emission reduction credits for the following quantity of emissions: 1st quarter – 232 lb, 2nd quarter – 323 lb, 3rd quarter – 232 lb, and fourth quarter – 232 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
- ERC Certificate Number N-1150-5 (or a certificate split from this certificate) shall be used to supply the required **SOx** 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]
- Prior to operating equipment under this Authority to Construct, permittee shall surrender **PM_{10}** emission reduction credits for the following quantity of emissions: 1st quarter – 130 lb, 2nd quarter – 130 lb, 3rd quarter – 130 lb, and fourth quarter – 130 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
- ERC Certificate Number N-1169-4 (or a certificate split from this certificate) shall be used to supply the required **PM_{10}** 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]
- Prior to operating equipment under this Authority to Construct, permittee shall surrender **VOC** emission reduction credits for the following quantity of emissions: 1st quarter – 65 lb, 2nd quarter – 65 lb, 3rd quarter – 65 lb, and fourth quarter – 65 lb.

These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

- ERC Certificate Numbers N-1193-1 (or a certificate split from these certificates) shall be used to supply the required **VOC** 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]

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.
e. Any project which results in a Title V significant permit modification

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 Sections VII.C.7 and VII.C.8, this project is a 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	>20,000	>20,000	20,000 lb/year	No
SO_X	>54,750	>54,750	54,750 lb/year	No
PM_{10}	>29,200	>29,200	29,200 lb/year	No
CO	>200,000	>200,000	200,000 lb/year	No
VOC	>20,000	>20,000	20,000 lb/year	No

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

SSIPE Public Notice Thresholds			
Pollutant	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x	14,190	20,000 lb/year	No
SO_x	864	20,000 lb/year	No
PM_{10}	4,936	20,000 lb/year	No
CO	4,936	20,000 lb/year	No
VOC	2,468	20,000 lb/year	No

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project constitutes a Title V significant modification. Therefore, public noticing for Title V significant modifications is required for this project.

2. Public Notice Action

As discussed above, public noticing is required for this project for NO_X and VOC emissions triggering a Federal Major Modification and a Title V Significant Permit Modification. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATCs 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:

- Emission rates from this unit shall not exceed any of the following limits: 0.023 lb-NOx/MMBtu; 0.0143 lb-SOx/MMBtu; 0.008 lb-PM10/MMBtu; 0.008 lb-CO/MMBtu; or 0.004 lb-VOC/MMBtu. [District Rule 2201] Y

E. Compliance Assurance

1. Source Testing

- Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following condition(s) are listed on the permit to operate:

- The permittee shall keep accurate daily records of volume of gas combusted and hours of operation for a period of five years, and shall make such records available for District inspection upon request. [District Rule 2201] Y

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to Appendix D of this document for the AAQA summary sheet.

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

The proposed location is in a non-attainment area for the state's PM_{10} as well as federal and state $PM_{2.5}$ thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM_{10} and $PM_{2.5}$.

G. Compliance Certification

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

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install two VDDs

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

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII. C. 9. above, this project does not result in a new PSD major source or PSD major modification. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

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

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. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment/minor modification application.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. However, no subparts of 40 CFR Part 60 apply to VDDs.

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of

hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to VDD operations.

Rule 4101 Visible Emissions

Rule 4101 states that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity.

As long as the equipment is properly maintained and operated, compliance with visible emissions limits is expected under normal operating conditions.

Rule 4102 Nuisance

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (**Appendix D**), 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 RMR Summary for this project is shown below:

RMR Summary				
Categories	**VOC Destruction Device (Unit 456-0)**		**Project Totals**	**Facility Totals**
Prioritization Score	NA		NA	>1
Acute Hazard Index	0.0		0.0	0.45
Chronic Hazard Index	0.0		0.0	0.03
Maximum Individual Cancer Risk (10^{-6})	0.016		0.016	8.08
T-BACT Required?	**No**			
Special Permit Conditions?	**Yes**			

Discussion of T-BACT

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

The following condition will be placed on the permit to ensure compliance:

- he fuel consumption shall not exceed either of the following limits: 300 MMBtu/day and 18,000 MMBtu/year..

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 = $\frac{20.9}{(20.9-3)} = 1.17$

$$GL = \left(\frac{0.008\,lb-PM}{MMBtu} \times \frac{7{,}000\,grain}{lb-PM}\right) / \left(\frac{8{,}578\ ft^3}{MMBtu} \times\ 1.17\right)$$

$$GL = 0.006\ grain/dscf < 0.1\ grain/dscf$$

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

Rule 4311 Flares

This Rule applies to operations involving the use of flares. This Rule defines a flare as:

A direct combustion device in which air and all combustible gases react at the burner with the objective of complete and instantaneous oxidation of the combustible gases. Flares are used either continuously or intermittently and are not equipped with devices for fuel-air mix control or for temperature control.
The VDD pre-mixes air and combustion gas; therefore, this Rule does not apply.

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 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) = $\frac{10.73 psi \cdot ft^3}{lb \cdot mol \cdot °R}$

$$\frac{0.0014\ lb-SOx}{MMBtu} \times \frac{MMBtu}{8{,}578\ dscf} \times \frac{1\ lb \cdot mol}{64\ lb} \times \frac{10.73\ psi \cdot ft^3}{lb \cdot mol \cdot °R} \times \frac{520°R}{14.7\ psi} \times \frac{1{,}000{,}000 \cdot parts}{million} = 1.0 \frac{parts}{million}$$

$$SulfurConcentration = 1.0 \frac{parts}{million}$$ < 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)

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

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

Greenhouse Gas (GHG) Significance Determination

District is a Lead Agency & Facility is Subject to Cap-and-Trade

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

3. Group 3: Suppliers of Natural Gas, Suppliers of Reformulated Gasoline Blendstock for Oxygenate Blending and Distillate Fuel Oil, Suppliers of Liquefied Petroleum Gas, and Suppliers of Blended Fuels

   These entities are subject to Cap and Trade compliance obligations which must cover all fuels (except jet fuels) identified in section 95811 (c) through (f) of the Cap-and-Trade regulation delivered to end users in California, less the fuel delivered to covered entities (group 1 above).

This facility is subject to the Cap-and-Trade regulation. Therefore, as discussed above, consistent with District Policies APR 2005 and APR 2025, the District concludes that the GHG emissions increases associated with this project would have a less than significant individual and cumulative impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATCs S-1326-456-0 subject to the permit conditions on the attached draft ATCs in **Appendix F**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1326-456-0	3020-02-H	30 MMBtu/hr	$1030

Appendixes

A. Quarterly Net Emissions Change
B: Calculations
C: BACT Guideline & BACT Analysis
D. HRA and AAQA
E. Compliance Certification
F: Draft ATC

APPENDIX A
Quarterly Net Emissions Change (QNEC)

Quarterly Net Emissions Change (QNEC)

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

QNEC = PE2 - PE1, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

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

$PE2_{quarterly} = PE2_{annual} \div 4$ quarters/year

$PE1_{quarterly} = PE1_{annual} \div 4$ quarters/year

Quarterly NEC [QNEC] S-1738-496-0					
	PE2 (lb/yr)	PE2 (lb/qtr)	PE1 (lb/yr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO_X	994	249	0	0	249
SO_X	618	155	0	0	155
PM_{10}	346	87	0	0	87
CO	346	87	0	0	87
VOC	173	43	0	0	43

APPENDIX B
Calculations

Fugitive VOC Emissions From Components
Calculated From Component Counts and EPA ALR Emission Factors

Fugitive Emissions - Coyote North CNTOX6 VOC Destruction Device (VDD)

Type of Component	Component Service	Component Counts	Leak Threshold (ppmv)	Leak Fraction	EPA 1995 ALR TOG Factor lb/day*Component	Fugitive Emissions		
						TOG (lb/Day)	VOC (lb/Day)	Methane (lb/Day)
Valves	Gas/Light Liquid	11	2,000	0.0000	7.392E-04	0.008	0.008	0.003
	Light Crude Oil	0	2,000	0.0000	7.392E-04	0.000	0.000	0.000
	Heavy Crude Oil	0	2,000	0.0000	4.118E-04	0.000	0.000	0.000
Pump Seals	Gas/Light Liquid	0	2,000	0.0000	1.214E-02	0.000	0.000	0.000
	Light Crude Oil	0	2,000	0.0000	1.003E-02	0.000	0.000	0.000
	Heavy Crude Oil	0	2,000	0.0000	0.000E+00	0.000	0.000	0.000
Others	Gas/Light Liquid	0	2,000	0.0000	2.376E-03	0.000	0.000	0.000
	Light Crude Oil	0	2,000	0.0000	3.379E-03	0.000	0.000	0.000
	Heavy Crude Oil	0	2,000	0.0000	1.690E-03	0.000	0.000	0.000
Connectors	Gas/Light Liquid	120	2,000	0.0000	4.488E-04	0.054	0.054	0.020
	Light Crude Oil	0	2,000	0.0000	4.541E-04	0.000	0.000	0.000
	Heavy Crude Oil	0	2,000	0.0000	0.000E+00	0.000	0.000	0.000
Flanges	Gas/Light Liquid	12	2,000	0.0000	1.373E-04	0.002	0.002	0.001
	Light Crude Oil	0	2,000	0.0000	8.448E-05	0.000	0.000	0.000
	Heavy Crude Oil	0	2,000	0.0000	0.000E+00	0.000	0.000	0.000
Open-ended Lines	Gas/Light Liquid	0	2,000	0.0000	3.960E-04	0.000	0.000	0.000
	Light Crude Oil	0	2,000	0.0000	3.538E-04	0.000	0.000	0.000
	Heavy Crude Oil	0	2,000	0.0000	3.168E-04	0.000	0.000	0.000
Total Fugitive VOC Emissions From Associated Components (lb/day)						0.064	0.064	0.024

Gas	VOC content (%) of TOG	100.00	Methane content (%) of TOG	37.50
Liquid	VOC content (%) of TOG	100.00	Methane content (%) of TOG	37.50

TABLE verified BY
STEVE DAVIDSON
11-5-14

TABLE 5-7. EQUATIONS RELATING AVERAGE LEAK RATE TO FRACTION LEAKING AT OIL AND GAS PRODUCTION OPERATION UNITS

Equipment Type	Leak Definition (ppmv)	Equation[a]
Gas Connector	500	ALR = (0.016 x LKFRAC) + 7.7E-06
	1000	ALR = (0.018 x LKFRAC) + 8.0E-06
	2000	ALR = (0.020 x LKFRAC) + 8.5E-06
	5000	ALR = (0.023 x LKFRAC) + 9.4E-06
	10000	ALR = (0.026 x LKFRAC) + 1.0E-05
Light Oil Connector	500	ALR = (0.016 x LKFRAC) + 7.7E-06
	1000	ALR = (0.021 x LKFRAC) + 8.3E-06
	2000	ALR = (0.022 x LKFRAC) + 8.6E-06
	5000	ALR = (0.025 x LKFRAC) + 9.2E-06
	10000	ALR = (0.026 x LKFRAC) + 9.7E-06
Water/Oil Connector	500	ALR = (0.013 x LKFRAC) + 7.8E-06
	1000	ALR = (0.014 x LKFRAC) + 7.9E-06
	2000	ALR = (0.016 x LKFRAC) + 8.3E-06
	5000	ALR = (0.023 x LKFRAC) + 9.4E-06
	10000	ALR = (0.028 x LKFRAC) + 1.0E-05
Gas Flange	500	ALR = (0.043 x LKFRAC) + 1.1E-06
	1000	ALR = (0.051 x LKFRAC) + 1.8E-06
	2000	ALR = (0.059 x LKFRAC) + 2.6E-06
	5000	ALR = (0.075 x LKFRAC) + 4.7E-06
	10000	ALR = (0.082 x LKFRAC) + 5.7E-06
Light Oil Flange	500	ALR = (0.037 x LKFRAC) + 9.4E-07
	1000	ALR = (0.046 x LKFRAC) + 1.2E-06
	2000	ALR = (0.055 x LKFRAC) + 1.6E-06
	5000	ALR = (0.068 x LKFRAC) + 2.1E-06
	10000	ALR = (0.073 x LKFRAC) + 2.4E-06

TABLE 5-7. EQUATIONS RELATING AVERAGE LEAK RATE TO FRACTION LEAKING AT OIL AND GAS PRODUCTION OPERATION UNITS (CONTINUED)

Equipment Type	Leak Definition (ppmv)	Equation[a]
Gas Valve	500	ALR = (0.070 x LKFRAC) + 9.1E-06
	1000	ALR = (0.076 x LKFRAC) + 1.1E-05
	2000	ALR = (0.083 x LKFRAC) + 1.4E-05
	5000	ALR = (0.092 x LKFRAC) + 1.9E-05
	10000	ALR = (0.098 x LKFRAC) + 2.5E-05
Heavy Oil Valve	500	ALR = (0.0013 x LKFRAC) + 7.8E-06
	1000	ALR = (0.0013 x LKFRAC) + 7.8E-06
	2000	ALR = (0.0013 x LKFRAC) + 7.8E-06
	5000	ALR = 8.4E-06
	10000	ALR = 8.4E-06
Light Oil Valve	500	ALR = (0.059 x LKFRAC) + 9.4E-06
	1000	ALR = (0.069 x LKFRAC) + 1.2E-05
	2000	ALR = (0.075 x LKFRAC) + 1.4E-05
	5000	ALR = (0.083 x LKFRAC) + 1.7E-05
	10000	ALR = (0.087 x LKFRAC) + 1.9E-05
Water/Light Oil Valve	500	ALR = (0.022 x LKFRAC) + 8.1E-06
	1000	ALR = (0.022 x LKFRAC) + 8.1E-06
	2000	ALR = (0.064 x LKFRAC) + 9.7E-06
	5000	ALR = (0.064 x LKFRAC) + 9.7E-06
	10000	ALR = (0.064 x LKFRAC) + 9.7E-06

[a]ALR = Average leak rate (kg/hr per source)
LKFRAC = Leak fraction.

$\left(\frac{Kg}{hr}\right)\left(\frac{24\ hr}{1\ day}\right)\left(\frac{2.2\ lb}{1\ Kg}\right)$ = MULTIPLY BY 52.8 FOR $\frac{lb}{day}$

Appendix C
BACT Guideline and
Top-down BACT Analysis

Best Available Control Technology (BACT) Guideline 1.4.1
Last Update: 11/9/1995

Waste Gas Flare - 15.3 MMBtu/hr, Serving a Tank Vapor Control System

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	Steam-assisted or air-assisted when steam unavailable		
NOx	Steam-assisted or air-assisted when steam unavailable		
PM10	Steam-assisted with smokeless combustion or Air-assisted flare with smokeless combustion when steam unavailable. Pilot Light Fired Solely on LPG or Natural Gas		
SOx	Pilot Light Fired Solely on LPG or Natural Gas		
VOC	Steam-assisted or air-assisted when steam unavailable		

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.

Top Down BACT Analysis

1. **BACT Analysis for NO_X and CO Emissions:**

   a. Step 1 - Identify all control technologies

   1. Steam-assisted
   2. Air assisted when steam unavailable
   3. VDD (equivalent to the above options)

   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

   All of the control technologies have the same control effectiveness

   d. Step 4 - Cost Effectiveness Analysis

   The applicant has proposed the VDD which has equivalent control effectiveness to the other control technologies; therefore, a cost analysis is not required.

   e. Step 5 - Select BACT

   BACT for NO_X and CO emissions from this operation is the VDD; therefore BACT for NO_X emissions is satisfied.

BACT Analysis for PM_{10} Emissions:

a. Step 1 - Identify all control technologies

1. Steam-assisted with smokeless combustion
2. Air-assisted with smokeless combustion when steam unavailable.
3. Pilot Light Fired Solely on LPG or Natural Gas
4. VDD (equivalent to the above options)

b. Step 2 - Eliminate technologically infeasible options

The VDD does not have a pilot light.

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

c. Step 3 - Rank remaining options by control effectiveness

The remaining control technologies have the same control effectiveness

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the VDD which has equivalent control effectiveness to the other technologies; therefore, a cost analysis is not required.

e. Step 5 - Select BACT

BACT for PM_{10} emissions from operation is the VDD; therefore BACT for PM_{10} emissions is satisfied.

3. **BACT Analysis for VOC Emissions:**

a. Step 1 - Identify all control technologies

1. Steam-assist
2. Air-assist when steam unavailable.
3. VDD

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

All of the control technologies have the same control effectiveness

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the VDD which has equivalent control effectiveness to the other technologies; therefore, a cost analysis is not required.

e. Step 5 - Select BACT

BACT for VOC emissions from operation is the VDD; therefore BACT for VOC emissions is satisfied.

3. **BACT Analysis for SOx Emissions:**

a. Step 1 - Identify all control technologies

1. Steam-assist
2. Air-assist when steam unavailable.
3. VDD

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

All of the control technologies have the same control effectiveness

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the VDD which has equivalent control effectiveness to the other technologies; therefore, a cost analysis is not required.

e. Step 5 - Select BACT

BACT for SOx emissions from operation is the VDD; therefore BACT for VOC emissions is satisfied.

Appendix D
HRA and AAQA

REVISED 12/09/14
San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Steve Davidson – Permit Services
From:	Ester Davila – Technical Services
Date:	December 9, 2014
Facility Name:	Vintage Production CA
Location:	(SE/3 Section 9, T.27S., R.28E)
Application #(s):	S-1326-456-0
Project #:	S-1143901

A. RMR SUMMARY

RMR Summary				
Categories	**VOC Destruction Device (Unit 456-0)**		**Project Totals**	**Facility Totals**
Prioritization Score	NA		NA	>1
Acute Hazard Index	0.0		0.0	0.35
Chronic Hazard Index	0.0		0.0	0.03
Maximum Individual Cancer Risk (10^{-6})	0.034		0.034	7.50
T-BACT Required?	**No**			
Special Permit Conditions?	**Yes**			

Proposed Permit Conditions

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

Unit # 455-0

The maximum annual fuel rate shall not exceed 18 MMSCF per year.

B. RMR REPORT

I. Project Description

Technical Services received a request on November 5, 2014, 2014 to perform an Ambient Air Quality Analysis and a Risk Management Review for a 30.0 MMBTU/hr Coyote North LTD model CNTOX3 VOC destruction device (or equivalent) authorized to incinerate excess natural gas from gas collection/distribution pipeline.

II. Analysis

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 calculated using Ventura County emission factors for internal combustion of natural gas and District approved oil field equipment fugitives were input into the HEARTs database. The AERMOD model was used, with the parameters outlined below and meteorological data for 2009-2013 from Bakersfield to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the Hot Spots Analysis and Reporting Program (HARP) risk assessment module to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 456-0			
Source Type	Point	**Location Type**	rural
Stack Height (m)	14	**Closest Receptor (m)**	16,090
Stack Diameter. (m)	1.83	**Type of Receptor**	Residential
Stack Exit Velocity (m/s)	0.09	**Max Hours per Year**	8760
Stack Exit Temp. (°K)	1477.6	**Fuel Type**	NG
Burner Rating (MMBtu/hr)	30.0		

In Addition, Technical Services performed modeling for criteria pollutants CO, NOx, SOx and PM_{10}; as well as a RMR. The emission rates used for criteria pollutant modeling were 0.24 lb/hr CO, 0.69 lb/hr NOx, 0.43 lb/hr SOx, and 0.24 lb/hr PM_{10}.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

VOC Destruction Device	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	Pass	X	Pass	Pass
PM_{10}	X	X	X	Pass[2]	Pass[2]
$PM_{2.5}$	X	X	X	NA	NA

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

III. Conclusion

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

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

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

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

IV. Attachments

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

Has the applicant requested reimbursable overtime processing? Yes: ☒ No: ☐
If YES, please send HRA request to Tech Services before deeming complete

Supervisor's signature: _____

Comments and References:

HRA/RMR REQUEST
PROJECT INFORMATION Form

I. Project Description: Installation of a new VOC Destruction Device.

II Receptor Location(s)

Receptor Description	Distance From Source
Residence	10.29 Miles SW
Business	10.29 Miles SW

III. Process Rate to be Modeled

Process Description	Process Rates	
	Hourly Rate	Annual Rate

IV. Emission Rate Or Substances to be Modeled

Process Description	Emission Rates	
	Hourly Rate	Annual Rate
Combustion Emissions of Oilfield gasses	Lb	Lb
NOx	0.69	6044
VOC	0.12	1059
CO	0.24	2117
SOx	0.43	3760
PM10	0.24	2117

Process Description	Emission Rates	
	Hourly Rate	Annual Rate
Fugitive Oilfeild Emissions	0.003 lb-VOC	23 lb-VOC

V. Project Location (*Select One*)

☐ Urban – Area of dense population
☒ Rural – Area of sparse population

VI. Point Sources

Stack Parameters:

Stack Height (Units)	Rain Cap or Pressure Plate	Inside Diameter (Units)	Gas Exit Velocity (Units)	Exhaust Discharge Direction	Gas Exit Temperature (Units)
46'	Yes / No	72"	17.7 ft/min	Vertical	2200 F

VII. Area Sources[1] Parameters

Release Height[2] (Units)	Length Of Side (Units)

1. An area source is defined as in an area with four equal sides.
2. Release height is defined as the physical height of the source. For example, if a sump has a three meter brim surrounding it. The physical height of the sump is three meters. Height is measured from the ground to the top of the source.

II. Equipment Location:

The new VDD will be located in the southeast quarter (SE/4) of Section 9, T27S/R28E. The installation site is in the Vintage Heavy Oil Central Stationary Source (Facility I.D. S-1326) in the Mount Poso oilfield of Kern County.

The project is not located near residential areas, sensitive receptors or within 1000 feet of any school. The oilfield location ensures that the facility will not result in a public nuisance.

A Project And Receptors Location Map can be found in Appendix A.

Table II-1
Initial Project Location of Coyote CNTOX6 Unit #1[1]

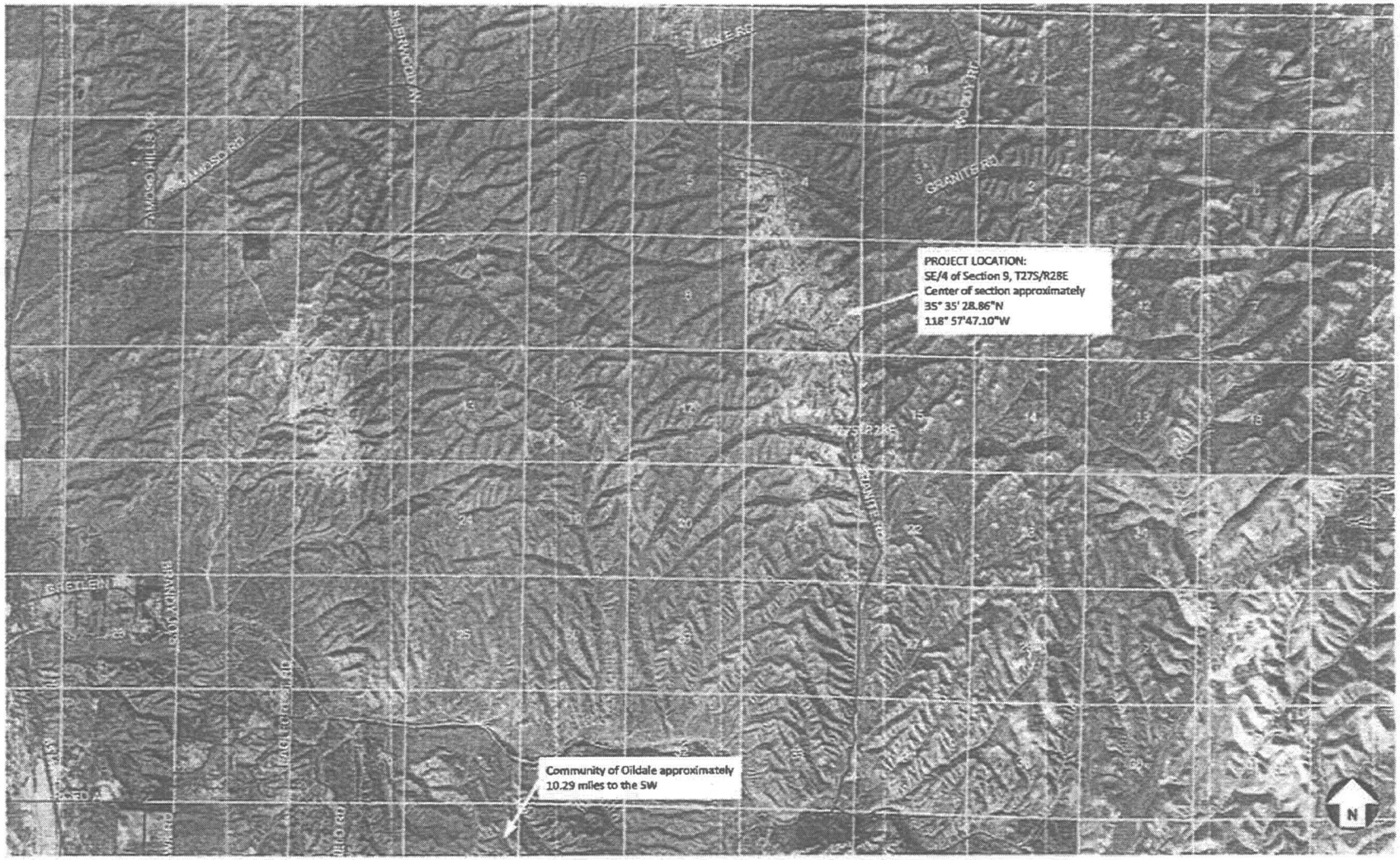
Section	Township	Range	Quarter	Longitude	Latitude
9	27S	28E	SE	118° 57' 47.10"W	35° 35' 28.86"N
1. Location of center of quarter section					

Table II-2
Receptor Distances

Receptor Description	Receptor	Proximity
Nearest Residential, Business and Sensitive Receptors	Community of Oildale	Approx. 10.29 Miles SW

III. Process Description

The VDD will be connected to our gas collection/distribution system (a.k.a. field gas header). The system supplies fuel gas to equipment throughout the field. When fuel-burning equipment is shut down or if all or part of the field gas header itself is shut down, the VDD will be used to incinerate the excess gas. We anticipate such an occurrence no more than 60 days per year and annual emissions are based on 60 days/year of operation.



Vintage Production California, LLC

Application For Authorities To Construct For VOC Destruction Device (VDD)

PROJECT LOCATION AND RECEPTORS MAP

Project Location SE/4 Section 9 T27S/R28E Date: 09/2014

FILE: c:\HARP\projects\demo\S-1326-456-0 (1143901) 11-13-14 Rep_PMI.txt

EXCEPTION REPORT
(there have been no changes or exceptions)

RECEPTORS WITH HIGHEST CANCER RISK

REC	TYPE	CANCER	CHRONIC	ACUTE	UTME	UTMN	ZONE
305	GRID	1.60E-08	1.59E-04	4.34E-04	321932	3940516	11
306	GRID	1.59E-08	1.58E-04	4.73E-04	321883	3940516	11
307	GRID	1.51E-08	1.50E-04	4.64E-04	321833	3940516	11
334	GRID	1.46E-08	1.45E-04	4.38E-04	321932	3940491	11
335	GRID	1.46E-08	1.45E-04	4.42E-04	321883	3940491	11
304	GRID	1.43E-08	1.42E-04	4.29E-04	321981	3940516	11
308	GRID	1.40E-08	1.39E-04	4.93E-04	321784	3940516	11
336	GRID	1.38E-08	1.37E-04	4.24E-04	321833	3940491	11
365	GRID	1.35E-08	1.34E-04	4.27E-04	321932	3940466	11
333	GRID	1.34E-08	1.34E-04	4.25E-04	321981	3940491	11

RECEPTORS WITH HIGHEST CHRONIC HI

REC	TYPE	CANCER	CHRONIC	ACUTE	UTME	UTMN	ZONE
305	GRID	1.60E-08	1.59E-04	4.34E-04	321932	3940516	11
306	GRID	1.59E-08	1.58E-04	4.73E-04	321883	3940516	11
307	GRID	1.51E-08	1.50E-04	4.64E-04	321833	3940516	11
334	GRID	1.46E-08	1.45E-04	4.38E-04	321932	3940491	11
335	GRID	1.46E-08	1.45E-04	4.42E-04	321883	3940491	11
304	GRID	1.43E-08	1.42E-04	4.29E-04	321981	3940516	11
308	GRID	1.40E-08	1.39E-04	4.93E-04	321784	3940516	11
336	GRID	1.38E-08	1.37E-04	4.24E-04	321833	3940491	11
365	GRID	1.35E-08	1.34E-04	4.27E-04	321932	3940466	11
333	GRID	1.34E-08	1.34E-04	4.25E-04	321981	3940491	11

RECEPTORS WITH HIGHEST ACUTE HI

REC	TYPE	CANCER	CHRONIC	ACUTE	UTME	UTMN	ZONE
1071	GRID	9.04E-09	8.99E-05	1.63E-03	321392	3941378	11
1043	GRID	9.16E-09	9.11E-05	1.55E-03	321441	3941353	11
1042	GRID	1.00E-08	9.99E-05	1.53E-03	321392	3941353	11
1039	GRID	8.76E-09	8.72E-05	1.44E-03	321244	3941353	11
1069	GRID	9.32E-09	9.27E-05	1.39E-03	321294	3941378	11
1134	GRID	6.29E-09	6.25E-05	1.38E-03	321441	3941428	11
1132	GRID	7.79E-09	7.74E-05	1.38E-03	321343	3941428	11
1068	GRID	8.35E-09	8.30E-05	1.37E-03	321244	3941378	11
1100	GRID	8.02E-09	7.97E-05	1.33E-03	321294	3941403	11
1099	GRID	7.97E-09	7.92E-05	1.33E-03	321244	3941403	11

PRIORITIZATION
FOR

VINTAGE PRODUCTION CALIFORNIA LLC
Project # 1143901
Region (S) Facility (1326)

DEVICE NUMBER 456
DEVICE NAME 30 MMBTU/HR COYOTE NORTH LTD VOC DESTRUCTION DEVICE

CAS NUMBER	POLLUTANT NAME	LBS/HOUR	LBS/YEAR	Emissions and Potency Method Prioritization Scores			Despersion Adjustment Method Prioritization Scores		
				CANCER	CHRONIC	ACUTE	CANCER	CHRONIC	ACUTE
75070	Acelaldehyde	9.30E-05	8.15E-01	3.74E-06	9.99E-08	2.97E-07	3.70E-06	9.99E-08	2.97E-07
107028	Acrolein	8.10E-05	7.10E-01		3.48E-05	4.86E-05		3.48E-05	4.86E-05
71432	Benzene	1.74E-04	1.52E+00	7.51E-05	4.36E-07	2.01E-07	7.43E-05	4.36E-07	2.01E-07
71432	Benzene	1.31E-05	1.01E-01	4.96E-06	2.88E-08	1.51E-08	4.90E-06	2.88E-08	1.51E-08
100414	Ethyl benzene	2.07E-04	1.81E+00	7.71E-06	1.56E-08		7.62E-06	1.56E-08	
50000	Formaldehyde	3.69E-04	3.23E+00	3.30E-05	6.17E-06	1.01E-05	3.26E-05	6.17E-06	1.01E-05
110543	Hexane	1.38E-04	1.21E+00		2.97E-09			2.97E-09	
7783064	Hydrogen sulfide	5.36E-05	4.11E-01		7.06E-07	1.92E-06		7.06E-07	1.92E-06
91203	Naphthalene	9.00E-06	7.88E-02	4.56E-06	1.50E-07		4.50E-06	1.50E-07	
1151	PAHs, total, w/o individ. components reported	1.20E-05	1.05E-01	1.97E-04			1.94E-04		
115071	Propylene	1.59E-02	1.39E+02		7.97E-07			7.97E-07	
108883	Toluene	7.95E-04	6.96E+00		3.99E-07	3.22E-08		3.99E-07	3.22E-08
108883	Toluene	1.28E-05	9.78E-02		5.59E-09	5.17E-10		5.59E-09	5.17E-10
1330207	Xylenes (mixed)	5.91E-04	5.18E+00		1.27E-07	4.03E-08		1.27E-07	4.03E-08
1330207	Xylenes (mixed)	2.63E-05	2.01E-01		4.94E-09	1.79E-09		4.94E-09	1.79E-09
	TOTALS FOR DEVICE 456			3.26E-04	4.37E-05	6.12E-05	3.22E-04	4.37E-05	6.12E-05

PRIORITIZATION
FOR

VINTAGE PRODUCTION CALIFORNIA LLC
Project # 1143901
Region (S) Facility (1326)

Emissions and Potency Method

Prioritization Scores

Cancer	CHRONIC	ACUTE
3.26E-04	4.37E-05	6.12E-05

TS = Total Score
t = Specific Toxic Substance
EYR = Emissions Lbs / Year
EHR = Emissions Lbs / Hour
NF = Normalization Factor (Cancer = 1700, Acute = 1500, Chronic = 150)
URF = Unit Risk Factor
AREL = Acute Reference Exposure Level
CREL = Chronic Reference Exposure Level
RP = Receptor Proximity Adjustment Factor
R = Receptor Distance

	RP
0m < R < 100m	1.0
100m < R < 250m	0.25
250m < R < 500m	0.04
500m < R < 1000m	0.011
1000m < R < 1500m	0.003
1500m < R < 2000m	0.002
R > 2000m	0.001

Cancer Score:
TS(t) = EYR(t) * URF(t) * RP * 1700

Acute Score:
TS(t) = [EHR(t) / AREL(t)] * RP * 1500

Chronic Score:
TS(t) = { ([EYR(t) / Hours Of Operation] / CREL(t)) * RP * 150 }

Dispersion Adjustment Method

Prioritization Scores

Cancer	CHRONIC	ACUTE
3.22E-04	4.37E-05	6.12E-05

TS = Total Score
t = Specific Toxic Substance
EYR = Emissions Lbs / Year
EHR = Emissions Lbs / Hour
NF = Normalization Factor (Cancer = 28, Acute = 25, Chronic = 2.5)
URF = Unit Risk Factor
AREL = Acute Reference Exposure Level
CREL = Chronic Reference Exposure Level
SHA = Stack Height Adjustment (< 20m = 60, < 45m = 9, >= 45m = 1)
RP = Receptor Proximity Adjustment Factor
R = Receptor Distance
H = Stack Height

For Stack - 0m <= H < 20m	RP	For Stack - 20m <= H < 45m	RP	For Stack - >= H < 45m	RP
0m < R < 100m	1.0	0m < R < 100m	1.0	0m < R < 100m	1.0
100m < R < 250m	0.25	100m < R < 250m	0.85	100m < R < 250m	1.0
250m < R < 500m	0.04	250m < R < 500m	0.22	250m < R < 500m	0.90
500m < R < 1000m	0.011	500m < R < 1000m	0.064	500m < R < 1000m	0.40
1000m < R < 1500m	0.003	1000m < R < 1500m	0.018	1000m < R < 1500m	0.13
1500m < R < 2000m	0.002	1500m < R < 2000m	0.009	1500m < R < 2000m	0.066
R > 2000m	0.001	R > 2000m	0.006	R > 2000m	0.042

Cancer Score:
TS(t) = EYR(t) * URF(t) * RP * SHA * 28

Acute Score:
TS(t) = [EHR(t) / AREL(t)] * RP * SHA * 25

Chronic Score:
TS(t) = { ([EYR(t) / Hours Of Operation] / CREL(t)) * RP * SHA * 2.5 }

AAQA for Vintage Production Company (S1326-456)
All Values are in Micrograms per Cubic Meter

	NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM 24 Hour	PM Annual
STCK1	2.8E+00	6.0E-02	9.9E-01	2.8E-01	1.8E+00	1.0E+00	2.1E-01	3.7E-02	1.18E-01	2.08E-02
Background	9.0E+01	1.3E+01	4.1E+03	2.6E+03	2.4E+01	2.4E+01	5.3E+00	2.4E+01	1.74E+02	4.40E+01
Facility Totals	92.8	13.4	4,078.5	2,563.3	25.8	25.0	5.5	24.0	174.1	44.0
AAQS	188.7	56.0	23,000.0	10,000.0	195.0	1,300.0	105.0	80.0	50.0	30.0
	Pass	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Fail**	**Fail**

EPA's Significance Level (ug/m^3)

NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM 24 Hour	PM Annual
0.0	**1.0**	**2000.0**	**500.0**	**0.0**	**25.0**	**5.0**	**1.0**	**5.0**	**1.0**

*Since 5-years of metereological data were used, an adjustment factor of 1.75 for Bakersfield was applied to the annual average concentrations for the devices modeled.

AAQA Emission (g/sec)

Device	NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM 24 Hour	PM Annual
STCK1	8.69E-02	8.69E-02	3.02E-02	3.02E-02	5.42E-02	5.42E-02	5.42E-02	5.41E-02	3.02E-02	3.04E-02

*Since 5-years of metereological data were used, an adjustment factor of 1.75 for Bakersfield was applied to the annual average concentrations for the devices modeled.

Facility Summary: VINTAGE PRODUCTION

REGION: S

FACID: 1326

PROJECT	Unit ID	MOD #	EQUIPMENT	Prioritization Scores CANCER	ACUTE	CHRONIC	Risk Scores CANCER	ACUTE	CHRONIC
980289	46	3	Stock Tank	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
980289	201	6	Wash Tank	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
980289	274	0	Slop Tank	0.008	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.008	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1050741	9	13	Steam Generator	0.000	0.004	0.001	0.00E+00	0.00E+00	0.00E+00
1050741	294	0	Steam Generator	0.000	0.004	0.001	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.001	0.008	0.001	0.00E+00	0.00E+00	0.00E+00
1063750	314	0	NATURAL GAS STEAM GENERATOR	0.001	0.005	0.002	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.001	0.005	0.002	0.00E+00	0.00E+00	0.00E+00
1072081	337	0	Steam Generator	0.001	0.005	0.002	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.001	0.005	0.002	0.00E+00	0.00E+00	0.00E+00
1073464	338	0	85 MMBTU/HR NATURAL GAS STEAM	0.001	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.001	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
1082457	385	0	Steam Generator	0.001	0.005	0.002	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.001	0.005	0.002	0.00E+00	0.00E+00	0.00E+00
1083337	337	4	STEAM GENERATOR	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1083337	338	4	STEAM GENERATOR	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00

PROJECT	Unit ID	MOD #	EQUIPMENT	Prioritization Scores CANCER	ACUTE	CHRONIC	Risk Scores CANCER	ACUTE	CHRONIC
1083337	390	0	STEAM GENERATOR	0.001	0.005	0.002	0.00E+00	0.00E+00	0.00E+00
1083337	391	0	Steam Generator	0.001	0.005	0.002	0.00E+00	0.00E+00	0.00E+00
1083337	392	0	Steam Generator	0.001	0.005	0.002	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.004	0.016	0.006	0.00E+00	0.00E+00	0.00E+00
1103505	400	0	85 MMBtu/Hr NG-Fired Steam Generator	0.001	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.001	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
1104728	401	0	85 MMBtu/Hr NG Steam Generator	0.001	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.001	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
1112303	405	0	85 MMBTU/HR NATURAL GAS STEAM	0.003	0.001	0.000	0.00E+00	0.00E+00	0.00E+00
1112303	406	0	85 MMBTU/HR NATURAL GAS STEAM	0.003	0.001	0.000	0.00E+00	0.00E+00	0.00E+00
1112303	407	0	85 MMBTU/HR NATURAL GAS STEAM	0.003	0.001	0.000	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.008	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
1113626	263	17	3,000 BBL FIXED ROOF CRUDE OIL W	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1113626	408	0	20,000 BBL FWKO VESSEL	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1113626	409	0	20,000 BBL FWKO VESSEL	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1113626	410	0	5,000 BBL FIXED ROOF CRUDE OIL W	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1113626	411	0	5,000 BBL FIXED ROOF CRUDE OIL LA	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1113626	412	0	3,400 BBL FIXED ROOF CRUDE OIL D	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1113626	413	0	5,000 BBL FIXED ROOF CRUDE OIL R	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1113626	414	0	3,400 BBL FIXED ROOF CRUDE OIL LA	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1113626	415	0	3,400 BBL FIXED ROOF CRUDE OIL LA	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1120328	382	2	Flare	0.019	0.343	0.001	0.00E+00	0.00E+00	0.00E+00

PROJECT	Unit ID	MOD #	EQUIPMENT	Prioritization Scores CANCER	ACUTE	CHRONIC	Risk Scores CANCER	ACUTE	CHRONIC
Project Totals				0.019	0.343	0.001	0.00E+00	0.00E+00	0.00E+00
1120405	417	0	85 MMBTU/HR NATURAL GAS STEAM	0.010	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
1120405	418	0	85 MMBTU/HR NATURAL GAS STEAM	0.010	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
1120405	419	0	85 MMBTU/HR NATURAL GAS STEAM	0.010	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.030	0.006	0.004	0.00E+00	0.00E+00	0.00E+00
1123499	405	1	85.0 MMBTU/HR NATURAL GAS-FIRED	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1123499	406	1	85.0 MMBTU/HR NATURAL GAS-FIRED	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1123499	407	1	85.0 MMBTU/HR NATURAL GAS-FIRED	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1123499	420	0	85 MMBTU/HR NATURAL GAS-FIRED S	0.010	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
1123499	421	0	85 MMBTU/HR NATURAL GAS-FIRED S	0.010	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
1123499	422	0	85 MMBTU/HR NATURAL GAS-FIRED S	0.010	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
1123499	423	0	85 MMBTU/HR NATURAL GAS-FIRED S	0.010	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
1123499	424	0	85 MMBTU/HR NATURAL GAS-FIRED S	0.010	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
1123499	425	0	85 MMBTU/HR NATURAL GAS-FIRED S	0.010	0.002	0.001	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.060	0.011	0.008	0.00E+00	0.00E+00	0.00E+00
1130231	35	13	TEOR Operation	5.640	0.016	0.040	4.58E-07	1.08E-03	2.45E-04
Project Totals				5.640	0.016	0.040	4.58E-07	1.08E-03	2.45E-04
1131067	428	0	Two (2) 7.5 MMBtu/hr heaters	0.000	0.000	0.000	9.15E-10	3.74E-04	3.45E-07
Project Totals				0.000	0.000	0.000	9.15E-10	3.74E-04	3.45E-07
1131457	287	12	VAPOR COMPRESSOR SKIDS EACH C	0.000	0.000	0.000	6.74E-07	1.50E-02	7.42E-03
Project Totals				0.000	0.000	0.000	6.74E-07	1.50E-02	7.42E-03
1133786	430	0	2000 BBL CRUDE OIL STORAGE TANK	0.000	0.000	0.000	4.29E-10	1.46E-04	4.73E-06

PROJECT	Unit ID	MOD #	EQUIPMENT	Prioritization Scores			Risk Scores		
				CANCER	ACUTE	CHRONIC	CANCER	ACUTE	CHRONIC
1133786	431	0	2000 BBL CRUDE OIL STORAGE TANK	0.000	0.000	0.000	4.24E-10	1.48E-04	4.68E-06
1133786	436	0	1200 BBLFREE WATER KNOCKOUT V	0.000	0.000	0.000	4.36E-10	2.06E-04	4.80E-06
Project Totals				0.000	0.000	0.000	1.29E-09	5.00E-04	1.42E-05
1133970	435	0	25 mmbtu/hr NG steam generator	0.087	0.174	0.079	1.84E-08	5.05E-03	2.39E-03
Project Totals				0.087	0.174	0.079	1.84E-08	5.05E-03	2.39E-03
1134319	437	0	15 MMBtu/hr NG-fired heater w/2 7.5 MM	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1134477	438	0	1200 BBL FREE WATER KNOCKOUT V	0.000	0.000	0.000	4.36E-10	2.07E-04	4.80E-06
Project Totals				0.000	0.000	0.000	4.36E-10	2.07E-04	4.80E-06
1134747	439	0	CRUDE OIL STORAGE TANK	0.000	0.000	0.000	6.41E-09	4.28E-04	3.43E-06
1134747	440	0	CRUDE OIL STORAGE TANK	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1134747	441	0	CRUDE OIL STORAGE TANK	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1134747	442	0	CRUDE OIL STORAGE TANK	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
Project Totals				0.000	0.000	0.000	6.41E-09	4.28E-04	3.43E-06
1140292	443	0	25 MMBTU/HR NG/TEOR GAS/FIELD G	0.087	0.174	0.079	8.97E-08	8.04E-02	1.16E-02
Project Totals				0.087	0.174	0.079	8.97E-08	8.04E-02	1.16E-02
1140534	287	13	TEOR (287-13)	12.237	0.034	0.087	1.68E-07	2.36E-01	9.27E-03
Project Totals				12.237	0.034	0.087	1.68E-07	2.36E-01	9.27E-03
1142087	263	24	3,000 BBL FIXED ROOF WASH TANK S	0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1142087	444	0	2500 BBL FIXED ROOF CRUDE OIL TA	0.000	0.000	0.000	6.70E-10	2.70E-04	7.33E-06
1142087	445	0	6300 BBL FIXED ROOF CRUDE OIL TA	0.000	0.000	0.000	6.70E-10	2.70E-04	7.33E-06
1142087	446	0	6300 BBL FIXED ROOF CRUDE OIL TA	0.000	0.000	0.000	6.70E-10	2.70E-04	7.33E-06

PROJECT	Unit ID	MOD #	EQUIPMENT	Prioritization Scores CANCER	ACUTE	CHRONIC	Risk Scores CANCER	ACUTE	CHRONIC
Project Totals				0.000	0.000	0.000	2.01E-09	8.10E-04	2.20E-05
1142341	447	0	567 BHP Diesel ICE	0.000	0.000	0.000	4.76E-06	0.00E+00	0.00E+00
1142341	448	0	567 BHP Diesel ICE	0.000	0.000	0.000	1.26E-06	0.00E+00	0.00E+00
Project Totals				0.000	0.000	0.000	6.02E-06	0.00E+00	0.00E+00
1143161	429	4		0.000	0.000	0.000	0.00E+00	0.00E+00	0.00E+00
1143161	449	0	OILFIELD TANK	0.000	0.000	0.000	2.38E-10	8.86E-05	2.61E-06
Project Totals				0.000	0.000	0.000	2.38E-10	8.86E-05	2.61E-06
1143483	450	0	85 MMBTU/HR NATURAL GAS/TEOR G	0.010	0.020	0.012	5.05E-09	1.45E-03	3.66E-04
1143483	451	0	85 MMBTU/HR NATURAL GAS/TEOR G	0.010	0.020	0.012	5.05E-09	1.45E-03	3.66E-04
1143483	452	0	85 MMBTU/HR NATURAL GAS/TEOR G	0.010	0.020	0.012	5.05E-09	1.45E-03	3.66E-04
1143483	453	0	85 MMBTU/HR NATURAL GAS/TEOR G	0.010	0.020	0.012	5.05E-09	1.45E-03	3.66E-04
1143483	454	0	85 MMBTU/HR NATURAL GAS/TEOR G	0.010	0.020	0.012	5.05E-09	1.45E-03	3.66E-04
Project Totals				0.052	0.099	0.059	2.52E-08	7.25E-03	1.83E-03
1143756	287	16	Oil Field Compressors	0.000	0.000	0.000	1.91E-08	5.18E-03	2.11E-04
Project Totals				0.000	0.000	0.000	1.91E-08	5.18E-03	2.11E-04
1143842	455	0	12.5 MMBTU/HR VOC DESTRUCTION	0.005	0.006	0.004	2.85E-09	4.72E-05	1.01E-06
Project Totals				0.005	0.006	0.004	2.85E-09	4.72E-05	1.01E-06
1143901	456	0	30 MMBTU/HR COYOTE NORTH LTD V	0.000	0.000	0.000	1.60E-08	0.00E+00	0.00E+00
Project Totals				0.000	0.000	0.000	1.60E-08	0.00E+00	0.00E+00
1143931	457	0	25 MMBtu/hr NG/CVRG Steam Generato	0.276	0.527	0.313	7.50E-09	0.00E+00	0.00E+00
Project Totals				0.276	0.527	0.313	7.50E-09	0.00E+00	0.00E+00

PROJECT	Unit ID	MOD #	EQUIPMENT	Prioritization Scores			Risk Scores		
				CANCER	ACUTE	CHRONIC	CANCER	ACUTE	CHRONIC
Facility Totals				18.525	1.437	0.691	7.51E-06	3.52E-01	3.30E-02

Appendix E
Compliance Certification

CERTIFICATION

Vintage Production California LLC (VPC) hereby certifies as follows:

1. VPC owns or operates certain major stationary sources in the State of California. Such sources are comprised of a vast number of emission points. As used in this certification, the term "major stationary source" shall, with respect to VPC stationary sources in the SJVUAPCD, have the meaning ascribed thereto in SJVUAPCD Rule 2201, Section 3.23, and shall, with respect to all of VPC's other stationary sources in the State of California, have the meaning ascribed thereto in section 302(J) of the Clean Air Act (42 U.S.C. Section 7602 (J)).

2. Subject to paragraphs 3 and 4 below, all major stationary sources owned or operated by VPC in the State of California are either in compliance, or on an approved schedule of compliance, with all applicable emission limitations and standards under the Clean Air Act and all of the State Implementation Plan approved by the Environmental Protection Agency.

3. This certification is made on information and belief and is based upon a review of VPC major stationary sources in the State of California by those employees of VPC who have operational responsibility for compliance. In conducting such reviews, VPC and its employees have acted in good faith and have exercised best efforts to identify any exceedance of the emission limitations and standards referred to in paragraph 2 thereof.

4. This certification shall speak as of the time and date of its execution.

CERTIFICATION

By: _____ Date: September 9, 2014

Title: Operations Manager, Central Valley Operations Time: 4:00 PM

RECEIVED
OCT 02 2014
SJVAPCD
Southern Region

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

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

COMPANY NAME: Vintage Production California, LLC (VPC)	FACILITY ID: S – 1326
1. Type of Organization: [✓] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name: Vintage Production California, LLC (VPC)	
3. Agent to the Owner: Jennifer Hart	

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

JH 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).

JH 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.

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

JH 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:

Signature of Responsible Official — Date: 9/29/14

John Ocana
Name of Responsible Official (please print)

Operations Manager, Central Valley Operations
Title of Responsible Official (please print)

Appendix F

Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1326-456-0

ISSUANCE DATE: DRAFT

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

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
30.0 MMBTU/HR COYOTE NORTH LTD MODEL CNTOX6 VOC DESTRUCTION DEVICE (OR EQUIVALENT) AUTHORIZED SERVING THE GAS COLLECTION/DISTRIBUTION PIPELINE (A.K.A. FIELD GAS HEADER)

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. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 373 lb, 2nd quarter - 373 lb, 3rd quarter - 373 lb, and fourth quarter - 373 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number N-1165-2 and C-1291-2 (or a certificate split from these 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] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

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

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender SOX emission reduction credits for the following quantity of emissions: 1st quarter - 232 lb, 2nd quarter - 232 lb, 3rd quarter - 232 lb, and fourth quarter - 232 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
6. ERC Certificate Number N-1150-5 (or a certificate split from these 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] Federally Enforceable Through Title V Permit
7. Prior to operating equipment under this Authority to Construct, permittee shall surrender PM10 emission reduction credits for the following quantity of emissions: 1st quarter - 130 lb, 2nd quarter - 130 lb, 3rd quarter - 130 lb, and fourth quarter - 130 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule]
8. ERC Certificate Number N-1169-4 (or a certificate split from these 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]
9. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 65 lb, 2nd quarter - 65 lb, 3rd quarter - 65 lb, and fourth quarter - 65 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit
10. ERC Certificate Numbers N-1193-1 (or a certificate split from these certificates) shall be used to supply the required VOC 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] Federally Enforceable Through Title V Permit
11. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit
12. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010] Federally Enforceable Through Title V Permit
13. A flame shall be present at all times when combustible gases are vented. [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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
15. This device shall be equipped with an automatic ignition system [District Rule 2201] Federally Enforceable Through Title V Permit
16. The fuel consumption shall not exceed either of the following limits: 300 MMBtu/day or 18,000 MMBtu/year. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
17. This device shall be designed for and operated with no visible emissions except for periods not to exceed a total of three (3) minutes in any one (1) hour. [District Rule 4101, 5.1] Federally Enforceable Through Title V Permit
18. This device shall be inspected quarterly during operation for visible emissions, using EPA Method 22. If visible emissions are observed, corrective action shall be taken. If visible emissions cannot be eliminated, an EPA Method 9 test shall be conducted within 24 hours. [2520, 9.3.2] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

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

20. Emission rates from this unit shall not exceed any of the following limits: 0.023 lb-NOx/MMBtu; 0.0143 lb-SOx/MMBtu; 0.008 lb-PM10/MMBtu; 0.008 lb-CO/MMBtu; or 0.004 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Gas sulfur content and higher heating value shall be measured quarterly using gas chromatographic analysis to calculate SOx emission rate. Test reports of measured fuel sulfur content and higher heating value shall be maintained. The calculated SOx emission rate shall be recorded in format approved by the District. If compliance with the SOx emission rate has been demonstrated for 8 consecutive quarters for a fuel source, then the testing frequency shall be annually. If an annual fuel sulfur content and higher heating value testing fails to show compliance, quarterly testing shall resume [District Rule 2201] Federally Enforceable Through Title V Permit

22. The permittee shall keep accurate daily and annual records of volume of gas combusted for a period of five years, and shall make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

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