



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



OCT 20 2014

Mr. Greg Pritchett
Chevron USA, Inc.
PO Box 1392
Bakersfield, CA 93302

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1128
Project # S-1140931**

Dear Mr. Pritchett:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The modifications include the installation of two new internal combustion engines.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authorities to Construct with Certificates 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 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.

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:SR/st

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
Natural Gas-Fired IC Engines**

Facility Name: Chevron USA

Date: 10/13/14

Mailing Address: PO Box 1392
Bakersfield, CA 93302

Engineer: Steve Roeder
Lead Engineer: Rich Karrs

Contact Person: Ashley Dahlstrom

Telephone: (661) 654-7293

Application #: S-1128-1002-0 and 1003-0

Project #: S-1140931

Complete: 6/23/14

I. Proposal

Chevron USA is proposing to install two 46 hp natural gas-fired internal combustion (IC) engine powering vapor recovery system compressors.

Pursuant to Section 6.12 of District Rule 2020 *Exemptions*, a permit is not specifically required for piston type internal combustion engines with a manufacturer's maximum continuous rating of 50 braking horsepower (bhp) or less.

However, pursuant to Section 5.4 of Rule 2020, an Authority to Construct (ATC) may be issued to an otherwise exempt unit if the owner specifically requests a Permit to Operate. Chevron has proposed to permit these engines so that the relevant requirements of 40 CFR 60 Subpart JJJJ may be placed on the permit. Therefore, an ATC permit will be issued for each engine.

Chevron has a Title V Permit. This modification can be classified as a Title V significant permit modification pursuant to Rule 2520, Section 3.29, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Chevron must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

In addition, this project triggers a Federal Major Modification, which requires a 30-day public noticing period. Therefore, the EPA comment period and the public notice will run concurrently, prior to the issuance of these ATCs.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410 Prevention of Significant Deterioration (6/6/11)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4701 Stationary Internal Combustion Engines – Phase 1 (8/21/03)
Rule 4702 Stationary Internal Combustion Engines – Phase 2 (11/14/13)
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 project is located at Chevron's 31E Oil Cleaning Plant (OCP) (SW S31, T12N, R23W) in the Midway Sunset Oilfield in Chevron's Western Kern County Heavy Oil Stationary Source. The District has verified that 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 two new engine-driven compressors will compress tank vapors at the 31E OCP.

The subject compressors were previously approved in project S-1134320, and that approval was a modification to S-1128-617. The engines previously evaluated in project S-1134320 were exempt from permit and not subject to 40 CFR 60 Subpart JJJJ.

Chevron is now requesting Authorities to Construct, to install new otherwise permit-exempt compressor engines.

V. Equipment Listing

- S-1128-1002-0: 46 HP COMPRESSCO MODEL GJ230 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION (NSCR) POWERING A VAPOR RECOVERY SYSTEM COMPRESSOR
- S-1128-1003-0: 46 HP COMPRESSCO MODEL GJ230 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION (NSCR) POWERING A VAPOR RECOVERY SYSTEM COMPRESSOR

VI. Emission Control Technology Evaluation

The engine is equipped with:

- Positive Crankcase Ventilation (PCV) or 90% efficient control device
- Non-Selective Catalytic Reduction
- Air/Fuel Ratio or an O₂ Controller
- Lean Burn Technology

The PCV system reduces crankcase VOC and PM₁₀ emissions by at least 90% over an uncontrolled crankcase vent.

Non-Selective Catalytic Reduction (NSCR) decreases NO_x, CO and VOC emissions by using a catalyst to promote the chemical reduction of NO_x into N₂ and O₂, and the chemical oxidation of VOC and CO into H₂O and CO₂.

The air/fuel ratio controller is used in conjunction with the NSCR to maintain the correct amount of exhaust oxygen for optimal catalyst performance.

Lean burn technology increases the volume of air in the combustion process and therefore increases the heat capacity of the mixture. This technology also incorporates improved swirl patterns to promote thorough air/fuel mixing, lowering the combustion temperature and reducing NO_x formation.

VII. General Calculations

A. Assumptions

Operating schedule:	24 hours/day
EPA F-factor (adjusted to 60 °F):	8,578 dscf/MMBtu (40 CFR 60 Appendix B)
Fuel heating value:	1,00 Btu/scf (District Policy APR-1720)
BHP to Btu/hr conversion:	2,542.5 Btu/bhp-hr
Sulfur Concentration in Fuel:	2.85 lb-S/MMscf (District Policy APR-1720)
Thermal efficiency of engine:	commonly ≈ 35%
Catalyst Efficiencies:	90% NO _x , 80% CO and 50% VOC (Applicant)

B. Emission Factors

Emission Factors		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO _x	2.0	Engine Manufacturer
SO _x *	0.0094	Mass Balance Equation Below
PM ₁₀	0.033	AP-42 (7/00) Table 3.2-2
CO	4.0	Engine Manufacturer
VOC	1.0	Engine Manufacturer

$$* \frac{0.00285 \text{ lb-SO}_x}{\text{MMBtu}} \times \frac{1 \text{ MMBtu}}{1,000,000 \text{ Btu}} \times \frac{2542.5 \text{ Btu}}{\text{hp-hr}} \times \frac{1 \text{ Btu}_{in}}{0.35 \text{ Btu}_{out}} \times \frac{453.6 \text{ grams}}{\text{lb}} = 0.0094 \frac{\text{grams}}{\text{hp-hr}}$$

C. Calculations

1. Pre-Project Emissions (PE1)

Since these are new emissions units, PE1 = 0.

2. Post Project PE (PE2)

The daily and annual PE are calculated for each new engine as follows:

Daily PE2										
NO _x	2.0	g/hp·hr x	46	hp x	24	hr/day ÷	453.6	g/lb=	4.9	lb/day
SO _x	0.0094	g/hp·hr x	46	hp x	24	hr/day ÷	453.6	g/lb=	0.0	lb/day
PM ₁₀	0.033	g/hp·hr x	46	hp x	24	hr/day ÷	453.6	g/lb=	0.1	lb/day
CO	4.0	g/hp·hr x	46	hp x	24	hr/day ÷	453.6	g/lb=	9.7	lb/day
VOC	1.0	g/hp·hr x	46	hp x	24	hr/day ÷	453.6	g/lb=	2.4	lb/day

Annual PE2										
NO _x	2.0	g/hp·hr x	46	hp x	8,760	hr/yr ÷	453.6	g/lb=	1,777	lb/yr
SO _x	0.0094	g/hp·hr x	46	hp x	8,760	hr/yr ÷	453.6	g/lb=	8	lb/yr
PM ₁₀	0.033	g/hp·hr x	46	hp x	8,760	hr/yr ÷	453.6	g/lb=	29	lb/yr
CO	4.0	g/hp·hr x	46	hp x	8,760	hr/yr ÷	453.6	g/lb=	3,553	lb/yr
VOC	1.0	g/hp·hr x	46	hp x	8,760	hr/yr ÷	453.6	g/lb=	888	lb/yr

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

The SSPE1 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) 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.

Since the SSPE is above the major source and offset thresholds for all pollutants, the SSPE1 calculation is not required.

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

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.

Since the SSPE is above the major source and offset thresholds for all pollutants, the SSPE2 calculation is not required.

5. Major Source Determination

Rule 2201 Major Source Determination:

A Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the identified threshold values in Rule 2201.

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

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)(i). Therefore, the following PSD Major Source thresholds are applicable.

PSD Major Source Determination (tons/year)						
	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀
PSD Major Source Thresholds (tpy)	250	250	250	250	250	250

According to Chevron, this facility is an existing major source for PSD.

6. Baseline Emissions (BE)

According to District Rule 2201, the BE is the same as the PE1 for any unit located at a non-major source.

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 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 (lb/year)			
Pollutant	Project PE2 lb/year	Threshold	SB 288 Major Modification Calculation Required?
NO _x	3,554	50,000	No
SO _x	16	80,000	No
PM ₁₀	58	30,000	No
VOC	1,776	50,000	No

Since none of the SB288 Major Modification Thresholds are exceeded, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

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

Since this facility is a major source, the project's combined total emission increases are compared to the Federal Major Modification thresholds in the following table.

Federal Major Modification Thresholds			
Pollutant	Project PE2 lb/year	Threshold	Federal Major Modification?
NO _x	3,554	0	Yes
SO _x	16	80,000	No
PM ₁₀	58	30,000	No
PM _{2.5}	58	20,000	No
VOC	1,776	0	Yes

According to the table above, this project constitutes a Federal Major Modification for NO_x and VOC emissions increases.

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

Rule 2410 applies to pollutants for which the District is in attainment or for unclassified, pollutants. Pollutants addressed in the PSD applicability determination are listed below.

- NO₂ (as a primary pollutant)
- SO₂ (as a primary pollutant)
- CO
- PM
- PM₁₀

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not (See Section VII.C.5 above).

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 above, the facility is determined to be an existing major source for PSD. Since the project is not located within 10 km of a Class 1 area – modeling of the emission increase is not required to determine if project is subject to Rule 2410 requirements.

II. Significance of Project Emission Increase Determination

PE of attainment/unclassified pollutant for New or Modified Emission Units vs PSD Significant Emission Increase Thresholds

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 the total PE from all new and modified units is below this threshold, no further analysis will be needed.

PSD Significant Emission Increase Determination: PE (tons/year)					
	NO ₂	SO ₂	PM	PM ₁₀	CO
Total Project PE2	1.8	0.01	0.03	0.03	3.6
PSD Significant Emissions Increase Thresholds	40	40	25	15	100
PSD Significant Emissions Increase?	N	N	N	N	N

As shown above, this project does not exceed any of the PSD significance thresholds, and the project is not subject to the requirements of Rule 2410.

10. Quarterly Net Emissions Change (QNEC)

The QNEC is used to complete the emission profile screen for the District's PAS database. The QNEC for each pollutant is calculated as follows.

$$QNEC = \frac{(PE2 - PE1) \frac{lb}{yr}}{4 \frac{Quarters}{yr}}$$

QNEC				
Units	Pollutant	PE1 (lb/yr)	PE2 (lb/yr)	QNEC (lb/qtr)
S-1128-1002-0	NO _x	0	1,777	444
and	SO _x	0	8	2
S-1128-1003-0	PM ₁₀	0	29	7
	CO	0	3,553	888
	VOC	0	888	222

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 for the following*:

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

The daily emissions from the new engine are compared to the BACT threshold levels in the following table:

New Emissions Unit BACT Applicability				
Pollutant	Daily Emissions (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO _x	4.9	> 2.0	n/a	Yes
SO _x	0.0	> 2.0	n/a	No
PM ₁₀	0.1	> 2.0	n/a	No
CO	9.7	> 2.0 and SSPE2 ≥ 200,000 lb/yr	> 200,000	Yes
VOC	2.4	> 2.0	n/a	Yes

As shown above, BACT is triggered for NO_x and CO emissions for new emissions unit purposes.

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

There are no emissions units being relocated from one stationary source to another. Therefore BACT is not triggered for relocation purposes.

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 for AIPE > 2 lb/day.

d. SB 288/Federal Major Modification

As discussed above, this project does constitute a Federal Major Modification for NO_x, VOC and PM_{2.5} emissions. Therefore BACT is triggered for NO_x and VOC emissions for Federal Major Modification purposes.

2. BACT Guideline and Evaluation (For NO_x, CO and VOC)

No BACT Guideline currently exists that covers non-emergency natural gas-fired IC engines of less than 50 hp (which are normally permit-exempt). As these engines represent a unique permitting action that is not likely to be repeated, the District at this time will not create a new BACT determination for this class and category of source. Rather, a project-specific determination is included below.

The applicant has proposed engines that meet the requirements of 40 CFR 60 Subpart JJJJ, and are equipped with non-selective catalytic reduction (NSCR). NSCR is a very effective means of controlling NO_x, CO and VOC emissions. The District has not identified any Achieved-in-Practice controls for NO_x, CO and VOC emissions that are more effective than NSCR. Technologically feasible controls for emissions for engines of less than 50 hp are not considered practical or cost effective.

Therefore, NSCR in conjunction with a PCV valve will be accepted as BACT for this size, class and category of engine.

The following conditions are listed on the Permit to ensure compliance:

- Emissions from this IC engine shall not exceed any of the following limits: 2.0 g-NO_x/bhp-hr, 0.033 g-PM₁₀/bhp-hr, 4.0 g-CO/bhp-hr, or 1.0 g-VOC/bhp-hr. [District Rule 2201]
- This engine shall be equipped with a positive crankcase ventilation (PCV) system which recirculates crankcase emissions into the air intake system for combustion. [District Rule 2201]
- This engine shall be equipped with a 3-way catalyst. [District Rule 2201]

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.

Chevron concedes that the SSPE2 exceeds the offset threshold values for all pollutants. Therefore emissions offsets are required for all emission increases associated with these new engines.

2. Quantity of Offsets Required

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.

Pursuant to District Policy APR 1130, increases in emissions of less than 0.5 lb/day round to zero for all New Source Review Purposes. Therefore, the increase in emissions of SO_x and PM₁₀ round to zero for offsetting purposes and no offsets will be required for those pollutants.

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 has performed an Ambient Air Quality Analysis (AAQA) for the new engines to demonstrate this project will not result in or contribute to a violation an Ambient Air Quality Standard for CO. Therefore, CO offsets are not required for this project.

For NO_x and VOC emissions, the Offsets required (in lb/year) =

$(\sum[PE2 - BE] + ICCE) \times DOR$, for all new or modified emissions units in the project where,

PE2 = Post Project Potential to Emit, (lb/year)
BE = Baseline Emissions, (lb/year) [which = 0 for new emissions units]
ICCE = Increase in Cargo Carrier Emissions, (lb/year) [= 0 in this case]
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

Offsets required (lb/year) = $(\sum[PE2 - BE] + ICCE) \times DOR$
= $(\sum[PE2 - 0] + 0) \times 1.5$

The amount of offsets required for each engine is calculated in the following table.

Offsets Required (pounds) per Engine				
Pollutant	Annual PE	DOR	Annual Offsets	Quarterly Offsets
NO _x	1,777	1.5	2,666	666
VOC	888	1.5	1,332	333

The grand total of offsets required for both new engines is posted in the following table.

Offsets Required (pounds) Entire Project		
Pollutant	Annual Total	Quarterly Total
NO _x	5,332	1,332
VOC	2,664	666

Chevron has proposed to surrender the following ERC certificates as offsets for this project. The quarterly emission reduction credits available is compared to the quarterly offset requirements of the engines to verify the facility has sufficient credits to fully offset the quarterly emission increases.

NO _x ERC Certificate S-4195-2				
	Q1	Q2	Q3	Q4
ERCs Available	135,433	135,433	135,433	135,433
ERCs Required	1,333	1,333	1,333	1,333
Sufficient ERCs?	Yes	Yes	Yes	Yes

VOC ERC Certificate S-3905-1 (formerly S-3402-1)				
	Q1	Q2	Q3	Q4
ERCs Available	5,284	5,380	5,476	5,475
ERCs Required	666	666	666	666
Sufficient ERCs?	Yes	Yes	Yes	Yes

As shown above, the facility has sufficient credits to fully offset the quarterly emissions increases associated with this project, and the offsets have been reserved for this project.

3. Proposed Offset Permit Conditions

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

- Prior to operating equipment under this Authority to Construct, the permittee shall surrender NO_x emission reduction Credits for the following quantity of emissions: 1st Quarter - 666 lb, 2nd Quarter, 666 lb, 3rd Quarter 666 lb, and 4th Quarter, 666 lb. These amounts include the required Offset Ratio of 1.5:1. [District Rule 2201]

- Prior to operating equipment under this Authority to Construct, the permittee shall surrender VOC emission reduction Credits for the following quantity of emissions: 1st Quarter - 333 lb, 2nd Quarter, 333 lb, 3rd Quarter 333 lb, and 4th Quarter, 333 lb. These amounts include the required Offset Ratio of 1.5:1. [District Rule 2201]
- Emission Reduction Credit Certificate numbers S-4195-2 (NOx) and S-3905-1 (VOC) or certificates 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 time, this Authority to Construct will be re-issued, administratively specifying the revised offsetting proposal. Public Noticing requirements shall be duplicated prior to the re-issuance of this Authority to Construct. [District Rule 2201]

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New major sources, SB 288 major modifications, federal major modifications,
- b. Any new emissions unit with a PE greater than 100 pounds during any one day for any pollutant,
- c. Any project which results in the offset thresholds being surpassed,
- d. New stationary sources with an SSPE2 exceeding any emissions offset threshold, and
- e. Any permitting action resulting in a SSIPE > 20,000 lb/yr for any pollutant.

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

Since this project does constitute a Federal Major Modification, public noticing is required for this purpose.

b. New Emissions Unit with a PE > 100 lb/day

Since none of the daily emissions are greater than 100 lb/day, public noticing is not required for this purpose.

c. Modifications Exceeding any Offset Thresholds

Since no offset thresholds are being surpassed with this project, public noticing is not required for this purpose.

d. New Stationary Sources Exceeding any Offset Thresholds

Since this is not a new stationary source, public noticing is not required for this purpose.

e. SSIPE > 20,000 lb/year

Since the SSIPE is not greater than 20,000 lb/year, public noticing is not required for this purpose.

2. Public Notice Action

Public noticing is required for Federal Major Modification 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 ATCs for this equipment.

D. Daily Emissions Limits (DELs)

DELs and other enforceable conditions are required 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 the latest PTO and enforceable, in a practicable manner, on a daily basis. The following conditions are listed on the permit to ensure compliance.

- Emissions from this engine shall not exceed any of the following limits: 2.0 g-NO_x/bhp-hr, 0.033 g-PM₁₀/bhp-hr, 4.0 g-CO/bhp-hr, or 1.0 g-VOC/bhp-hr. [District Rule 2201]
- This engine shall be equipped with either a positive crankcase ventilation (PCV) system which recirculates crankcase emissions into the air intake system for combustion. [District Rule 2201]
- This engine shall be fired on natural gas only. [District Rules 2201 and 4801]
- This engine shall be equipped with a three-way catalyst. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

According to Section 6.3 of District Rule 4702, *Stationary Internal Combustion Engines – Phase 2*, engines are normally required to be source tested for NO_x, VOC and CO emissions at least once every 24 months. In addition, 40 CFR 60 Subpart JJJJ - *Standards of Performance for Stationary Spark Ignited Internal Combustion Engines*, (see discussion below) requires initial source testing for these engines.

The following conditions are listed on the permits to ensure compliance.

- This engine shall be source tested for NO_x, CO and VOC emissions within 60 days of initial startup, and at least once every 24 months thereafter. [District Rule 2201 and 40 CFR 60.4243(b)(2)(i)]
- Source testing shall be conducted using the following methods. NO_x shall be tested using EPA Method 7E, or ARB Method 100; CO shall be tested using EPA Method 10, or ARB Method 100; and VOC shall be tested using EPA Method 25A or 25B, or ARB Method 100. [District Rule 2201]

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

The following condition is listed on each permit to ensure compliance.

- The owner or operator shall maintain records of the results of all source tests performed. [District Rule 2201 and 40 CFR 60.4245(a)(4)]

4. Reporting

No reporting is required to ensure compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

Section 4.14 of this Rule requires that an AAQA be conducted for the purpose of determining whether the project will cause or increase a violation of any ambient air quality standards. The District's Technical Services Division performed the required modeling for NO_x, SO_x, PM₁₀, and CO emissions. The results are as follows (See Appendix A):

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

G. Compliance Certification

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. Since this project does constitute a Federal Major Modification, Chevron's Compliance Certification Statement is included in Appendix B.

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII C.8 above, the project does not result in a Significant Emissions Increase for Prevention of Significant Deterioration. Therefore, this project is not subject to Rule 2410.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. Since the project triggers a Federal Major Modification, the proposed modification is a Significant Modification to the Title V Permit.

Pursuant to Section 5.3.2, *Minor or Significant Permit Modifications*, except when allowed by the operational flexibility provisions of section 6.4 of this rule, the permittee shall file an application for a permit modification prior to implementing the requested change.

Section 5.3.4, *Administrative Permit Amendments*, states that except when allowed by the operational flexibility provisions of section 6.4 of this rule, the permittee shall file an application for administrative permit amendments prior to implementing the requested change.

Since the proposal constitutes a significant permit modification, and the applicant has requested a Certificate of Conformity (COC) be issued, the applicant must file an application for an Administrative Amendment, pursuant to Section 5.3.4, prior to operating under the ATCs.

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

- 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]
- Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4]

Rule 4001 New Source Performance Standards (NSPS)

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.

Subpart JJJJ - *Standards of Performance for Stationary Spark Ignited Internal Combustion Engines* (40 CFR 60.4230 thru 4248) is applicable to the proposed engines.

Applicability

Pursuant to 40 CFR 60.4230(a)(4)(iii), owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured on or after July 1, 2008, for engines with a maximum engine power less than 500 HP are subject to this subpart.

Emission Standards

Pursuant to §60.4233(d), owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards for field testing in 40 CFR 1048.101(c).

§1048.101(c)(2) states: The HC+NO_x standard is 3.8 g/kW-hr and the CO standard is 6.5 g/kW-hr. For severe-duty engines, the HC+NO_x standard is 3.8 g/kW-hr and the CO standard is 200.0 g/kW-hr. *For natural gas-fueled engines, you are not required to measure nonmethane hydrocarbon emissions or total hydrocarbon emissions for testing to show that the engine meets the emission standards of this paragraph (c); that is, you may assume HC emissions are equal to zero.*

Therefore the emission standards for the proposed engines is: 3.8 g-(NO_x+HC)/kw-hr (2.83 g-NO_x/hp-hr) and 6.5 g-CO/kw-hr (4.85 g-CO/hp-hr), where HC is not measured and is assumed to be zero. Since the HC may be assumed to be zero for the purposes of this subpart, the entire (NO_x+HC) portion may be all NO_x.

The following condition is listed on each permit to ensure compliance:

- Emissions from this engine shall not exceed any of the following limits: 2.83 g-NO_x/hp-hr (3.8 g-NO_x/kw-hr) or 4.85 g-CO/hp-hr (6.5 g-CO/kw-hr). [40 CFR 1048.101(c)(2)]

Duration of Applicable Standards

Pursuant to §60.4234, owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.

Compliance Requirements

§60.4243(b)(2)(i) states: (i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, **you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.**

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

- Owner or operator shall keep a maintenance plan and records of all maintenance conducted on this engine. [40 CFR 60.4243(b)(2)(i)]
- Owner or operator shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 60.4243(b)(2)(i)]
- The owner or operator shall maintain records of the results of all source tests performed. [District Rule 2201 and 40 CFR 60.4245(a)(4)]

Test Methods

The following District source test methods are listed on each permit to ensure compliance.

- Source testing shall be conducted using the following methods. NO_x shall be tested using EPA Method 7E, or ARB Method 100; CO shall be tested using EPA Method 10, or ARB Method 100; and VOC shall be tested using EPA Method 25A or 25B, or ARB Method 100. [District Rule 2201]

Notification, Reporting, and Recordkeeping Requirements

§60.4245 states: Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

(a) Owners and operators of all stationary SI ICE **must keep records** of the information in paragraphs (a)(1) through (4) of this section.

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(2) **Maintenance conducted on the engine.**

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) **If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.**

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

- Owner or operator shall keep a maintenance plan and records of all maintenance conducted on this engine. [40 CFR 60.4243(b)(2)(i)]
- The owner or operator shall maintain records of the results of all source tests. [40 CFR 60.4245(a)(4)]

Compliance with Subpart JJJJ is expected.

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. The following condition is listed on the Facility-Wide Permit to ensure compliance:

- {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

Rule 4102 Nuisance

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. The following condition is listed on the Facility-Wide Permit to ensure compliance:

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

District policy APR 1905 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. A Health Risk Assessment (HRA) is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (see Appendix A), the total facility prioritization score including this project was greater than one. Therefore, an HRA is required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

Risk Management Review Summary				
Categories	Full-time NG-fired ICE (Unit 1002-0)	Full-time NG-fired ICE (Unit 1003-0)	Project Totals	Facility Totals
Prioritization Score	0.01	0.01	0.02	>1
Acute Hazard Index	0.03	0.03	0.06	0.55
Chronic Hazard Index	0.00	0.00	0.00	0.03
Maximum Individual Cancer Risk	8.13E-08	8.28E-08	1.64E-07	4.26E-06
T-BACT Required?	No	No		
Special Permit Conditions?	No	No		

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

Since no special conditions are required, compliance with Rule 4102 is expected.

Rule 4201 Particulate Matter Concentration

Particulate matter emissions from the engine will be less than or equal to the rule limit of 0.1 grain per cubic foot of gas at dry standard conditions as shown by the following:

$$\frac{0.033 \text{ gram} \cdot \text{PM}_{10}}{\text{hp} \cdot \text{hr}} \times \frac{1 \text{ hp} \cdot \text{hr}}{2,542.5 \text{ Btu}} \times \frac{10^6 \text{ Btu}}{8,578 \text{ ft}^3} \times \frac{0.35 \text{ Btu}_{\text{out}}}{1 \text{ Btu}_{\text{in}}} \times \frac{15.43 \text{ grain}}{\text{gram}} = 0.0082 \frac{\text{grains} \cdot \text{PM}}{\text{ft}^3}$$

Since 0.008 grain-PM/dscf is ≤ to 0.1 grain per dscf, compliance with Rule 4201 is expected.

The following condition is listed on the Permit to ensure compliance:

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

Rule 4701 Internal Combustion Engines – Phase 1

Pursuant to Section 2, this Rule is only applicable to engines rated at 50 horsepower or greater. Therefore, this project is not subject to Rule 4701.

Rule 4702 Internal Combustion Engines – Phase 2

The purpose of this rule is to limit the emissions of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines.

This rule applies to any internal combustion engine rated at 25 brake horsepower or greater.

Pursuant to Section 4.5, Except for the requirements of Section 5.1, the requirements of this rule shall not apply to stationary engines rated at least 25 Brake Horsepower, up to, and including 50 Brake Horsepower.

Section 5.1 states: Stationary Engines Rated at Least 25 Brake Horsepower, Up To, and Including 50 Brake Horsepower and Used in Non-Agricultural Operations (Non-AO)

5.1.1 On and after July 1, 2012, no person shall sell or offer for sale any non-AO spark-ignited engine or any non-AO compression-ignited engine unless the engine meets the applicable requirements and emission limits specified in 40 Code of Federal Regulation (CFR) 60 Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines) and 40 CFR 60 Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines) for the year in which the ownership of the engine changes.

5.1.2 By January 1, 2013, the operator shall submit a one-time report that includes the number of engines at the stationary source, and the following information for each engine:

5.1.2.1 Location of each engine,

5.1.2.2 Engine manufacturer,

5.1.2.3 Model designation and engine serial number,

5.1.2.4 Rated brake horsepower,

5.1.2.5 Type of fuel and type of ignition,

5.1.2.6 Combustion type: rich-burn, lean-burn, or compression ignition,

5.1.2.7 Purpose, and intended use, of the engine,

5.1.2.8 Typical daily operating schedule, and

5.1.2.9 Fuel consumption (cubic feet for gas or gallons for liquid fuel) for the previous one-year period.

The proposed engines comply with Subpart JJJJ, and Chevron has submitted a report for existing engines in accordance with Section 5.1.2. Since this application and evaluation will serve as the report for the engines currently being applied-for, compliance with Rule 4702 is expected.

Rule 4801 Sulfur Compounds

Rule 4801 requires that sulfur compound emissions (as SO₂) shall not exceed 0.2% by volume. Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = \frac{N \cdot R \cdot T}{P}, \text{ where}$$

N = Moles of SO₂

T = Standard Temperature = 60°F or 520°R

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

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

Since 1.97 ppmv is \leq 2,000 ppmv, this engine is expected to comply with Rule 4801.

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.

Title 17 California Code of Regulations (CCR), Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines

This regulation applies to any new or in-use stationary diesel-fueled compression ignition (CI) emergency standby engine. The engine involved with this project is fired on LPG/propane and is spark-ignited. Therefore, this regulation is not applicable to the engine involved with this project.

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.

On December 17, 2009, the District's Governing Board adopted a policy, APR 2005, *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*, for addressing GHG emission impacts when the District is Lead Agency under CEQA and approved the District's guidance document for use by other agencies when addressing GHG impacts as lead agencies under CEQA. Under this policy, the District's determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with AB 32 emission reduction targets are considered to have a less than significant impact on global climate change. Consistent with District Policy 2005, projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emission.

The California Air Resources Board (ARB) adopted a Cap-and-Trade regulation as part one of the strategies identified for AB 32. This Cap-and-Trade regulation is a statewide plan, supported by a CEQA compliant environmental review document, aimed at reducing or mitigating GHG emissions from targeted industries. Facilities subject to the Cap-and-Trade regulation are subject to an industry-wide cap on overall GHG emissions. Any growth in emissions must be accounted for under that cap such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions.

Under District policy APR 2025, *CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation*, the District finds that the Cap-and-Trade is a regulation plan approved by ARB, consistent with AB32 emission reduction targets, and supported by a CEQA compliant environmental review document. As such, consistent with District Policy 2005, projects

complying project complying with Cap-and-Trade requirements are determined to have a less than significant individual and cumulative impact for GHG emissions.

Industries covered by Cap-and-Trade are identified in the regulation under section 95811, Covered Entities:

1. Group 1: Large industrial facilities

These types of facilities are subject to Cap and Trade, and the specific companies covered are listed at <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>, Section 95811 (a), under the “Publically Available Market Information” section (list maintained by the California Air Resources Board).

2. Group 2: Electricity generation facilities located in California, or electricity importers

These types of facilities are subject to Cap and Trade (section 95811, b).

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. Issue ATC S-1128-1002-0 and 1003-0 subject to the permit conditions listed on the attached draft ATCs.

X. Billing Information

Billing Schedule			
Permit Number	Fee Schedule	Fee Description	Fee Amount
S-1128-1002-0	3020-6	Miscellaneous	\$105
S-1128-1003-0	3020-6	Miscellaneous	\$105

Appendixes

- A. HRA Summary
- B. Compliance Certification Form
- C. Emissions Profile
- D. Draft ATC

Appendix A Risk Management Review

To: Steve Roeder - Permit Services
 From: Kyle Melching - Permit Services
 Date: March 25, 2014
 Facility Name: Chevron USA
 Location: S31/T12N/R23W
 Application #(s): S-1128-1002-0 & 1003-0
 Project #: S-1140931

A. RMR SUMMARY

Categories	Full-time NG-fired ICE (Unit 1002-0)	Full-time NG-fired ICE (Unit 1003-0)	Project Totals	Facility Totals
Prioritization Score	0.01	0.01	0.02	>1
Acute Hazard Index	0.03	0.03	0.06	0.55
Chronic Hazard Index	0.00	0.00	0.00	0.03
Maximum Individual Cancer Risk	8.13E-08	8.28E-08	1.64E-07	4.26E-06
T-BACT Required?	No	No		
Special Permit Conditions?	No	No		

B. RMR REPORT

I. Project Description

Technical Services received a request on March 5, 2014, to perform a Risk Management Review (RMR) and Ambient Air Quality Analysis (AAQA) for two 46 BHP NG-fired ICE's with non-selective catalytic reduction (NSCR) powering a vapor recovery system compressor.

II. Analysis

Toxic emissions for this proposed unit were calculated using 2001 Ventura County's Air Pollution Control District emission factors for Natural Gas Fired internal combustion (4 Stroke Lean Burn) Engine. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905-1, March 2, 2001), risks from the project were prioritized using the procedures in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEART's database. The prioritization score for the project was less than 1.0 (see RMR Summary Table); however, the facility's combined prioritization scores totaled to greater than one. Therefore, a refined Health Risk Assessment was required and performed for the project. AERMOD was used with source parameters outlined below and concatenated 5-year meteorological data from Fellows to determine maximum dispersion factors at the nearest residential and business receptors. The dispersion factors were input into the HARP model to calculate the Chronic and Acute Hazard Indices and the Carcinogenic Risk.

The following parameters were used for the reviews:

Analysis Parameters (Units 1002-0 & 1003-0) (Each)			
Source Type	Point*	Closest Receptor (m)	305
Stack Height (m)	2.38	Type of Receptor	Residence /Business
Stack Diameter (m)	0.06	Location Type	Rural
Stack Gas Temperature (K)	789	Stack Gas Velocity (m/sec)	9.75
NG Fuel Usage (mmscf/hr)	0.0003	NG Fuel Usage (mmscf/yr)	2.79

*Modeled using AERMOD's NON-Default Beta Option for "Capped & Horizontal Stack Releases."

Technical Services also performed modeling for criteria pollutants NO_x, CO, SO_x, PM₁₀, and PM_{2.5}; as well as the RMR. For Units 1002-0 & 1003-0, the emission rates used for criteria pollutant modeling were 0.2 lb/hr and 1,775 lb/yr NO_x, 0.4 lb/hr and 3,550 lb/yr CO, 0 lb/hr and 8 lb/yr SO_x, and 0.004lb/hr & 29 lb/yr PM₁₀ & PM_{2.5} for each unit.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

(Units 1002-0 & 1003-0)	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	Pass ²	Pass ²

¹The 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.

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

III. Conclusions

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

The acute and chronic indices are below 1.0; and the maximum individual cancer risk associated with the project is **1.64E-07**; which is less than the 1 in a million threshold. In accordance with the District's Risk Management Policy, the project is approved **without** Toxic Best Available Control Technology (T-BACT).

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. Fuel Consumption Worksheet
- D. Stack Parameter Worksheet
- E. Prioritization score w/ toxic emissions summary
- F. HARP Risk Report
- G. Facility Summary
- H. AERMOD Checklist

Appendix A Risk Management Review

To: Steve Roeder - Permit Services
 From: Kyle Melching - Permit Services
 Date: March 25, 2014
 Facility Name: Chevron USA
 Location: S31/T12N/R23W
 Application #(s): S-1128-1002-0 & 1003-0
 Project #: S-1140931

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Maximum Individual Cancer Risk	8.13E-08	8.28E-08	1.64E-07	4.26E-06
T-BACT Required?	No	No		
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The following parameters were used for the reviews:

Analysis Parameters (Units 1002-0 & 1003-0) (Each)			
Source Type	Point*	Closest Receptor (m)	305
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Stack Diameter (m)	0.06	Location Type	Rural
Stack Gas Temperature (K)	789	Stack Gas Velocity (m/sec)	9.75
NG Fuel Usage (mmscf/hr)	0.0003	NG Fuel Usage (mmscf/yr)	2.79

*Modeled using AERMOD's NON-Default Beta Option for "Capped & Horizontal Stack Releases."

Technical Services also performed modeling for criteria pollutants NO_x, CO, SO_x, PM₁₀, and PM_{2.5}; as well as the RMR. For Units 1002-0 & 1003-0, the emission rates used for criteria pollutant modeling were 0.2 lb/hr and 1,775 lb/yr NO_x, 0.4 lb/hr and 3,550 lb/yr CO, 0 lb/hr and 8 lb/yr SO_x, and 0.004lb/hr & 29 lb/yr PM₁₀ & PM_{2.5} for each unit.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

(Units 1002-0 & 1003-0)	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	Pass ²	Pass ²

¹The 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.

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

III. Conclusions

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

The acute and chronic indices are below 1.0; and the maximum individual cancer risk associated with the project is **1.64E-07**; which is less than the 1 in a million threshold. In accordance with the District's Risk Management Policy, the project is approved **without** Toxic Best Available Control Technology (T-BACT).

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. Fuel Consumption Worksheet
- D. Stack Parameter Worksheet
- E. Prioritization score w/ toxic emissions summary
- F. HARP Risk Report
- G. Facility Summary
- H. AERMOD Checklist

Appendix B Compliance Certification

**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 ADMINISTRATIVE AMENDMENT
 MINOR PERMIT MODIFICATION

COMPANY NAME: CHEVRON U.S.A. INC.	FACILITY ID: S- 1128
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: CHEVRON U.S.A. INC.	
3. Agent to the Owner: N/A	

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

- 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).
- 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.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- 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 foregoing is correct and true:


 Signature of Responsible Official

7-28-14
 Date

Bo Bravo

 Name of Responsible Official (please print)

 Plant Supervisor

 Title of Responsible Official (please print)

Appendix C

Emissions Profiles

Permit #: S-1128-1002-0	Last Updated
Facility: CHEVRON USA INC	09/03/2014 ROEDERS

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	1777.0	8.0	29.0	3553.0	888.0
Daily Emis. Limit (lb/Day):	4.9	0.0	0.1	9.7	2.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	444.0	2.0	7.0	888.0	222.0
Q2:	444.0	2.0	7.0	888.0	222.0
Q3:	444.0	2.0	7.0	888.0	222.0
Q4:	444.0	2.0	7.0	888.0	222.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-1128-1003-0	Last Updated
Facility: CHEVRON USA INC	09/03/2014 ROEDERS

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	1777.0	8.0	29.0	3553.0	888.0
Daily Emis. Limit (lb/Day)	4.9	0.0	0.1	9.7	2.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	444.0	2.0	7.0	888.0	222.0
Q2:	444.0	2.0	7.0	888.0	222.0
Q3:	444.0	2.0	7.0	888.0	222.0
Q4:	444.0	2.0	7.0	888.0	222.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Appendix D Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1128-1002-0

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY

SECTION: SW31 TOWNSHIP: 12N RANGE: 23W

EQUIPMENT DESCRIPTION:

46 HP COMPRESSCO MODEL GJ230 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION (NSCR) POWERING A VAPOR RECOVERY SYSTEM COMPRESSOR

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. 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, the permittee shall surrender NOx emission reduction Credits for the following quantity of emissions: 1st Quarter - 666 lb, 2nd Quarter, 666 lb, 3rd Quarter 666 lb, and 4th Quarter, 666 lb. These amounts include the required Offset Ratio of 1.5:1. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Prior to operating equipment under this Authority to Construct, the permittee shall surrender VOC emission reduction Credits for the following quantity of emissions: 1st Quarter - 333 lb, 2nd Quarter, 333 lb, 3rd Quarter 333 lb, and 4th Quarter, 333 lb. These amounts include the required Offset Ratio of 1.5:1. [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 Marjolle, Director of Permit Services

S-1128-1002-0: Oct 19 2014 1:24PM - KARRGR : Joint Inspection NOT Required

5. Emission Reduction Credit Certificate numbers S-4195-2 (NO_x) and S-3905-1 (VOC) or certificates 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 time, this Authority to Construct will be re-issued, administratively specifying the revised offsetting proposal. Public Noticing requirements shall be duplicated prior to the re-issuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
6. This engine shall be equipped with a positive crankcase ventilation (PCV) system which recirculates crankcase emissions into the air intake system for combustion. [District Rule 2201] Federally Enforceable Through Title V Permit
7. This engine shall be equipped with a three-way catalyst. [District Rule 2201] Federally Enforceable Through Title V Permit
8. This engine shall be fired on natural gas only. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
10. Emissions from this engine shall not exceed any of the following limits: 2.0 g-NO_x/bhp-hr, 0.033 g-PM₁₀/bhp-hr, 4.0 g-CO/bhp-hr, or 1.0 g-VOC/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this engine shall not exceed any of the following limits: 2.83 g-NO_x/hp-hr (3.8 g-NO_x/kw-hr) or 4.85 g-CO/hp-hr (6.5 g-CO/kw-hr). [40 CFR 1048.101(c)(2)] Federally Enforceable Through Title V Permit
12. This engine shall be source tested for NO_x, CO and VOC emissions within 60 days of initial startup, and at least once every 24 months thereafter. [District Rule 2201 and 40 CFR 60.4243(b)(2)(i)] Federally Enforceable Through Title V Permit
13. Source testing shall be conducted using the following methods. NO_x shall be tested using EPA Method 7E, or ARB Method 100; CO shall be tested using EPA Method 10, or ARB Method 100; and VOC shall be tested using EPA Method 25A or 25B, or ARB Method 100. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The owner or operator shall maintain records of the results of all source tests performed. [District Rule 2201 and 40 CFR 60.4245(a)(4)] Federally Enforceable Through Title V Permit
15. Owner or operator shall keep a maintenance plan and records of all maintenance conducted on this engine. [40 CFR 60.4243(b)(2)(i)] Federally Enforceable Through Title V Permit
16. Owner or operator shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 60.4243(b)(2)(i)] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1128-1003-0

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

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KERN COUNTY

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Seyed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services
S-1128-1003-0; Oct 13 2014 1:26PM - KARRSR : Joint Inspection NOT Required

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