



NOV 27 2013

Lance Ericksen
Chevron USA, Inc.
PO Box 1392
Bakersfield, CA 93302

Re: Notice of Preliminary Decision – Emission Reduction Credits
Facility Number: C-2885
Project Number: C-1111565


Dear Mr. Ericksen:

Enclosed for your review and comment is the District's analysis of Chevron USA, Inc.'s application for Emission Reduction Credits (ERCs) resulting from the shutdown of one 1,478 hp natural gas-fired compressor engine, at the Coalinga Nose Unit in the Coalinga Oilfield in Fresno County. The quantity of ERCs proposed for banking is 205 lb-NOx/yr, 25 lb-SOx/yr, 502 lb-PM10/yr, 13,323 lb-CO/yr, 284 lb-VOC/yr and 1,522 metric tons CO₂e/yr.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. After addressing all comments made during the 30-day public notice comment period, the District intends to issue the ERCs. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Steve Roeder of Permit Services at (661) 392- 5615.

Sincerely,



David Warner
Director of Permit Services

DW:SR/ya

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
ERC Application Review
Shutdown of Internal Combustion Engine**

Facility Name: Chevron USA, Inc
Mailing Address: PO Box 1392
Bakersfield, CA 93302

Date: November 20, 2013
Engineer: Steve Roeder
Lead Engineer: Richard Karrs

Contact Person: Lance Ericksen @ (661) 654-7145

Facility ID: C-2885

Project #: C-1111565

Submitted: May 27, 2011

Deemed Complete: June 23, 2011

I. Summary

The primary business of Chevron is the production of oil and natural gas.

Chevron has shutdown Coalinga Engine #1 (C-2885-57), surrendered the operating permit, and proposed to bank the emission reductions for both criteria pollutants (NO_x, SO_x, CO, PM₁₀ and VOC) and greenhouse gasses (GHG) (primarily CO₂, CH₄ and N₂O). The natural gas-fired IC engine was used to power a natural gas compressor. See the operating permit in Appendix A. The following emission reductions qualify for banking.

Bankable Criteria ERCs (lb/quarter)					
	NO _x	SO _x	PM ₁₀	CO	VOC
1st Quarter	56	7	136	3,614	77
2nd Quarter	57	7	140	3,711	79
3rd Quarter	39	5	95	2,524	54
4th Quarter	53	6	131	3,474	74

Bankable GHG ERCs (metric tons/year)	
GHG	1,522

II. Applicable Rules

- Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
- Rule 2301 Emission Reduction Credit Banking (1/19/12)
- Rule 4201 Particulate Matter Concentration (12/17/92)
- Rule 4701 Internal Combustion Engines - Phase 1 (8/21/03)
- Rule 4702 Internal Combustion Engines (8/18/11)

III. Location of Reduction

The engine was located in the Coalinga Nose Unit in the Coalinga Oilfield in Fresno County, Section 7, Township 20S, Range 16E, near Coalinga, CA.

IV. Method of Generating Reductions

The method of emission reductions is the permanent shut down of a natural-gas compressor engine, permit C-2885-57. The engine ceased operating in May of 2010, and was removed in February of 2011. The permit was canceled on 3/28/11. All three of the compressor engines have been shut down and removed from the site and no other engines or electric motors are being used to compress the gas. In addition, the applicant has proposed to bank ERCs from the other two shut-down engines as well (Project C-1130364). According to the applicant, the Coalinga Nose Unit gas production has declined beyond practical use.

V. Calculations

A. Assumptions

- Monthly fuel use records have been provided by the applicant
- Annual emissions are based on fuel usage and emission factors
- Emission factors for NO_x, SO_x, CO and VOC are based on source test results from 4/24/07 and 4/24/09 (see Appendix B).

B. Emission Factors

District Rule 2201, defines "actual emissions" as follows:

Actual Emissions: emissions having occurred from a source, based on source test or monitoring data, actual fuel consumption, and process data. If source test or monitoring data is not available, other appropriate, APCO-approved, emission factors may be used.

The applicant has provided source test data for NO_x, SO_x, CO and VOC, and the results have been confirmed by District Records.

Since the engines had not been tested for PM₁₀ emissions, the District must consider using the permitted emission factor of 0.064 g/hp-hr. In order to determine if that number is accurate, it has been compared to the emission factor in EPA AP-42, Table 3.2-3, which is 0.01941 lb/MMBtu.

According to the following calculation, the numbers are the same.

$$\frac{0.064 \text{ g} \cdot \text{PM}_{10}}{\text{hp} \cdot \text{hr}} \times \frac{1 \text{ lb}}{453.6 \text{ g}} \times \frac{\text{hp} \cdot \text{hr}}{2,546.5 \text{ Btu}} \times \frac{0.35\% \text{ hp}_{out}}{\text{hp}_{in}} \times \frac{1,000,000}{\text{MM}} = 0.0194 \frac{\text{lb} \cdot \text{PM}_{10}}{\text{MMBtu}}$$

Since the AP-42 emission factor has been derived from the testing of many natural gas-fired engines, it is considered to be accurate and shall be used in the proceeding calculations.

Finally, the CO₂e emission factor is taken from the District's Spreadsheet "ARB – Greenhouse Gas Emission Factors" and is calculated in lb/MMBtu to three significant figures in the following table.

Natural Gas Emission Factors					
Pollutant	kg/MMBtu x	2.205 lb/kg x	GWP =	CO ₂ e EF	
CO ₂	52.87	2.205	1.00	116.578	lb/MMBtu
CH ₄	0.0009	2.205	21.00	0.0417	lb/MMBtu
N ₂ O	0.0001	2.205	310.0	0.0684	lb/MMBtu
Total CO ₂ e				117	lb/MMBtu

The criteria pollutant emission factors are all converted to lb/MMBtu in Appendix C. All emission factors are presented in following table.

Emission Factors (lb/MMBtu)	
NO _x	0.00792
SO _x	0.0001
PM ₁₀	0.0194
CO	0.516
VOC	0.0110
CO ₂ e	117

C. Baseline Period Determination

Pursuant to Rule 2201, the Baseline Period is a period of time equal to either:

The two consecutive years of operation immediately prior to the submission date of the Complete Application; or

At least two consecutive years within the five years immediately prior to the submission date of the Complete Application if determined by the APCO as more representative of normal source operation.

The District has determined that the period from May, 2008 through April, 2010 is the appropriate baseline period. It is a consecutive two-year period within the last 5 years immediately prior to submission of the complete application, and represents the last period of actual operation. The engine was never operated after May, 2010, though it remained permitted and capable of operation until it was removed in February, 2011.

D. Baseline Data

The baseline fuel-use data is taken from the monthly fuel-use records that have been supplied by the applicant (see Appendix D), and divided into quarterly averages in the following table. The final column presents the quarterly heat input expressed in MMBtu, based on the HHV of the gas of 1,057 Btu/scf.

Monthly Baseline Fuel-Use in MMSCF						
Month	2008	2009	2010	Monthly Total	Quarterly Average MMscf	Quarterly Average MMBtu
Jan		2.739	2.306	5.045		
Feb		2.379	2.076	4.455		
Mar		2.739	2.482	5.221	7.361	7,781
Apr		2.627	2.596	5.223		
May	2.208	2.963		5.171		
Jun	1.911	2.815		4.726	7.560	7,991
Jul	2.242	2.040		4.282		
Aug	1.347	0.254		1.601		
Sep	2.013	2.385		4.398	5.141	5,434
Oct	2.283	2.761		5.044		
Nov	2.011	2.558		4.569		
Dec	2.195	2.347		4.542	7.078	7,481

E. Historical Actual Emissions (HAE)

HAE from Fuel Use

The HAE for the engine are determined by multiplying the quarterly fuel-use by the emission factors presented above, as shown in the following tables.

HAE from Fuel Use Quarter 1						
NO _x	0.00792	lb/MMBtu x	7,781	MMBtu/qtr =	62	lb/qtr
SO _x	0.001	lb/MMBtu x	7,781	MMBtu/qtr =	8	lb/qtr
PM ₁₀	0.0194	lb/MMBtu x	7,781	MMBtu/qtr =	151	lb/qtr
CO	0.516	lb/MMBtu x	7,781	MMBtu/qtr =	4,015	lb/qtr
VOC	0.0110	lb/MMBtu x	7,781	MMBtu/qtr =	86	lb/qtr
CO _{2e}	117	lb/MMBtu x	7,781	MMBtu/qtr =	910,377	lb/qtr

HAE from Fuel Use Quarter 2						
NO _x	0.00792	lb/MMBtu x	7,991	MMBtu/qtr =	63	lb/qtr
SO _x	0.001	lb/MMBtu x	7,991	MMBtu/qtr =	8	lb/qtr
PM ₁₀	0.0194	lb/MMBtu x	7,991	MMBtu/qtr =	155	lb/qtr
CO	0.516	lb/MMBtu x	7,991	MMBtu/qtr =	4,123	lb/qtr
VOC	0.0110	lb/MMBtu x	7,991	MMBtu/qtr =	88	lb/qtr
CO _{2e}	117	lb/MMBtu x	7,991	MMBtu/qtr =	934,947	lb/qtr

HAE from Fuel Use Quarter 3						
NO _x	0.00792	lb/MMBtu x	5,434	MMBtu/qtr =	43	lb/qtr
SO _x	0.001	lb/MMBtu x	5,434	MMBtu/qtr =	5	lb/qtr
PM ₁₀	0.0194	lb/MMBtu x	5,434	MMBtu/qtr =	105	lb/qtr
CO	0.516	lb/MMBtu x	5,434	MMBtu/qtr =	2,804	lb/qtr
VOC	0.0110	lb/MMBtu x	5,434	MMBtu/qtr =	60	lb/qtr
CO _{2e}	117	lb/MMBtu x	5,434	MMBtu/qtr =	635,778	lb/qtr

HAE from Fuel Use Quarter 4						
NO _x	0.00792	lb/MMBtu x	7,481	MMBtu/qtr =	59	lb/qtr
SO _x	0.001	lb/MMBtu x	7,481	MMBtu/qtr =	7	lb/qtr
PM ₁₀	0.0194	lb/MMBtu x	7,481	MMBtu/qtr =	145	lb/qtr
CO	0.516	lb/MMBtu x	7,481	MMBtu/qtr =	3,860	lb/qtr
VOC	0.0110	lb/MMBtu x	7,481	MMBtu/qtr =	82	lb/qtr
CO _{2e}	117	lb/MMBtu x	7,481	MMBtu/qtr =	875,277	lb/qtr

The HAE for GHG is expressed in metric tons per year as follows:

$$CO_2e \text{ HAE} = \frac{(910,377 + 934,947 + 635,778 + 875,277) \text{ lb}}{\text{year}} \times \frac{1 \text{ metric ton}}{2,204.6 \text{ lb}} = 1,522 \frac{\text{metric tons}}{\text{year}}$$

F. Adjustments to HAE

1. Rule 2201 - New and Modified Stationary Source Review Rule

Pursuant to Section 3.22, HAE must be discounted for any emissions reduction which is:

- required or encumbered by any laws, rules, regulations, agreements, orders, or
- attributed to a control measure noticed for workshop, or proposed or contained in a State Implementation Plan, or
- proposed in the District Air Quality Plan for attaining the annual reductions required by the California Clean Air Act.
- Any Actual Emissions in excess of those required or encumbered by any laws, rules, regulations, orders, or permits. For units covered by a Specific Limiting Condition (SLC), the total overall HAE for all units covered by SLC must be discounted for any emissions in excess of that allowed by the SLC.
 - a. There are no agreements or orders regarding the operation or emissions reductions associated with the engine. The discounts for any Rules will be discussed under the applicable Rules listed below. Therefore, no adjustments will be made to the HAE under this section.

- b. There are no reductions from the engine that are attributed to a control measure noticed for workshop, or proposed or contained in a State Implementation Plan. Therefore, no adjustment to the HAE will be made in this section.
- c. There are no reductions for engines proposed in the District Air Quality Plan for attaining the annual reductions required by the California Clean Air Act. Therefore, no adjustments will be made to the HAE under this section.
- d. There are no SLCs related to the operation of the engine. In addition, the fuel-use did not exceed the permitted maximum daily use (full-power, full-time operation for fuel use)) for any month represented. Therefore, no adjustments will be made to the HAE under this section.

The engine has undergone permitting under Rule 2201 and EPA review under a minor modification. The permit complied with all NSR and Federal Requirements. No adjustments to the HAE are necessary under Rule 2201.

2. Rule 4201 - Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

The particulate matter concentration is calculated as follows.

Assumptions

F-Factor for NG:	8,578 dscf/MMBtu
PM ₁₀ Emission Factor:	0.0194 lb-PM ₁₀ /MMBtu
Percentage of PM as PM ₁₀ in Exhaust:	100%
Exhaust Oxygen (O ₂) Concentration:	15%
Heat input:	$\frac{1,478 \text{ hp}}{35\%} \times \frac{2,543 \text{ Btu}}{\text{hp}\cdot\text{hr}} = 10.7 \frac{\text{MMBtu}}{\text{hr}}$

$$\frac{0.0194 \text{ lb} \cdot \text{PM}}{\text{MMBtu}} \times \frac{7,000 \text{ grain}}{\text{lb}} \times \frac{\text{MMBtu}}{8,578 \text{ ft}^3} = 0.0158 \frac{\text{grain} \cdot \text{PM}}{\text{ft}^3}$$

Since 0.0158 grain·PM/ft³ is less than 0.1, no adjustment is necessary for Rule 4201.

3. Rule 4701 Internal Combustion Engines - Phase 1

The purpose of Rule 4701 is to limit emissions of NO_x, CO and VOC from IC engines.

Table 3 limits NO_x, CO and VOC emissions for rich burn engines to 50 ppmv, 2,000 ppmv and 250 ppmv, at 15% oxygen, respectively. Since this engine was permitted to operate at 25 ppmv-NO_x, 2,000 ppmv-CO and 60 ppmv-VOC, at 15% oxygen, no adjustment is necessary for Rule 4701.

4. Rule 4702 Internal Combustion Engines

The purpose of this rule is to limit the emissions of NO_x, CO, VOC and SO_x from internal combustion engines.

Table 2 requires rich burn engines that are not ag-only, waste gas-fired, cyclic loaded field-gas-fueled or limited use engines to be limited to 11 ppmv-NO_x, 2,000 ppmv-CO and 250 ppmv-VOC by the compliance date of 1/1/16.

Since this engine is subject to the NO_x limit in this Rule, the NO_x emissions available for banking would be limited to 11 ppmv @ 15% oxygen. However, source-test results confirm that this engine has operated at an average of only 2.15 ppmv-NO_x during the baseline period. Since 2.5 ppmv is less than 11 ppmv, no adjustment is required.

To limit SO_x, Section 5.7 requires that engines be fired on either PUC-regulated natural gas, or gas that does not exceed a sulfur content of 5 grains of sulfur per 100 scf of gas.

According to the District Policy *Generally Accepted SO_x Emission Factor for Combustion of PUC-quality Natural Gas*, PUC regulated gas contains 1.0 grains of sulfur per 100 scf of gas, which is equivalent to 0.00285 lb-SO_x/MMBtu. Since this emission factor is the most stringent of the two standards, emissions in excess of 0.00285 lb-SO_x/MMBtu will not be considered to be surplus. As shown above, this engine has operated at 0.0001 lb-SO_x/MMBtu. Therefore, no adjustment is necessary.

5. Actual Emissions Reductions (AER)

Since no adjustments have been to the HAE, the AER is the same as the HAE posted in Section V.E above.

6. Air Quality Improvement Deduction (AQID)

Pursuant to Rule 2201 Section 3.5, the AQID is a 10% discount factor applied to AER (for criteria pollutants) before the AER is eligible for banking. GHG banking is covered by Rule 2301, and no AQID applies to GHG AER. The HAE is adjusted for the AQID for criteria pollutants in the following tables.

Total HAE (lb/Qtr)			
Quarter 1			
Pollutant	HAE	AQID	HAE Adjusted for AQID
NO _x	62	6.2	56
SO _x	8	0.8	7
PM ₁₀	151	15.1	136
CO	4,015	401.5	3,614
VOC	86	8.6	77

Total HAE (lb/Qtr)			
Quarter 2			
Pollutant	HAE	AQID	Adjusted for AQID
NO _x	63	6.3	57
SO _x	8	0.8	7
PM ₁₀	155	15.5	140
CO	4,123	412.3	3,711
VOC	88	8.8	79

Total HAE (lb/Qtr)			
Quarter 3			
Pollutant	HAE	AQID	Adjusted for AQID
NO _x	43	4.3	39
SO _x	5	0.5	5
PM ₁₀	105	10.5	95
CO	2,804	280.4	2,524
VOC	60	6	54

Total HAE (lb/Qtr)			
Quarter 4			
Pollutant	HAE	AQID	Adjusted for AQID
NO _x	59	5.9	53
SO _x	7	0.7	6
PM ₁₀	145	14.5	131
CO	3,860	386	3,474
VOC	82	8.2	74

7. Increase in Permitted Emissions (IPE)

The unit has been shut down and there are no increases in emissions associated with this project. Therefore no adjustment is necessary.

8. Bankable Emissions Reduction Credits

The bankable ERCs for criteria pollutants are presented in pounds/quarter in the following tables, while the bankable GHG ERCs are expressed in metric tons per year.

Bankable GHG emission reductions:

Bankable GHG ERCs (metric tons/year)	
GHG	1,522

Bankable criteria pollutant emission reductions:

Bankable ERCs (lb/qtr)	
Quarter 1	
NO _x	56
SO _x	7
PM ₁₀	136
CO	3,614
VOC	77

Bankable ERCs (lb/qtr)	
Quarter 2	
NO _x	57
SO _x	7
PM ₁₀	140
CO	3,711
VOC	79

Bankable ERCs (lb/qtr)	
Quarter 3	
NO _x	39
SO _x	5
PM ₁₀	95
CO	2,524
VOC	54

Bankable ERCs (lb/qtr)	
Quarter 4	
NO _x	53
SO _x	6
PM ₁₀	131
CO	3,474
VOC	74

VI. Compliance

Rule 2201 - New and Modified Stationary Source Review Rule

The applicant has proposed to bank ERCs for both criteria pollutants and GHG. While Rule 2201 provides requirements for banking the criteria pollutants (see following discussion), Rule 2301 provides requirements for banking both criteria pollutants and GHG (see discussion of Rule 2301 below).

Criteria Pollutants

To comply with the definition of AER, the reductions must be real, enforceable, quantifiable, permanent, and surplus.

A. Real

The emissions reductions were generated by the shutdown of an engine. The emissions were calculated from actual historic fuel-use data and recognized emission factors and source test data, therefore the emissions were real. The engine has been removed. Therefore, the emission reductions are real.

B. Enforceable

The associated permit for this unit has been surrendered to the District, and the engine has been removed. Operation of the equipment without a valid permit would subject the permittee to enforcement action, and this facility is subject to annual inspections. Therefore, the reductions are enforceable.

C. Quantifiable

The reductions are quantifiable since they were calculated from historic fuel use records, source testing data, established and accepted emission factors and methods according to District Rule 2201. Therefore, the reductions are quantifiable and have been quantified.

D. Permanent

The equipment has been shut down and removed and the permit has been surrendered. The gas in the field has been depleted, all compressor engines have been removed and there are no other engines or electric motors connected to compress any remaining gas. Since no emissions have been shifted, the reductions are permanent.

E. Surplus

To be considered surplus, AER shall be in excess, at the time the application for an ERC is deemed complete, of any emissions reduction which:

- Is required or encumbered by any laws, rules, regulations, agreements, orders, or
- Is attributed to a control measure noticed for workshop, or proposed or contained in a State Implementation Plan, or
- Is proposed in the adopted air quality plan pursuant to the California Clean Air Act.

As discussed in Section V above, there are no rules, regulations, plans, etc., that would serve to reduce the bankable emissions for criteria pollutants. Therefore the reductions are surplus.

F. Not used for the Approval of an Authority to Construct or as Offsets

The emission reduction credits generated by the shutdown of the engine have not been used for the approval of any Authority to Construct or as offsets or mitigation. The PTO has been surrendered.

Rule 2301 – Emission Reduction Credit Banking

Section 5.5 states that ERC Certificate applications shall be submitted within 180 days after the emission reduction occurs. The engine was removed in February of 2011 and the permit was canceled on 3/28/11. The applicant filed the ERC application on 5/27/11. Since the application was received within 180 days of the surrender of the permit, the application was submitted in a timely fashion.

Section 6.1.2 states that if the emission reductions were created as a result of the shutdown of a permitted emissions unit, the relevant Permit to Operate shall have been surrendered and voided. The Permit to Operate was surrendered and canceled by the District on 3/28/11.

Regarding GHG, the purpose of this Rule is to:

- 1.2.1 Provide an administrative mechanism for sources to bank voluntary greenhouse gas emission reductions for later use.
- 1.2.2 Provide an administrative mechanism for sources to transfer banked greenhouse gas emission reductions to others for any use.
- 1.2.3 Define eligibility standards, quantitative procedures and administrative practices to ensure that banked greenhouse gas emission reductions are real, permanent, quantifiable, surplus, and enforceable.

Section 4.5 specifies eligibility criteria for GHG emission reductions to qualify for banking. Below is a summary of each criteria and a description of how the emission reductions satisfy the criteria.

Section 4.5.1 requires that the emission reduction must have occurred after 1/1/05.

The emission reductions occurred when the engine was removed in February of 2011. As the emission reduction occurred after 1/1/05, this criteria has been satisfied.

Section 4.5.2 requires that the emissions must have occurred in the District.

The emissions occurred at the Coalinga Nose Unit in Coalinga, CA. Since this location is within the District, this criteria has been satisfied.

Section 4.5.3 requires that the emission reductions must be real, surplus, permanent, quantifiable, and enforceable.

Real:

The emissions reductions were generated by the shutdown of an engine. The emissions were calculated from actual historic fuel-use data and recognized emission factors and source test data, therefore the emissions were real. The engine has been removed. Therefore, the emission reductions are real.

Surplus:

There are no laws, rules, regulations, agreements, orders, or permits requiring any GHG emission reductions from the natural gas compressor. Therefore, the emission reductions satisfy the surplus requirement in Section 4.5.3.2.

The facility is subject to the CARB Cap and Trade regulation. Since the reductions occurred prior January 1, 2012, the emission reductions satisfy the surplus requirement in Section 4.5.3.1.

The facility is subject to the CARB Cap and Trade regulation. Since the reductions occurred prior to the baseline period of Cap and Trade, the emission reductions satisfy the surplus requirement in Section 4.5.3.2.

The emission reductions are not the result of an action taken by the permittee to comply with any requirement. The emission reductions are surplus and additional of all requirements. Therefore, the emission reductions satisfy the surplus requirement in Section 4.5.3.4.

Permanent:

The equipment has been shut down and removed and the permit has been surrendered. The gas in the field has been depleted, all compressor engines have been removed and there are no other engines or electric motors connected to compress any remaining gas. Since no emissions have been shifted, the reductions are permanent.

When determining the geographical boundary in which the emission reduction is determined to be permanent the applicant may consider how the GHG ERC may likely be used.

Please note that while Rule 2301 allows facilities to receive ERCs for GHG emission reductions, the District does not have any requirements on the use of GHG ERCs. However, it is anticipated that the likely uses of such GHG ERCs would be their future retirement as GHG mitigation in the CEQA process.

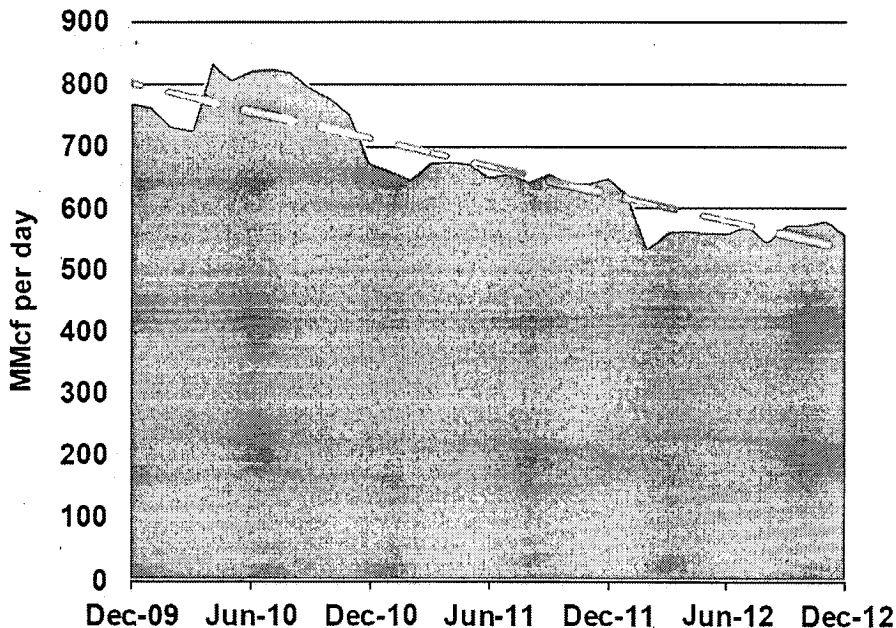
Pursuant to CEQA, lead agencies must consider the environmental impact of GHG emissions from a project and may require that such GHG emissions be mitigated. In evaluating various mitigation techniques, including the retirement of GHG ERCs, the lead agency must determine if the proposed mitigation technique adequately mitigates the projects GHG emission increase.

When a lead agency determines if the retirement of a particular GHG ERC provides adequate GHG mitigation for a project, the lead agency may choose to consider the location where the GHG ERC was generated and the geographical boundary used to determine the permanence of the emission reduction. The in making this determination, the lead agency may conclude that the retirement of a particular GHG ERC would provide adequate mitigation for projects within that same geographical boundary. Again, that determination will be made be the lead agency for a particular project.

This applicant has selected the State of California as the geographical boundary for which the emission reduction is permanent. Information has been provided below to validate this geographical boundary selection.

As shown in the following chart from the Division of Oil, Gas and Geothermal Resources (DOGGR), the total natural gas production in the State of California has been on a decline since 2009. Gas Production has declined from 800,000,000 cubic feet per day in 12/09 to 550,000,000 cubic feet per day in 12/12.

CALIFORNIA GAS PRODUCTION



Sources: EIA / DOGGR / Navigant

Chevron had three natural gas compressors serving the Coalinga Nose Unit, and due to a lack of gas to compress, all of the engines have been shut down and removed, and there are no other engines or electric motors compressing any of the remaining gas. Therefore there is no transfer of emissions to any other sources, and the emission reductions are permanent.

Based on this information, the geographical boundary for which the emission reduction is permanent is the State of California.

The ERC Certificate will include the following identifier:

"Shutdown of engine verified as permanent within the State of California"

Quantifiable:

The actual emissions were calculated from historic fuel-use records and accepted emission factors. Therefore, the emission reductions are quantifiable and have been quantified.

Enforceable:

The engine has been shut down and the PTO has been surrendered to the District. Operation of the equipment without a valid permit would subject the permittee to enforcement action. Therefore, the emission reductions are enforceable.

Section 4.5.4 requires that GHG emission reductions be calculated as the difference between the historic annual average GHG emissions (as CO₂e) and the PE2 after the reduction is complete. The historical GHG emissions must be calculated using the consecutive 24 month period immediately prior to the date the emission reductions occurred (the shutdown of the cotton gin), or another consecutive 24 month period in the 60 months prior to the date the emission reduction occurred if determined by the APCO as being more representative of normal operations.

The GHG emission reductions were calculated according to the baseline period identified above. Since this is a permanent shutdown of the compressor engine from a depleted natural gas field, with none of the load being shifted to any other compressor engines or electric motors in California, there is no post-project potential to emit GHG.

Section 4.5.5.5 requires that GHG emission reductions proposed to be quantified using CARB-approved emission reduction project protocols shall be calculated in accordance with the applicable protocol.

Since the GHG emission reductions are not subject to an applicable CARB-approved emission reduction project protocol, this section is not applicable.

Section 4.5.6 requires that ERCs shall be made enforceable through permit conditions or legally binding contract.

The compressor engine held a legal District operating permit. That permit has been surrendered to the District. Since the operation of a new engine would require a new Authority to Construct, as discussed above, the emission reduction is enforceable.

Section 5 identifies ERC Certificate application procedures.

Section 5.5.2 requires, for emission reductions occurring prior to 1/19/12, applications for ERCs must be submitted by 7/19/12.

The ERC application was submitted on 5/27/11, therefore the application is timely.

Section 6.15 specifies the registration requirements for GHG ERCs.

This emission reductions are surplus and additional of all requirements pursuant to Section 4.5.3.4. Therefore the ERC certificate shall include the following notation:

“This emission reduction is surplus and additional to all applicable regulatory requirements.”

Compliance with Rule 2301 has been demonstrated and no adjustments are necessary.

VII. Recommendation

Issue ERC Certificates in the amounts posted in the table below and on the Draft ERC Certificates in Appendix E.

Bankable Criteria ERCs (lb/quarter)					
	NO _x	SO _x	PM ₁₀	CO	VOC
1st Quarter	56	7	136	3,614	77
2nd Quarter	57	7	140	3,711	79
3rd Quarter	39	5	95	2,524	54
4th Quarter	53	6	131	3,474	74

Bankable GHG ERCs (metric tons/year)	
GHG	1,522

List of Appendixes

- A. Surrendered Permit to Operate
- B. Source Test Data
- C. Emission Factor Conversions
- D. Fuel Use Records
- E. Draft Emission Reduction Credit Certificates

Appendix A

Surrendered Permit to Operate

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-2885-57-3

EXPIRATION DATE: 10/31/2012

EQUIPMENT DESCRIPTION:

1,478 BHP WAUKESHA MODEL L7042GSI NATURAL GAS-FIRED IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION (NSCR) POWERING A NATURAL GAS COMPRESSOR

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801] Federally Enforceable Through Title V Permit
5. Unit shall be fired only on PUC quality natural gas with a sulfur content of less than or equal to 0.017% by weight. [District Rule 4801] Federally Enforceable Through Title V Permit
6. If the IC engine is fired on PUC-regulated natural gas, then maintain on file copies of all natural gas bills. [District Rule 2520, 9.4] Federally Enforceable Through Title V Permit
7. If the engine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the IC engine shall be determined using ASTM method D 1072, D 3031, D 4084, D 3246, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3] Federally Enforceable Through Title V Permit
8. If the engine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3] Federally Enforceable Through Title V Permit
9. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
10. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
11. Emissions from this IC engine shall not exceed any of the following limits: 25 ppmvd NO_x @ 15% O₂ (equivalent to 0.3 g-NO_x/hp-hr), 0.009 g-SO_x/hp-hr, 0.064 g-PM₁₀/hp-hr, 2,000 ppmvd CO @ 15% O₂ (equivalent to 14.56 g-CO/hp-hr), or 60 ppmvd VOC @ 15% O₂ (equivalent to 0.25 g-VOC/hp-hr). [District NSR Rule and Rules 4701 and 4702] Federally Enforceable Through Title V Permit
12. Source testing to measure natural gas-combustion NO_x, CO, and VOC emissions from this unit shall be measured not less than once every 24 months. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

13. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
14. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
15. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 18, 25A or 25B, or ARB Method 100. [District Rules 1081, 4701, and 4702] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
19. If either the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
21. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
22. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type and quantity (cubic feet of gas or gallons of liquid) of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

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

23. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
24. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

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

Appendix B

Source Test Data

Facility: C 2885 CHEVRON USA, INC.	Permit ID: 57	Mod#: 4
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Test Tracking	Periodic Test Setup	Test Equipment Details	Test Result Details																																																																
<p>Representative Test</p> <p>Unit Identification: <input type="text" value="IC #1"/> Description: <input type="text"/></p> <p>1 Unit Total</p> <p><input type="button" value="Add New Unit"/> <input type="button" value="Save"/> <input type="button" value="Cancel"/></p>																																																																			
<p>Test Results For: IC Engine #1</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units</th> <th>Limit</th> <th>Result</th> <th>Failed</th> <th>O₂ Correction (%)</th> <th># Runs</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>CO</td> <td>g/bhp-hr</td> <td>14.56</td> <td>3.779</td> <td><input type="checkbox"/></td> <td></td> <td>3</td> <td></td> </tr> <tr> <td>CO</td> <td>ppm</td> <td>2000.0</td> <td>444.0</td> <td><input checked="" type="checkbox"/></td> <td></td> <td>3</td> <td></td> </tr> <tr> <td>NOx</td> <td>ppm</td> <td>25.0</td> <td>4.0</td> <td><input checked="" type="checkbox"/></td> <td></td> <td>3</td> <td></td> </tr> <tr> <td>NOx</td> <td>g/bhp-hr</td> <td>0.3</td> <td>0.0566</td> <td><input type="checkbox"/></td> <td></td> <td>3</td> <td></td> </tr> <tr> <td>SOx</td> <td>g/bhp-hr</td> <td>0.009</td> <td>0.0008</td> <td><input type="checkbox"/></td> <td></td> <td>3</td> <td>calc'd from fuel H₂S</td> </tr> <tr> <td>VOC</td> <td>ppm</td> <td>60.0</td> <td>11.3</td> <td><input checked="" type="checkbox"/></td> <td></td> <td>3</td> <td></td> </tr> <tr> <td>VOC</td> <td>g/bhp-hr</td> <td>0.25</td> <td>0.0549</td> <td><input type="checkbox"/></td> <td></td> <td>3</td> <td></td> </tr> </tbody> </table> <p>4/24/07</p> <p><input type="button" value="Add New Pollutant"/></p> <p><input type="button" value="Close"/> <input type="button" value="Save"/></p>				Pollutant	Units	Limit	Result	Failed	O ₂ Correction (%)	# Runs	Description	CO	g/bhp-hr	14.56	3.779	<input type="checkbox"/>		3		CO	ppm	2000.0	444.0	<input checked="" type="checkbox"/>		3		NOx	ppm	25.0	4.0	<input checked="" type="checkbox"/>		3		NOx	g/bhp-hr	0.3	0.0566	<input type="checkbox"/>		3		SOx	g/bhp-hr	0.009	0.0008	<input type="checkbox"/>		3	calc'd from fuel H ₂ S	VOC	ppm	60.0	11.3	<input checked="" type="checkbox"/>		3		VOC	g/bhp-hr	0.25	0.0549	<input type="checkbox"/>		3	
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Facility: C 2885 CHEVRON USA, INC.	Permit ID: 57	Mod#: 3
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Test Tracking	Periodic Test Setup	Test Equipment Details	Test Result Details																																																								
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Appendix C

Emission Factor Conversions

The emission factors from the source tests are averaged together in the table below.

Average Emission Factors			
Pollutant	4/24/07	4/24/09	Average
NO _x	4.0 ppmv	0.3 ppmv	2.15 ppmv
SO _x	-	0.0001 lb/MMBtu	0.0001 lb/MMBtu
CO	444 ppmv	16.0 ppmv	230 ppmv
VOC	11.3 ppmv	5.8 ppmv	8.55 ppmv

While the emission factor for SO_x is given in lb/MMBtu, the emission factors for NO_x, CO and VOC are converted into lb/MMBtu as follows:

Assumptions:

- STP is 14.7 psia @ 520°R
- ppmv figures are given at 15% oxygen
- Universal gas constant is 10.73 psi·ft³/lb·mol·°R
- Molecular weight of NO_x (as NO₂) is 46 lb/lb-mole
- Molecular weight of CO is 28 lb/lb-mole
- Molecular weight of VOC (as methane) is 16 lb/lb-mole
- F-factor for natural gas is 8,578 dscf/MMBtu @ STP
- Natural gas heating value = 1,057 Btu/scf (Applicant)

NO_x

$$\frac{2.15 \text{ parts}}{1,000,000} \times \frac{14.7 \text{ psi}}{520^\circ\text{R}} \times \frac{\text{lb} \cdot \text{mole} \cdot ^\circ\text{R}}{10.73 \text{ psi} \cdot \text{ft}^3} \times \frac{46 \text{ lb}}{\text{lb} \cdot \text{mole}} \times \frac{8,578 \text{ ft}^3}{\text{MMBtu}} \times \frac{20.9}{20.9 - 15} = 0.00792 \frac{\text{lb}}{\text{MMBtu}}$$

CO

$$\frac{230 \text{ parts}}{1,000,000} \times \frac{14.7 \text{ psi}}{520^\circ\text{R}} \times \frac{\text{lb} \cdot \text{mole} \cdot ^\circ\text{R}}{10.73 \text{ psi} \cdot \text{ft}^3} \times \frac{28 \text{ lb}}{\text{lb} \cdot \text{mole}} \times \frac{8,578 \text{ ft}^3}{\text{MMBtu}} \times \frac{20.9}{20.9 - 15} = 0.516 \frac{\text{lb}}{\text{MMBtu}}$$

VOC

$$\frac{8.55 \text{ parts}}{1,000,000} \times \frac{14.7 \text{ psi}}{520^\circ\text{R}} \times \frac{\text{lb} \cdot \text{mole} \cdot ^\circ\text{R}}{10.73 \text{ psi} \cdot \text{ft}^3} \times \frac{16 \text{ lb}}{\text{lb} \cdot \text{mole}} \times \frac{8,578 \text{ ft}^3}{\text{MMBtu}} \times \frac{20.9}{20.9 - 15} = 0.0110 \frac{\text{lb}}{\text{MMBtu}}$$

Appendix D
Fuel-Use Records

Month	C-2885-57 MSCF	C-2885-57 Btu/scf	Total MMBtu
Oct-06	2,242	1,057	2,370
Nov-06	2,270	1,057	2,399
Dec-06	2,036	1,057	2,152
Jan-07	2,000	1,057	2,114
Feb-07	1,805	1,057	1,908
Mar-07	2,511	1,057	2,654
Apr-07	2,166	1,057	2,289
May-07	1,402	1,057	1,482
Jun-07	1,384	1,057	1,463
Jul-07	2,069	1,057	2,187
Aug-07	2,166	1,057	2,289
Sep-07	2,250	1,057	2,378
Oct-07	2,650	1,057	2,801
Nov-07	2,547	1,057	2,692
Dec-07	2,096	1,057	2,215
Jan-08	2,296	1,057	2,427
Feb-08	2,243	1,057	2,371
Mar-08	1,833	1,057	1,937
Apr-08	2,190	1,057	2,315
May-08	2,208	1,057	2,334
Jun-08	1,911	1,057	2,020
Jul-08	2,242	1,057	2,370
Aug-08	1,347	1,057	1,424
Sep-08	2,013	1,057	2,128
Oct-08	2,283	1,057	2,413
Nov-08	2,011	1,057	2,126
Dec-08	2,195	1,057	2,320
Jan-09	2,739	1,057	2,895
Feb-09	2,379	1,057	2,515
Mar-09	2,739	1,057	2,895
Apr-09	2,627	1,054	2,769
May-09	2,963	1,054	3,123
Jun-09	2,815	1,054	2,967
Jul-09	2,040	1,054	2,150
Aug-09	254	1,054	268
Sep-09	2,385	1,054	2,514
Oct-09	2,761	1,054	2,910
Nov-09	2,558	1,054	2,698
Dec-09	2,347	1,054	2,474
Jan-10	2,306	1,054	2,431
Feb-10	2,076	1,054	2,188
Mar-10	2,482	1,054	2,616
Apr-10	2,596	1,054	2,736
May-10	545	1,054	574
Jun-10	0	1,054	0

Appendix E
Draft ERC Certificates

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate

C-1147-1
DRAFT

ISSUED TO: CHEVRON USA, INC.
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: COALINGA NOSE UNIT
FRESNO COUNTY, CA
SECTION: 7 TOWNSHIP: 20S RANGE: 16E

For VOC Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
77 lbs	79 lbs	54 lbs	74 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of natural gas-fired IC engine C-2885-57

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

DRAFT

David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate

G-1147-2
DRAFT

ISSUED TO: CHEVRON USA, INC.
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: COALINGA NOSE UNIT
FRESNO COUNTY, CA
SECTION: 7 TOWNSHIP: 20S RANGE: 16E

For NOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
56 lbs	57 lbs	39 lbs	53 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of natural gas-fired IC engine C-2885-57

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

DRAFT

David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate

G-1147-3
DRAFT

ISSUED TO: CHEVRON USA, INC.
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: COALINGA NOSE UNIT
FRESNO COUNTY, CA
SECTION: 7 TOWNSHIP: 20S RANGE: 16E

For CO Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
3,614 lbs	3,711 lbs	2,524 lbs	3,474 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of natural gas-fired IC engine C-2885-57

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director, APCO

DRAFT

David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate

C-1147-4
DRAFT

ISSUED TO: CHEVRON USA, INC.
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: COALINGA NOSE UNIT
FRESNO COUNTY, CA
SECTION: 7 TOWNSHIP: 20S RANGE: 16E

For PM10 Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
136 lbs	140 lbs	95 lbs	131 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of natural gas-fired IC engine C-2885-57

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APSCO

DRAFT

David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate

G-1147-5
DRAFT

ISSUED TO: CHEVRON USA, INC.
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: COALINGA NOSE UNIT
FRESNO COUNTY, CA
SECTION: 7 TOWNSHIP: 20S RANGE: 16E

For SOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
7 lbs	7 lbs	5 lbs	6 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of natural gas-fired IC engine C-2885-57

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

DRAFT

David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

Emission Reduction Credit Certificate

C-1248-24
DRAFT

ISSUED TO: CHEVRON USA, INC.
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: COALINGA NOSE UNIT
FRESNO COUNTY, CA
SECTION: 7 TOWNSHIP: 20S RANGE: 16E

For CO₂e Reduction In The Amount Of:

1522 metric tons / year

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shutdown of natural gas-fired IC engine C-2885-57 is verified as permanent within the State of California

Emission Reduction Qualification Criteria

This emission reduction is surplus and additional to all applicable regulatory requirements.

Seyed Sadredin, Executive Director / APCO

DRAFT

David Warner, Director of Permit Services