



JAN 21 2011

Williaml Fall  
Chevron USA Production Inc  
PO Box 1392  
Bakersfield, CA 93302

**Re: Notice of Preliminary Decision - Emission Reduction Credits**  
**Project Number: S-1104455**

Dear Mr. Fall:

Enclosed for your review and comment is the District's analysis of Chevron USA Production Inc's application for Emission Reduction Credits (ERCs) resulting from the permanent shutdown of two IC engines, at the 17Z gas booster plant in the McKittrick Oilfield. The quantity of ERCs proposed for banking is 27 lbs. VOC, 812 lbs. NOx, 39,372 lbs. CO, 453 lbs. PM10 and 4 lbs. SOx.

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

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

Sincerely,

David Warner  
Director of Permit Services

DW: DBT/cm

Enclosures

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

**Northern Region**  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-6400 FAX: (209) 557-6475

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585



JAN 21 2011

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

**Re: Notice of Preliminary Decision - Emission Reduction Credits**  
**Project Number: S-1104455**

Dear Mr. Rios:

Enclosed for your review and comment is the District's analysis of Chevron USA Production Inc's application for Emission Reduction Credits (ERCs) resulting from the permanent shutdown of two IC engines, at the 17Z gas booster plant in the McKittrick Oilfield. The quantity of ERCs proposed for banking is 27 lbs. VOC, 812 lbs. NOx, 39,372 lbs. CO, 453 lbs. PM10 and 4 lbs. SOx.

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

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

Sincerely,

David Warner  
Director of Permit Services

DW: DBT/cm

Enclosure

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

**Northern Region**  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-6400 FAX: (209) 557-6475

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585



JAN 21 2011

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

**Re: Notice of Preliminary Decision - Emission Reduction Credits**  
**Project Number: S-1104455**

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Chevron USA Production Inc's application for Emission Reduction Credits (ERCs) resulting from the permanent shutdown of two IC engines, at the 17Z gas booster plant in the McKittrick Oilfield. The quantity of ERCs proposed for banking is 27 lbs. VOC, 812 lbs. NOx, 39,372 lbs. CO, 453 lbs. PM10 and 4 lbs. SOx.

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

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

Sincerely,

David Warner  
Director of Permit Services

DW: DBT/cm

Enclosure

**Seyed Sadredin**

Executive Director/Air Pollution Control Officer

---

**Northern Region**

4800 Enterprise Way  
Modesto, CA 95356-8718

Tel: (209) 557-6400 FAX: (209) 557-6475

**Central Region (Main Office)**

1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244

Tel: (559) 230-6000 FAX: (559) 230-6061

**Southern Region**

34946 Flyover Court  
Bakersfield, CA 93308-9725

Tel: 661-392-5500 FAX: 661-392-5585

Bakersfield Californian  
Bakersfield Californian

**NOTICE OF PRELIMINARY DECISION  
FOR THE PROPOSED ISSUANCE OF  
EMISSION REDUCTION CREDITS**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Emission Reduction Credits to Chevron USA Production Inc for the permanent shutdown of two IC engines, at the 17Z gas booster plant in the McKittrick Oilfield. The quantity of ERCs proposed for banking is 27 lbs. VOC, 812 lbs. NOx, 39,372 lbs. CO, 453 lbs. PM10 and 4 lbs. SOx.

The analysis of the regulatory basis for this proposed action, Project #S-1104455, is available for public inspection at [http://www.valleyair.org/notices/public\\_notices\\_idx.htm](http://www.valleyair.org/notices/public_notices_idx.htm) and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA: 93308.**

# San Joaquin Valley Air Pollution Control District

## ERC Application Review

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

JAN 07 2011

Reduction Location: 17Z Gas Booster Plant  
 McKittrick Oilfield  
 SE 17 T30S, R22E

Engineer: David Torii  
 Lead Engineer: Rich Karrs

*RWK 1-7-11*

Contact Person: William Fall  
 Telephone: (661) 654-7144

Application: S-2199  
 Project Number: 1104455

Deemed Complete: December 13, 2010

### I. Proposal

Chevron USA, Inc (CUSA) is proposing to bank the following amounts of emission reduction credits (ERCs) resulting from the permanent shutdown of a 150 bhp and a 330 bhp natural gas fired IC engine located at the 17Z gas booster plant in the McKittrick Oilfield.

Quarter	ERCs (lb/qtr)				
	VOC S-3533-1	NOx S-3533-2	CO S-3533-3	PM S-3533-4	SOx S-3533-5
1	6	181	8751	101	1
2	4	188	9390	106	1
3	9	224	10,714	124	1
4	8	219	10,517	122	1

See Permits to Operate in Appendix A.

### II. Applicable Rules

Rule 2301 Emission Reduction Credit Banking (12/17/92)

### III. Location of Reduction

CUSA  
S-2199, 1104455

The 17z Gas Booster plant is in the McKittrick Oilfield in Chevron's Western Kern County Gas stationary source in Section 17, T30S, R22E.

**IV. Method for Generating Reduction**

The emission reductions were generated from the permanent shutdown of natural gas fired IC engines S-2199-5 and '6 located at the 17Z Gas Booster plant. The engines were permanently removed from service and replaced with electric motors which may be located elsewhere on the gas gathering system.

**V. Calculations**

**A. Assumptions and Emission Factors**

Historical Actual Emissions (HAE) are calculated based on measured fuel use and annual source tests from the IC engines for the 2 - yr baseline period. The following assumptions are used to calculate emissions from the IC engines.

Heat Content of fuel: 1080 BTU/scf (from fuel gas analysis, see Appendix B)

Source test results are shown in Appendix C and emission factors for each calendar year are shown in the tables below.

Pursuant to District Rule 2201, Section 3.2.2, to be considered surplus, Actual Emissions Reductions must be, at the time the application for Emissions Reduction Credit or Authority to Construct authorizing such reductions is deemed complete, in excess of any reduction that is required by a control measure noticed for workshop. District Rule 4702 is in the process of being amended and was work shopped on 9/9/10, prior to the 12/13/10 deemed complete date of this Emissions Reduction Credit project. Therefore, the AERs calculated in this project must reflect the lower NOx emissions limit being proposed in Rule 4702: 11 ppmv @ 15% O2. As the source test derived emissions factor for engine S-2199-5 (but not engine S-2199-6) exceeded 11 ppmv @ 15% O2, emissions were calculated for engine S-2199-5 using the emissions factor proposed in work shopped Rule 4702.

S-2199-5		
	Emission Factor lb/MMBtu	Source
NOx	0.0405 (11 ppmv @15% O2)	Rule 4702
SOx	0.0001	Average of 5/30/06 and 5/20/08 source tests
PM10	0.0194	AP-42 Table 3.2-3
CO	1.32845	Average of 5/30/06 and 5/20/08 source tests
VOC	0.00595	Average of 5/30/06 and 5/20/08 source tests

CUSA  
S-2199, 1104455

S-2199-6		
	Emission Factor lb/MMBtu	Source
NOx	0.03375	Average of 5/23/07 and 2/12/09 source tests
SOx	0.0002	Average of 5/23/07 and 2/12/09 source tests
PM10	0.0194	AP-42 Table 3.2-3
CO	1.74885	Average of 5/23/07 and 2/12/09 source tests
VOC	0.0004	Average of 5/23/07 and 2/12/09 source tests

**B. Baseline Period Determination and Data**

Pursuant to Rule 2201 Section 3.8, the baseline period is determined as follows:

A period of time equal to either:

- 3.8.1 the two consecutive years of operation immediately prior to the submission date of the Complete Application; or
- 3.8.2 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; or
- 3.8.3 a shorter period of at least one year if the emissions unit has not been in operation for two years and this represents the full operational history of the emissions unit, including any replacement units; or
- 3.8.4 zero years if an emissions unit has been in operation for less than one year (only for use when calculating AER).

CUSA proposed baseline periods 7/13/07 to 7/16/09 and 6/3/08 to 6/2/10 for S-2199-5 and S-2199-6, respectively.

The applicant states that compressor/engine S-2199-5 was used for backup after 7/16/09 and was rarely used. Its permit was maintained and the engine was maintained in a service ready state in the event of a failure of the electric compressor, electrical power failure or other unforeseen event.

The applicant states that compressor/engine S-2199-6 was removed from service on 9/2/10 and requests a baseline period of 6/3/08 to 6/2/10 as this period represents the normal utilization of the unit.

Graphs of the engines' fuel use were submitted showing that S-2199-5's work wasn't shifted to S-2199-6 after 7/16/09 (see graphs in Appendix D).

Additionally, the graphs show that the proposed baseline periods are representative of normal operation during the last five years.

CUSA  
S-2199, 1104455

**C. Historical Actual Emissions**

Historical Actual Emissions (HAE) are the Actual Emissions occurring during the baseline period after discounting for the following, as outlined in Section 3.22 of Rule 2201:

- 3.22.1 Any emissions reductions required or encumbered by any laws, rules, regulations, agreements, orders, or permits; and
- 3.22.2 Any emissions reductions attributed to a control measure noticed for workshop, or proposed or contained in a State Implementation Plan (SIP), and
- 3.22.3 Any emissions reductions proposed in the District Air Quality Plan (AQP) for attaining the annual reductions required by the California Clean Air Act, and
- 3.22.4 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.

As noted above in section V.A, Rule 4702 was work-shopped on 9/9/10; therefore, the engines' Actual Emissions will be discounted for the draft rule's 11 ppmv @ 3% O2 NOx limit.

The engines' HAE was calculated as the recorded natural gas heat input for the baseline period multiplied by the pollutant concentration emission factor as shown above in section V.A.

Emission calculations are shown in Appendix E and baseline average quarterly emissions are summarized in the tables below.

HAE (lb/qr) S-2199-5					
	NOx	SOx	PM-10	CO	VOC
Q1	36.3	0.1	17.4	1,190.5	5.3
Q2	20.4	0.1	9.8	669.6	3.0
Q3	51.8	0.1	24.8	1,700.7	7.6
Q4	50.1	0.1	24.0	1,642.2	7.4



**CUSA**  
**S-2199, 1104455**

HAE (lb/qtr) S-2199-6					
	NOx	SOx	PM-10	CO	VOC
Q1	164.7	1.0	94.7	8,532.8	1.7
Q2	188.4	1.1	108.3	9,764.0	2.0
Q3	196.9	1.2	113.2	10,203.4	2.0
Q4	193.8	1.1	111.4	10,042.9	2.0

**D. Actual Emissions Reductions**

Actual Emissions Reductions (AER) shall be calculated, on a pollutant-by-pollutant basis, as follows:

$$\text{AER} = \text{HAE} - \text{PE2}$$

Where:

HAE = Historic Actual Emissions

PE2 = Post-project Potential to Emit

Since the reductions are attributed to the permanent shutdown of an emissions unit, PE2 is zero. Therefore, AER = HAE.

**E. Air Quality Improvement Deduction**

Prior to banking, Actual Emissions Reductions shall be discounted by 10% for Air Quality Improvement Deduction pursuant to District Rule 2201, Section 4.12.1. Therefore, the AER above are reduced by 10% as shown in the table below.

AQID (lb/qtr) S-2199-5					
	NOx	SOx	PM-10	CO	VOC
Q1	3.6	0.0	1.7	119.1	0.5
Q2	2.0	0.0	1.0	67.0	0.3
Q3	5.2	0.0	2.5	170.1	0.8
Q4	5.0	0.0	2.4	164.2	0.7

AQID (lb/qtr) S-2199-6					
	NOx	SOx	PM-10	CO	VOC
Q1	16.5	0.1	9.5	853.3	0.2
Q2	18.8	0.1	10.8	976.4	0.2
Q3	19.7	0.1	11.3	1020.3	0.2
Q4	19.4	0.1	11.1	1004.3	0.2

**F. Increases in Permitted Emissions**

CUSA  
S-2199, 1104455

The emissions reduction is due to the permanent removal of two gas-fired IC engines. The IC engines were replaced with a fully electric compressors, which does not emit criteria pollutants; therefore, there is no IPE associated with this project.

**G. Bankable Emissions Reductions Credits**

Bankable Emission Reduction Credits is the remainder of the Actual Emissions Reductions after discounting and subtraction of the Air Quality Attainment Discount. Final, bankable ERC's are shown in the table.

Bankable Emission Reduction Credits (lb/qr) S-2199-5					
	NOx	SOx	PM-10	CO	VOC
Q1	33	0	16	1071	5
Q2	18	0	9	603	3
Q3	47	0	22	1531	7
Q4	45	0	22	1478	7

Bankable Emission Reduction Credits (lb/qr) S-2199-6					
	NOx	SOx	PM-10	CO	VOC
Q1	148	1	85	7680	2
Q2	170	1	97	8788	2
Q3	177	1	102	9183	2
Q4	174	1	100	9039	2

Total Bankable Emission Reduction Credits (lb/qr) S-2199-5 and S-2199-6					
	NOx	SOx	PM-10	CO	VOC
Q1	181	1	101	8751	6
Q2	188	1	106	9390	4
Q3	224	1	124	10714	9
Q4	219	1	122	10517	8

**IV. Compliance Review**

Pursuant to District Rule 2301, Section 4.2, ERC's must meet the following criteria before banking:

- 4.2.1 The emission reductions are real, surplus, permanent, quantifiable, and enforceable;
- 4.2.2 AERs are calculated in accordance with the calculation procedures of Rule 2201 (New and Modified Stationary Source Review Rule)

CUSA  
S-2199, 1104455

4.2.3 An application for ERC has been filed no later than 180 days after the emission reductions occurred.

**A. Real**

The emission reductions in this project are based on the permanent shutdown of a recently operating IC engines. Actual records of fuel use and source testing over the baseline period were used in quantifying the emissions from the units. Therefore, these reductions are real.

**B. Enforceable**

Permits to Operate S-2199-5 and '6 are canceled and the emissions from the cancellations cannot be used for netting purposes on other projects. Resuming operation of the IC engine(s) would be subject to a new permitting action under Rule 2201. Therefore, these reductions are enforceable.

**C. Quantifiable**

Calculation of HAE was determined from actual records of fuel use and source tests during the baseline period. Therefore, the reductions are quantifiable.

**D. Permanent**

The emission reductions in this project are based on the permanent shutdown of recently operating IC engines. Engines S-2199-5 and S-2199-6 ceased operating on 5/10/10 and 9/2/10, respectively, and the respective PTO cancellation dates are 7/21/10 and 9/3/10. Resuming operation of the IC engines would be subject to a new permitting action and offsetting under Rule 2201. In addition, the applicant stated that the units were replaced with a fully electric compressors, which do not emit criteria pollutants. Therefore, the emission reductions are considered permanent.

**E. Surplus**

According to Rule 2201, to be considered surplus, AER shall be in excess, at the time the application for an Emission Reduction Credit, of any emissions reduction which:

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

CUSA  
S-2199, 1104455

- Applicable emission requirements enforced by local and federal regulations and the permitted potential to emit are less strict than the calculated reductions in this project. Therefore, the emission reductions are surplus.
- Rule 4702 was work-shopped on 9/9/10 and the application was deemed complete on 12/13/10. The work-shopped rule's NOx limit is lower than the engine S-2199-5's historical actual NOx emissions; therefore, the rule's 11 ppmv @ 15% O2 NOx limit was used to calculate S-2199-5's HAE. Therefore, the emission reductions are surplus of draft Rule 4702.
- The 2007 Ozone and 2008 PM 2.5 attainment plans identify replacing some IC engines with electric motors as possible future control options. However, neither plan quantified any emissions reduction due to these possible future control measures. As no emission reductions are quantified in the plans, the proposed ERC's are surplus of any possible future control measure.

**F. Timely Application Submittal**

Section 5.5 of Rule 2301 states that ERC certificate applications for reductions shall be submitted within 180 days after the emission reduction occurs. The ERC application was received on 9/23/10. Engines S-2199-5 and '6 ceased operation on 5/10/10 and 9/2/10, respectively. Therefore, the application was submitted in a timely fashion.

**V. Recommendation**

Issue ERC Certificates S-3533-1, 2, '3, '4, and '5 to CUSA with the quarterly values posted in the table below (see draft ERCs in Appendix F).

Quarter	ERCs (lb/qtr)				
	VOC S-3533-1	NOx S-3533-2	CO S-3533-3	PM S-3533-4	SOx S-3533-5
1	6	181	8751	101	1
2	4	188	9390	106	1
3	9	224	10,714	124	1
4	8	219	10,517	122	1

**APPENDIX A**

**PTOs S-2199-5 and '5**

**LEGAL OWNER OR OPERATOR:** CHEVRON USA PRODUCTION INC  
**MAILING ADDRESS:** PO BOX 1392  
BAKERSFIELD, CA 93302

**LOCATION:** WESTERN GAS STATIONARY SOURCE

**SECTION:** 17 **TOWNSHIP:** 30S **RANGE:** 22E

**INSPECT PROGRAM PARTICIPANT:** NO

**EQUIPMENT DESCRIPTION:**  
150 BHP NATURAL GAS-FIRED RICH-BURN INGERSOLL RAND MODEL XVG IC ENGINE  
SERVED BY A NON SELECTIVE CATALYTIC REDUCTION SYSTEM (MODEL #P-108, S/N  
4AV164) AND AN OXYGEN CONTROLLER

## CONDITIONS

---

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801, 3.0 and Rule 407 (Kern County)] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational nonresettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. NOx emissions (referenced as NO2) shall not exceed 25.0 ppmvd @ 15% O2. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. CO emissions shall not exceed 2000 ppmvd @ 15% O2. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
6. VOC emissions (referenced as methane) shall not exceed 100.0 ppmvd @ 15% O2. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
7. PM10 emissions shall not exceed 0.0194 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
8. This unit shall be fired only on PUC quality natural gas with a sulfur content not exceeding 1.0 grains per 100 dscf. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Source testing to measure NOx, CO, and VOC emissions shall be conducted at least once every 24 months by an independent testing laboratory and shall be witnessed by the District. [District Rules 2520, 9.3.2, 4701, 6.3.1 and 4702, 6.3.1] Federally Enforceable Through Title V Permit
10. Testing and sample collection shall be either District-witnessed or District-authorized, and shall be performed by an ARB-certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
11. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of the three runs are above an applicable limit the test cannot be used to demonstrate compliance with that applicable limit. [District Rule 1081 and District NSR Rule] Federally Enforceable Through Title V Permit
12. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

14. 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
15. Compliance with the NO<sub>x</sub> emission limit shall be determined using EPA Method 7E or ARB Method 100. [District Rules 1081, 4701 and 4702] Federally Enforceable Through Title V Permit
16. Compliance with the CO emission limit shall be determined using EPA Method 10 or ARB Method 100. [District Rules 1081, 4701 and 4702] Federally Enforceable Through Title V Permit
17. Compliance with the VOC emission limit shall be determined using EPA Methods 18, 25A, or 25B, or ARB Method 100. [District Rules 1081, 4701 and 4702] Federally Enforceable Through Title V Permit
18. Stack gas oxygen concentration shall be determined using EPA Method 3 or 3A, or ARB Method 100. [District Rules 1081, 4701 and 4702] Federally Enforceable Through Title V Permit
19. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> 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 Rule 4702] Federally Enforceable Through Title V Permit
20. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration specified in District Rule 4702, 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 Rule 4702] Federally Enforceable Through Title V Permit
21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
22. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (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
23. 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
24. 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

25. The permittee shall maintain records, on a monthly basis, that contain the following information: (1) total hours of operation; (2) type and quantity of fuel used; (3) maintenance or modifications performed; (4) monitoring data; and (5) compliance source test results. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
26. The operator of an internal combustion (IC) engine shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
27. An engine operating log shall be maintained for the each unit of the group. The log shall include, on a monthly basis, the total hours of operation, a record of the source and quantity of natural gas used, preventative and corrective maintenance and modifications performed and compliance source test results. [District Rule 2520, 9.3.2 and 4702, 6.2] Federally Enforceable Through Title V Permit
28. {2434} If the engine is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. {1958} All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]



**LEGAL OWNER OR OPERATOR:** CHEVRON USA PRODUCTION INC  
**MAILING ADDRESS:** PO BOX 1392  
BAKERSFIELD, CA 93302

**LOCATION:** WESTERN GAS STATIONARY SOURCE

**SECTION:** 17 **TOWNSHIP:** 30S **RANGE:** 22E

**INSPECT PROGRAM PARTICIPANT:** NO

**EQUIPMENT DESCRIPTION:**  
330 BHP INGERSOLL RAND GAS FIRED RICH BURN IC ENGINE MODEL SVG WITH NSCR;  
#UC12, S/N 6BS275

## CONDITIONS

---

1. Particulate emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201] Federally Enforceable Through Title V Permit
2. This unit shall be fired only on PUC quality natural gas with a total sulfur content not exceeding 1.0 grains/100 dscf. [District Rules 2201, 4801, 3.0 and Rule 407 (Kern County)] Federally Enforceable Through Title V Permit
3. Emission rates shall not exceed any of the following: NOx (as NO<sub>2</sub>): 25 ppmvd @ 15% O<sub>2</sub>, VOC: 100 ppmvd @ 15% O<sub>2</sub>, CO: 2000 ppmvd @ 15% O<sub>2</sub>, or PM<sub>10</sub>: 0.075 g/hp-hr. [District Rules 2201, 4701, & 4702] Federally Enforceable Through Title V Permit
4. Performance testing to measure NOx, CO, and VOC emissions shall be conducted at least every 24 months by an independent testing laboratory and shall be witnessed by the District. [District Rules 2520, 9.3.2, 4701, 6.3.1 and 4702, 6.3.1] Federally Enforceable Through Title V Permit
5. Performance testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any test, and a test plan must be submitted for approval 15 days prior to testing. The results of each test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
6. Testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
7. The following test methods shall be used: NOx (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 25 or EPA Method 18 referenced as methane, and ASTM D 3246 or double GC for total fuel gas sulfur content. [District Rules 2520, 9.4.2, 1081 and 4701, 6.4 and 4702, 6.4] Federally Enforceable Through Title V Permit
8. The permittee shall monitor and record the stack concentration of NOx (as NO<sub>2</sub>), CO, and O<sub>2</sub> at least once every calendar quarter using a portable emission monitor that meets District specifications. Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. 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 if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4701, 5.4.3 and 4702, 5.6.9] Federally Enforceable Through Title V Permit

9. If the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the permitted 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 Rule 4701 and 4702] Federally Enforceable Through Title V Permit
10. 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 and District policy SSP-1810. 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, 4702 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4701 and 4702] Federally Enforceable Through Title V Permit
12. The permittee shall operate a nonresettable fuel meter and a nonresettable elapsed operating time meter. The permittee shall maintain these meters in proper operating condition. The fuel meter shall be calibrated periodically per the recommendations of the manufacturer. [District Rule 4702, 5.6.6] Federally Enforceable Through Title V Permit
13. An engine operating log shall be maintained for the each unit of the group. The log shall include, on a monthly basis, the total hours of operation, a record of the source and quantity of natural gas used, preventative and corrective maintenance and modifications performed and compliance source test results. [District Rule 2520, 9.3.2 and 4702, 6.2] Federally Enforceable Through Title V Permit
14. 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. The permittee may request a change to the I&M plan at any time. [District Rule 4702, 6.5] Federally Enforceable Through Title V Permit
15. Permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. The operator of an internal combustion (IC) engine shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

# APPENDIX B

## Fuel Gas Analysis



**Chevron U.S.A., Inc.**  
**IC Engine UC-12**

**Project 104-5409**  
**Laboratory ID 070095-01**

Sample Description: Natural Gas  
 Sampled by: Matt Bryan

Date Sampled: March 14, 2007  
 Date Received: March 15, 2007  
 Date Reported: March 15, 2007

**Fuel Gas Analysis Results**

CONSTITUENT	MOLE %	WT. %	CHONS Wt.%	
Oxygen	0.477	0.799	Carbon	70.84
Nitrogen	1.222	1.791	Hydrogen	21.64
Carbon Dioxide	2.939	6.770	Oxygen	5.72
Carbon Monoxide	0.000	0.000	Nitrogen	1.79
Hydrogen Sulfide	0.000	0.000	Sulfur	0.00
Methane	83.602	70.200	H/C	0.306
Ethane	9.503	14.957	H <sub>2</sub> S ppmv	H <sub>2</sub> S gr/100 SCF*
Propane	2.021	4.664	ND < 1	ND < 0.06
Isobutane	0.054	0.164	TRS ppmv	TRS gr/100 SCF*
N-Butane	0.096	0.293	ND < 1	ND < 0.06
Isopentane	0.018	0.068		
N-Pentane	0.018	0.067		
Hexanes	0.050	0.227		
<b>Total(s)</b>	<b>100.000</b>	<b>100.000</b>		

\* Reported as Sulfur

Specific Gravity (Air = 1)	0.6597
Specific Volume (cf/lb)	19.86
Gross Calorific Value, Dry (Btu/cf)	1074.99
Gross Calorific Value, Wet (Btu/cf)	1053.43
Gross Calorific Value, Dry (Btu/lb)	21353.54
Net Calorific Value, Dry (Btu/cf)	971.53
Net Calorific Value, Wet (Btu/cf)	952.05
Compressibility Factor "Z" @ 60° F, 1 atm	0.9973
EPA F-Factor @ 68° F (DSCF/MMBtu)	8654
EPA F-Factor @ 60° F (DSCF/MMBtu)	8524

**References:**

ASTM Methods D1945-96, D3588-98 & D6228-98  
 Double GC, TCD, FPD  
 TRS = Total Reduced Sulfur as H<sub>2</sub>S

*Terry M. Rowles*  
 Terry M. Rowles, Laboratory Manager

**"Professional Air Emissions Testing and Analytical Services"**



Chevron U.S.A., Inc.  
IC Engine UC-12

Project 104-5409A  
Laboratory ID 070206-01

Sample Description: Natural Gas  
Sampled by: Jeff Beecher

Date Sampled: May 23, 2007  
Date Received: May 24, 2007  
Date Reported: May 24, 2007

**Fuel Gas Analysis Results**

CONSTITUENT	MOLE %	WT. %	CHONS Wt.%	
Carbon Dioxide	3.959	9.014	Carbon	71.11
Oxygen	0.130	0.215	Hydrogen	21.48
Nitrogen	0.446	0.646	Oxygen	6.77
Carbon Monoxide	0.000	0.000	Nitrogen	0.65
Hydrogen Sulfide	0.000	0.000	Sulfur	0.00
Methane	83.492	69.293	H/C	0.302
Ethane	9.309	14.481		
Propane	2.412	5.603		
Isobutane	0.068	0.203	H <sub>2</sub> S ppmv	H <sub>2</sub> S gr/100 SCF*
N-Butane	0.108	0.325	ND < 1	ND < 0.06
Isopentane	0.013	0.047		
N-Pentane	0.009	0.032	TRS ppmv	TRS gr/100 SCF*
Hexanes	0.054	0.240	ND < 1	ND < 0.06
<b>Total(s)</b>	<b>100.000</b>	<b>100.000</b>		

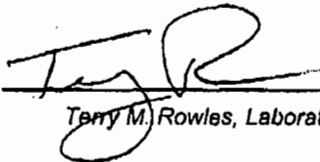
\* Reported as Sulfur

Specific Gravity (Air = 1)	0.6674
Specific Volume (cf/lb)	19.63
Gross Calorific Value, Dry (Btu/cf)	1080.82
Gross Calorific Value, Wet (Btu/cf)	1059.05
Gross Calorific Value, Dry (Btu/lb)	21219.61
Net Calorific Value, Dry (Btu/cf)	976.94
Net Calorific Value, Wet (Btu/cf)	957.26
Compressibility Factor "Z" @ 60° F, 1 atm	0.9972

EPA F-Factor @ 68° F (DSCF/MMBtu)	8669
EPA F-Factor @ 60° F (DSCF/MMBtu)	8539

References:

ASTM Methods D1945-96, D3588-98 & D6228-98  
Double GC, TCD, FPD  
TRS = Total Reduced Sulfur as H<sub>2</sub>S

  
Terry M. Rowles, Laboratory Manager

**"Professional Air Emissions Testing and Analytical Services"**

18828 Highway 65 • Bakersfield, CA 93308  
(661) 391-0112 • (661) 391-0153 Fax



**Chevron U.S.A., Inc.**  
**IC Engine UC-12**

**Project 104-6268**  
**Laboratory ID 090039-01**

Sample Description: Natural Gas  
 Sampled by: Jesus Garcia

Date Sampled: February 12, 2009  
 Date Received: February 12, 2009  
 Date Reported: February 12, 2009

**Fuel Gas Analysis Results**

CONSTITUENT	MOLE %	WT. %	CHONS Wt. %	
Carbon Dioxide	3.995	9.069	Carbon	70.97
Oxygen	0.193	0.318	Hydrogen	21.41
Nitrogen	0.491	0.710	Oxygen	6.91
Carbon Monoxide	0.000	0.000	Nitrogen	0.71
Hydrogen Sulfide	0.000	0.000	Sulfur	0.00
Methane	83.029	68.711	H/C	0.302
Ethane	9.774	15.160		
Propane	2.249	5.116		
Isobutane	0.067	0.200	H <sub>2</sub> S ppmv	H <sub>2</sub> S gr/100 SCF*
N-Butane	0.111	0.333	ND < 1	ND < 0.06
Isopentane	0.018	0.066		
N-Pentane	0.020	0.073	TRS ppmv	TRS gr/100 SCF*
Hexanes	0.055	0.245	ND < 1	ND < 0.06
<b>Total(s)</b>	<b>100.000</b>	<b>100.000</b>	* Reported as Sulfur	

Specific Gravity (Air = 1)	0.6693
Specific Volume (cf/lb)	19.58
Gross Calorific Value, Dry (Btu/cf)	1081.03
Gross Calorific Value, Wet (Btu/cf)	1059.25
Gross Calorific Value, Dry (Btu/lb)	21162.92
Net Calorific Value, Dry (Btu/cf)	977.18
Net Calorific Value, Wet (Btu/cf)	957.49
Compressibility Factor "Z" @ 60° F, 1 atm	0.9972
<b>EPA F-Factor @ 68° F (DSCF/MMBtu)</b>	<b>8668</b>
<b>EPA F-Factor @ 60° F (DSCF/MMBtu)</b>	<b>8538</b>

**References:**

ASTM Methods D1945-03, D3588-98 (2003), D6228-98 (2003)

Double GC, TCD, FPD

TRS = Total Reduced Sulfur as H<sub>2</sub>S

  
 Lisa Marijott-Smith, Laboratory Manager

**"Professional Air Emissions Testing and Analytical Services"**

18828 Highway 65 • Bakersfield, CA 93308  
 (661) 391-0112 • (661) 391-0153 Fax

# APPENDIX C

## Source Test Results

**Chevron U.S.A., Inc.**  
**Cymric**  
**IC Engine P-108**

**Project 104-4942B**  
**May 30, 2006**  
**PTO No. S-2199-5-5**

Pollutant	ppm	ppm @ 15% O <sub>2</sub>	lb/hr	lb/MMBtu	Permit Limits
NOx	61.0 ✓	17.4 ✓	0.07	0.0638 ✓	50 ppm @ 15% O <sub>2</sub>
	55.4 ✓	15.9 ✓	0.07	0.0581 ✓	
	61.5 ✓	17.7 ✓	0.08	0.0646 ✓	
Mean	59.3	17.0	0.07	0.0622	
CO	3346 ✓	957 ✓	2.44	2.1301 ✓	2000 ppm @ 15% O <sub>2</sub>
	4439 ✓	1272 ✓	3.39	2.8314 ✓	
	4371 ✓	1255 ✓	3.33	2.7935 ✓	
Mean	4052	1161	3.05	2.5850	
VOC	26.4	7.5	0.01	0.0096	250 ppm @ 15% O <sub>2</sub>
C <sub>2</sub> -C <sub>6</sub> + as C <sub>1</sub>	31.2	8.9	0.01	0.0114	
Mean	30.3	8.7	0.01	0.0111	
Mean	29.3	8.4	0.01	0.0107	



**Chevron U.S.A., Inc.  
Cymric  
IC Engine P-108**

**Project 104-6008  
May 20, 2008  
Permit No. S-2199-5-8**

Pollutant	ppm	ppm @ 15% O <sub>2</sub>	lb/hr	lb/MMBtu	Permit Limits
NOx	55.3	16.3	0.06	0.0597	
	54.9	16.1	0.06	0.0589	
	44.3	13.0	0.05	0.0475	
Mean	51.5	15.1	0.06	0.0554	25 ppm @ 15% O <sub>2</sub>
CO	90	27	0.06	0.0591	
	81	24	0.05	0.0529	
	159	47	0.11	0.1038	
Mean	110	33	0.07	0.0719	2000 ppm @ 15% O <sub>2</sub>
VOC	3.9	1.1	0.002	0.00146	
	2.4	0.7	0.001	0.00090	
	3.3	1.0	0.001	0.00123	
Mean	3.2	0.9	0.001	0.00120	100 ppm @ 15% O <sub>2</sub>

**Chevron U.S.A., Inc.  
Cymric  
IC Engine P-108**

**Project 104-6008  
May 20, 2008**

**EPA Method 19  
Sulfur Emissions as SO<sub>2</sub>  
@ 68° F & 29.92 "Hg**

Unit	Sulfur in Fuel Gas as H <sub>2</sub> S	Sulfur in Fuel Gas as S		Sulfur in Exhaust as SO <sub>2</sub>	
	ppm	gr/scf	gr/100scf	lb/hr	lb/MMBtu
P-108	<1	<0.0006	<0.058	0.0002	<0.0002

# AEROS ENVIRONMENTAL, INC.

## Summary Of Results

**Chevron U.S.A., Inc.**  
**Cymric**  
**IC Engine UC-12**

**Project 104-5409A**  
**May 23, 2007**  
**Permit No. S-2199-6-7**

Pollutant	ppm	ppm @ 3% O <sub>2</sub>	ppm @ 15% O <sub>2</sub>	lb/MMBtu	gm/Bhp-hr	Permit Limits
NOx	24.1	20.7	6.8	0.0250	0.096	
	26.7	22.9	7.5	0.0276	0.106	
	20.1	17.2	5.7	0.0208	0.080	
Mean	23.6	20.3	6.7	0.0245	0.094	25 ppm @ 15% O <sub>2</sub>
CO	3459	2972	980	2.1819	8.406	
	3192	2734	901	2.0067	7.731	
	3571	3080	1009	2.2461	8.653	
Mean	3407	2922	963	2.1449	8.263	1000 ppm @ 15% O <sub>2</sub>
VOC C <sub>3</sub> - C <sub>6</sub> + as C <sub>1</sub>	2.1	1.8	0.6	0.0008	0.003	
	2.1	1.8	0.6	0.0008	0.003	
	1.5	1.3	0.4	0.0005	0.002	
Mean	1.9	1.6	0.5	0.0007	0.003	100 ppm @ 15% O <sub>2</sub>
Fuel Sulfur (SOX as SO <sub>2</sub> )	As H <sub>2</sub> S In Fuel Gas <1.0				gr/100 scf <0.06	1.0 gr/100 scf
Comments:						
<div style="font-size: 2em; font-weight: bold;">R</div>						
<div style="font-size: 1.5em;">8/6/07</div>						

Chevron U.S.A., Inc.  
 Cymric  
 IC Engine UC-12

Project 104-6268  
 February 12, 2009  
 Permit No. S-2199-6-8

Pollutant	ppm	ppm @ 15% O <sub>2</sub>	lb/hr	g/Bhp-hr	lb/MMBtu	Permit Limits
NOx	39.7	11.3	0.11	0.160	0.0414	
	37.2	10.6	0.11	0.150	0.0389	
	46.5	13.3	0.13	0.187	0.0486	
Mean	41.1	11.7	0.12	0.166	0.0430	25 ppm @ 15% O <sub>2</sub>
CO	2196	627	3.59	5.375	1.3951	
	2132	609	3.86	5.223	1.3558	
	2054	587	3.54	5.037	1.3074	
Mean	2127	608	3.66	5.212	1.3528	2000 ppm @ 15% O <sub>2</sub>

Chevron U.S.A., Inc.  
 Cymric  
 IC Engine UC-12

Project 104-6268  
 February 12, 2009

EPA Method 19  
 Sulfur Emissions as SO<sub>2</sub>  
 @ 68° F & 29.92 "Hg

Unit	Sulfur in Fuel Gas as H <sub>2</sub> S	Sulfur in Fuel Gas as S		Sulfur in Exhaust as SO <sub>2</sub>		
	ppm	gr/scf	gr/100scf	g/Bhp-hr	lb/hr	lb/MMBtu
UC-12	<1.0	<0.0006	<0.06	<0.0006	<0.0004	<0.0002

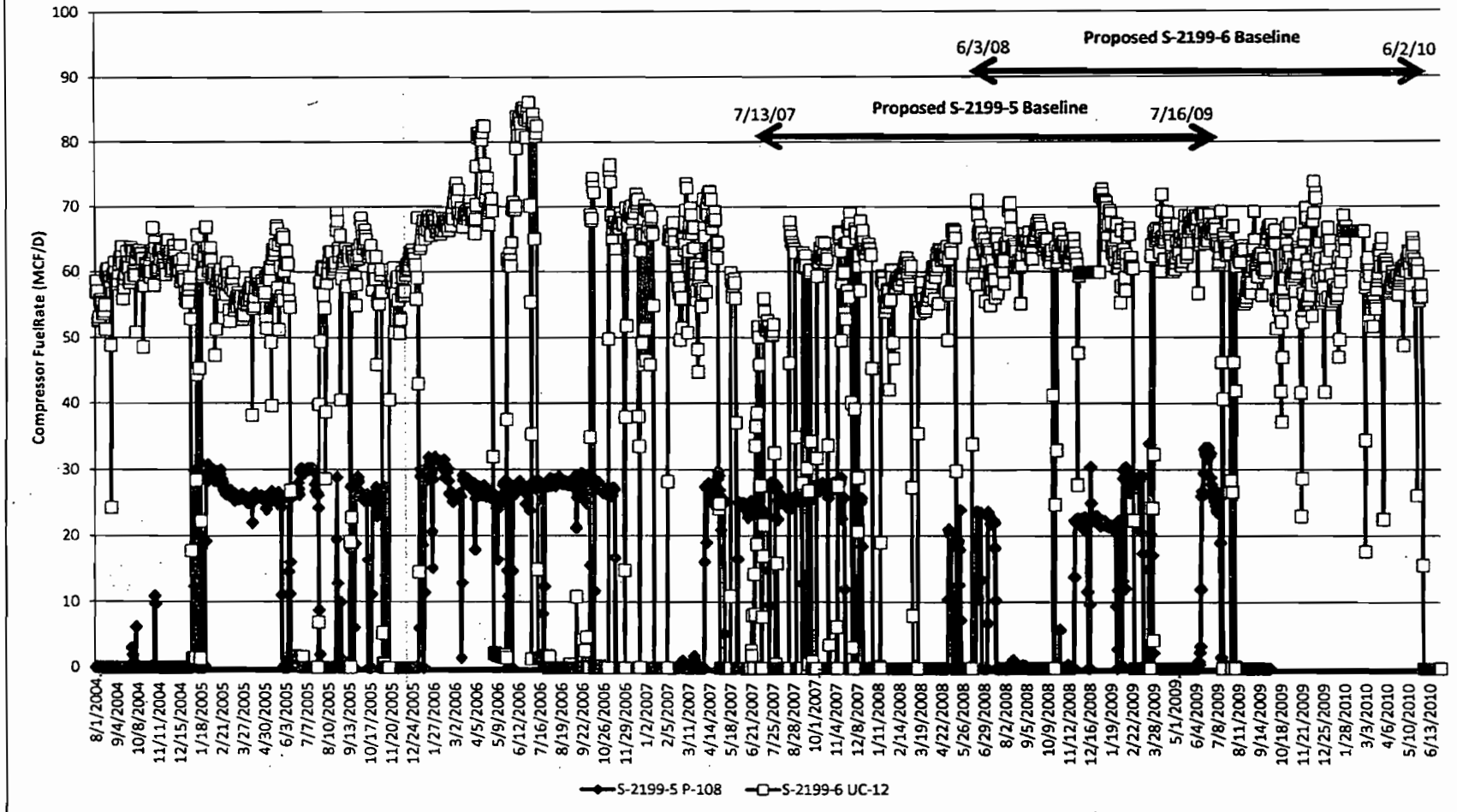
# APPENDIX D

## Fuel Use

APPENDIX D - FUEL USE

**Chevron USA, Inc.**  
**172 Booster Compressors**  
**P-108 and UC-12 Fuel Rates**

ERC Project  
# S-1104455



**Figure 1**

# APPENDIX E

## Emission Calculations

Date	Fuel Flow Mscf	Energy Consumed MMBtu
Subtotal 13 Jul to 31 Jul 2007	444	472.9
Subtotal Aug 2007	774.00	830.9
Subtotal Sep 2007	595.00	638.6
	1813.00	1942.472
Subtotal Oct 2007	848.00	909.8
Subtotal Nov 2007	475.00	509.8
Subtotal Dec 2007	155.00	166.1
	1478.00	1585.674
Subtotal Jan 2008	0	0.0
Subtotal Feb 2008	0	0.0
Subtotal Mar 2008	0	0.0
	0	0
Subtotal Apr 2008	0	0.0
Subtotal May 2008	251.00	264.7
Subtotal Jun 2008	162.00	169.8
	413.00	434.4888
Subtotal Jul 2008	283.00	297.6
Subtotal Aug 2008	1.00	1.1
Subtotal Sep 2008	0	0.0
	284.00	298.6132
Subtotal Oct 2008	6.00	6.4
Subtotal Nov 2008	215.00	233.3
Subtotal Dec 2008	613.00	646.9
	834.00	886.6235
Subtotal Jan 2009	609.00	623.7
Subtotal Feb 2009	715.00	736.4
Subtotal Mar 2009	417.00	432.0
	1741.00	1792.3443
Subtotal Apr 2009	0	0.0
Subtotal May 2009	0	0.0
Subtotal Jun 2009	564.00	573.6
	564.00	573.576
Subtotal 1 Jul to 12 Jul 2009	305.00	319.3

Representative Operation Dates: 13-Jul-2007 to 12-Jul-2009

Source Test 1 Results

30-May-06	NOx	SOx	PM-10	CO	VOC
lb/MMBtu	0.07	0	///	2.585	0.0107
ppmv (15% O2)	17	0	///	1161	8.4
Permit Limits					
lb/MMBtu		0.16297	0.0194		
ppmv (15% O2)	50	31.8		2000	250

Source Test 2 Results

20-May-08	NOx	SOx	PM-10	CO	VOC
lb/MMBtu	0.0562	0.0002	///	0.0719	0.0012
ppmv (15% O2)	15.1		///	33	0.9
Permit Limits					
lb/MMBtu		0.16297	0.0194		
ppmv (15% O2)	25	31.8		2000	100

Baseline Emission Factors (Average of Source Test Results):

lb/MMBtu	NOx*	SOx	PM-10	CO	VOC
	0.0405	0.0001	0.0194	1.32845	0.00595

\*0.0405 lb/MMBtu = 11 ppmv (work-shopped Rule 4702 limit)

Calculation Equation:

$$Q4-07 \text{ NOx} = (\text{NOx EF, lb-NOx/MMBtu}) * (\text{Energy Q4-07, MMBtu}) = \text{lb-NOx/Q4-07}$$

S-2199-5	NOx	SOx	PM-10	CO	VOC
*Q3-07	78.7	0.2	37.7	2,580.5	11.6
Q4-07	64.2	0.2	30.8	2,106.5	9.4
Q1-08	0.0	0.0	0.0	0.0	0.0
Q2-08	17.6	0.0	8.4	577.2	2.6
Q3-08	12.1	0.0	5.8	396.7	1.8
Q4-08	35.9	0.1	17.2	1,177.8	5.3
Q1-09	72.6	0.2	34.8	2,381.0	10.7
Q2-09	23.2	0.1	11.1	762.0	3.4
*Q3-09	12.9	0.0	6.2	424.1	1.9

\* Partial Quarters

Calculated Actual Average Quarterly Emissions:

S-2199-5	NOx	SOx	PM-10	CO	VOC
Q1	36.3	0.1	17.4	1,190.5	5.3
Q2	20.4	0.1	9.8	669.6	3.0
Q3	51.8	0.1	24.8	1,700.7	7.6
Q4	50.1	0.1	24.0	1,642.2	7.4

USA Permit S-2199-6 Compressor UC-12

Date	Fuel Flow Mscf	Energy Consumed MMBtu
Subtotal 3 Jun to 30 Jun 2008	1322.00	1385.9
Subtotal Jul 2008	1897.00	2002.2
Subtotal Aug 2008	1977.00	2093.4
Subtotal Sep 2008	1951.00	2065.4
	5825.00	6161.0475
Subtotal Oct 2008	1687.0	1805.4
Subtotal Nov 2008	1830.0	1977.9
Subtotal Dec 2008	1860.0	1962.2
	5377.00	5745.3968
Subtotal Jan 2009	2085.0	2134.8
Subtotal Feb 2009	1442.0	1482.9
Subtotal Mar 2009	407.0	424.1
	3934.00	4041.743
Subtotal Apr 2009	1949.0	1889.1
Subtotal May 2009	2011.0	1947.8
Subtotal Jun 2009	1992.0	2004.9
	5952.00	5841.8016
Subtotal Jul 2009	1724.0	1798.9
Subtotal Aug 2009	1677.0	1727.3
Subtotal Sep 2009	1869.0	1981.5
	5270.00	5507.6776
Subtotal Oct 2009	1819.0	1916.3
Subtotal Nov 2009	1748.0	1837.9
Subtotal Dec 2009	1888.0	1985.6
	5455.00	5739.77813
Subtotal Jan 2010	1863.0	1956.0
Subtotal Feb 2010	1848.0	1970.1
Subtotal Mar 2010	1662.0	1790.3
	5373.00	5716.4544
Subtotal Apr 2010	1771.0	1907.7
Subtotal May 2010	1827.0	1954.1
Subtotal 1 Jun to 2 Jun 2010	72.0	76.7
	3670.00	3938.5561

Representative Operation Dates: 03-Jun-2008 to 02-Jun-2010

Source Test 1 Results

23-May-07	NOx	SOx	PM-10	CO	VOC
lb/MMBtu	0.0245	0.0002		2.1449	0.0007
ppmv (15% O2)	6.7			963	0.5
Permit Limits					
lb/MMBtu	0.16297	0.0194			
ppmv (15% O2)	25	31.8		1000	100

Source Test 2 Results

12-Feb-09	NOx	SOx	PM-10	CO	VOC
lb/MMBtu	0.043	0.0002		1.3528	0
ppmv (15% O2)	11.7			608	0
Permit Limits					
lb/MMBtu	0.16297	0.0194			
ppmv (15% O2)	25	31.8		2000	100

Baseline Emission Factors (Average of Source Test Results):

	NOx	SOx	PM-10	CO	VOC
lb/MMBtu	0.03375	0.0002	0.0194	1.74885	0.0004

Calculation Equations:

Q4-07 NOx = (NOx EF, lb-NOx/MMBtu) \* (Energy Q4-07, MMBtu) = lb-NOx/Q4-07

Lb-S / Q4 \* 2 Lb-SO2 / Lb-S = Lb-SO2/ Q4

S-2199-6	NOx	SOx	PM-10	CO	VOC
*Q2-08	46.8	0.3	26.9	2,423.6	0.5
Q3-08	207.9	1.2	119.5	10,774.7	2.2
Q4-08	193.9	1.1	111.5	10,047.8	2.0
Q1-09	136.4	0.8	78.4	7,068.4	1.4
Q2-09	197.2	1.2	113.3	10,216.4	2.0
Q3-09	185.9	1.1	106.8	9,632.1	1.9
Q4-09	193.7	1.1	111.4	10,038.0	2.0
Q1-10	192.9	1.1	110.9	9,997.2	2.0
*Q2-10	132.9	0.8	76.4	6,887.9	1.4

\* Partial Quarters

Calculated Actual Average Quarterly Emissions:

S-2199-6	NOx	SOx	PM-10	CO	VOC
Q1	164.7	1.0	94.7	8,532.8	1.7
Q2	188.4	1.1	108.3	9,764.0	2.0
Q3	196.9	1.2	113.2	10,203.4	2.0
Q4	193.8	1.1	111.4	10,042.9	2.0



# APPENDIX F

## Draft ERC Certificates

San Joaquin Valley  
Air Pollution Control District

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308

**Emission Reduction Credit Certificate**  
**S-3533-1**

ISSUED TO: CHEVRON USA PRODUCTION INC  
ISSUED DATE: <DRAFT>  
LOCATION OF REDUCTION: WESTERN GAS STATIONARY SOURCE

**For VOC Reduction In The Amount Of:**

Quarter 1	Quarter 2	Quarter 3	Quarter 4
6 lbs	4 lbs	9 lbs	8 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source  
 Shutdown of Emissions Units  
 Other

Shutdown IC engines S-2199-5 and '6.

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

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308

**Emission Reduction Credit Certificate**  
**S-3533-2**

ISSUED TO: CHEVRON USA PRODUCTION INC  
ISSUED DATE: <DRAFT>  
LOCATION OF REDUCTION: WESTERN GAS STATIONARY SOURCE

**For NOx Reduction In The Amount Of:**

Quarter 1	Quarter 2	Quarter 3	Quarter 4
181 lbs	188 lbs	224 lbs	219 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source  
 Shutdown of Emissions Units  
 Other

Shutdown IC engines S-2199-5 and '6.

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

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308

**Emission Reduction Credit Certificate**  
**S-3533-3**

ISSUED TO: CHEVRON USA PRODUCTION INC  
ISSUED DATE: <DRAFT>  
LOCATION OF REDUCTION: WESTERN GAS STATIONARY SOURCE

**For CO Reduction In The Amount Of:**

Quarter 1	Quarter 2	Quarter 3	Quarter 4
8,751 lbs	9,390 lbs	10,714 lbs	10,517 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source  
 Shutdown of Emissions Units  
 Other

Shutdown IC engines S-2199-5 and '6.

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

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308

**Emission Reduction Credit Certificate**  
**S-3533-4**

ISSUED TO: CHEVRON USA PRODUCTION INC  
ISSUED DATE: <DRAFT>  
LOCATION OF REDUCTION: WESTERN GAS STATIONARY SOURCE

For PM10 Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
101 lbs	106 lbs	124 lbs	122 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source  
 Shutdown of Emissions Units  
 Other

Shutdown IC engines S-2199-5 and '6.

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

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308

**Emission Reduction Credit Certificate**  
**S-3533-5**

ISSUED TO: CHEVRON USA PRODUCTION INC  
ISSUED DATE: <DRAFT>  
LOCATION OF REDUCTION: WESTERN GAS STATIONARY SOURCE

For SOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
1 lbs	1 lbs	1 lbs	1 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source  
 Shutdown of Emissions Units  
 Other

Shutdown IC engines S-2199-5 and '6.

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