



JUN 15 2011

William Fall
Chevron USA, Inc.
PO Box 1392
bakersfield, CA 93302

**Re: Revised Preliminary Decision - Emission Reduction Credits
Project Number: S-1105004**

Dear Mr. Fall:

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 shut down and removed four Solar gas turbines (S-1131-970, '-973, '-1073, and '-974), at Kern River oil field. Please note that this revised preliminary decision, which replaces an April 6, 2011 preliminary decision, includes a different baseline period that more accurately reflects normal operation of the subject units and increases the quantity of ERCs. The quantity of ERCs proposed for banking is 2536 lb-VOC/year, 22,189 lb-NOx/year, 102,101 lb-CO/year, 7954 lb-PM10/year, and 244 lb-SOX/year.

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. Steve Davidson of Permit Services at (661) 392-5618.

Sincerely,

David Warner
Director of Permit Services

DW:SDD/dg

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)
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Southern Region
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Bakersfield, CA 93308-9725
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JUN 15 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: Revised Preliminary Decision - Emission Reduction Credits
Project Number: S-1105004**

Dear Mr. Rios:

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 shut down and removed four Solar gas turbines (S-1131-970, '-973, '-1073, and '-974), at Kern River oil field. Please note that this revised preliminary decision, which replaces an April 6, 2011 preliminary decision, includes a different baseline period that more accurately reflects normal operation of the subject units and increases the quantity of ERCs. The quantity of ERCs proposed for banking is 2536 lb-VOC/year, 22,189 lb-NOx/year, 102,101 lb-CO/year, 7954 lb-PM10/year, and 244 lb-SOX/year.

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JUN 15 2011

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

**Re: Revised Preliminary Decision - Emission Reduction Credits
Project Number: S-1105004**

Dear Mr. Tollstrup:

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 shut down and removed four Solar gas turbines (S-1131-970, '-973, '-1073, and '-974), at Kern River oil field. Please note that this revised preliminary decision, which replaces an April 6, 2011 preliminary decision, includes a different baseline period that more accurately reflects normal operation of the subject units and increases the quantity of ERCs. The quantity of ERCs proposed for banking is 2536 lb-VOC/year, 22,189 lb-NOx/year, 102,101 lb-CO/year, 7954 lb-PM10/year, and 244 lb-SOX/year.

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.

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Sincerely,

David Warner
Director of Permit Services

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**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, Inc. for the shut down and removed four Solar gas turbines (S-1131-970, '-973, '-1073, and '-974), at Kern River oil field. Please note that this revised preliminary decision, which replaces an April 6, 2011 preliminary decision, includes a different baseline period that more accurately reflects normal operation of the subject units and increases the quantity of ERCs. The quantity of ERCs proposed for banking is 2536 lb-VOC/year, 22,189 lb-NOx/year, 102,101 lb-CO/year, 7954 lb-PM10/year, and 244 lb-SOX/year.

The analysis of the regulatory basis for this proposed action, Project #S-1105004, is available for public inspection at 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.**

REVISED EMISSION REDUCTION CREDIT BANKING APPLICATION REVIEW

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

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

Facility: S-1131
Permit Numbers: S-1131-970, '-973, '-974, and '-1079

ERC Certificate Numbers: S-3544-1, '-2, '-3, -4, and '-5
S-3604-1, '-2, '-3, -4, and '-5

Project Number: S-1105004

Date Received: November 30, 2010
Date Complete: December 16, 2010

Engineer: Steve Davidson
Date: March 17, 2011

Lead Engineer: Allan Phillips, Supervising AQE

On April 6, 2011 the District made its preliminary decision on the subject ERC applications. On 4/25/11, Chevron provided comments that indicated that a different baseline period should have been used to determine the quantity of ERCs. The District concurs, and has re-evaluated the applications and identified a different baseline period that more accurately reflects normal operation of the subject units and increases the quantity of ERCs.

I. SUMMARY:

Chevron USA has permanently shut down and removed four Solar gas turbines (S-1131-970, '-973, '-1073, and '-974). Chevron USA is requesting emission reduction credit (ERC) banking certificates for VOC, NO_x, CO, PM₁₀, and SO_x. The following emission reductions have been found to qualify for banking:

		ERC (b)			
ERC #		Q1	Q2	Q3	Q4
S-3544-1	VOC	346	378	292	308
S-3544-2	NOx	3027	3303	2542	2691
S-3544-3	CO	17,310	18,804	14,712	15,270
S-3544-4	PM10	1086	1185	913	966
S-3544-5	SOx	33	36	29	30
		ERC (b)			
ERC #		Q1	Q2	Q3	Q4
S-3604-1	VOC	223	345	388	256
S-3604-2	NOx	1948	3037	3398	2243
S-3604-3	CO	8128	9591	9625	8661
S-3604-4	PM10	699	1081	1219	805
S-3604-5	SOx	22	33	37	24

II. APPLICABLE RULES:

- Rule 2201 New and Modified Stationary Source Review Rule (December 18, 2008)
- Rule 2301 Emission Reduction Credit Banking (December 21, 1992)

III. PROJECT LOCATION:

The four Solar gas turbines are located Kern River Oilfield within Chevron's Kern County Heavy Oil Central stationary source.

ERC: S-3544

S-1131-970: A Fee lease #1, Section 25, Township 28S, Range 27E

S-1131-973: A Fee lease #2, Section 25, Township 28S, Range 27E

ERC: S-3604

S-1131-974: C Fee lease #2, Section 30, Township 28S, Range 27E

S-1131-1079: C Fee lease #1, Section 30, Township 28S, Range 27E

IV. METHOD OF GENERATING EMISSION REDUCTIONS:

The emission reductions are being generated by removing four natural gas fired Solar gas turbines.

Equipment Shut down:

PIG	Equipment
S-1131-970	COGENERATION UNIT #1 (NORTH UNIT) SOLAR CENTAUR TYPE H, 52.4 MMBTU/HR GAS FIRED TURBINE ENGINE, 3.725 MW, WITH WATER INJECTION AND STRUTHERS UNFIRED HEAT RECOVERY STEAM GENERATOR - LEASE FEE A
S-1131-973	COGENERATION UNIT #1 (WEST) SOLAR CENTAUR TYPE H, 52.4 MM BTU/HR GAS FIRED TURBINE ENGINE, 3.725 MW, WITH WATER INJECTION AND STRUTHERS UNFIRED HEAT RECOVERY STEAM GENERATOR - FEE A
S-1131-974	COGENERATION UNIT #2 (EAST): SOLAR CENTAUR TYPE H, 52.4 MMBTU/HR GAS FIRED TURBINE ENGINE, 3.725 MV, WITH WATER INJECTION AND STRUTHERS UNFIRED HEAT RECOVERY STEAM GENERATOR - LEASE FEE C
S-1131-1079	COGENERATION UNIT #1 (FEE C LEASE - WEST UNIT) SOLAR CENTAUR 50-T5901S, 48.7 MMBTU/HR GAS FIRED DOE CERAMIC GTE, 4.1 MW, WITH LUBE OIL MIST ELIMINATOR, UNFIRED HEAT RECOVERY STEAM GENERATOR, AND CONTINUOUS MONITORING SYSTEM

V. CALCULATIONS:

A. Assumptions and Emission Factors

The actual emissions will be calculated for each of the calendar quarters in the baseline period. The Historical Actual Emissions (HAE) will be calculated using actual fuel use data and source test results.

The applicant provided monthly fuel use data for the subject engines from the second quarter 2008 through the first quarter 2010.

Rule 2201 section 3.22 specifies the Historical Actual Emissions must be discounted for any emission reduction which is:

1. Required or encumbered by any laws, rules, regulations, agreement, orders, or permits

2. Attributed for a control measure noticed for workshop, or proposed or contained in a State Implementation plan
3. Proposed in the District's adopted air quality plan for attaining the reductions required by the California Clean Air Act.

The following tables lists the CO emissions based on source tests for the permit units. (See Appendix B).

The HAE emissions are based on the following criteria:

- NOx – Rule 4703 emissions limit
- CO, and SOx -- annual source tests.
- VOC – AP 42, Stationary Gas Turbines, Table 3.1-2a (VOC)
- PM10 – AP 42, Stationary Gas Turbines, Table 3.1-2a (PM10 - Total)

Emissions Factors for S-1131-970							
	NOx (Rule Limit)	SOx	PM10	CO	VOC		
Source Test Date	ppm (15% O ₂)	lb/MMBtu	lb/MMBtu	lb/MMBtu	ppm (15% O ₂)	lb/MMBtu	lb/MMBtu
2/2006	5	0.0184	0.0002	0.0066	43.6	0.0978	0.0021
2/2007	5	0.0184	0.0002	0.0066	50.1	0.1123	0.0021
2/2008	5	0.0184	0.0002	0.0066	50.1	0.1123	0.0021

Emissions Factors for S-1131-973							
	NOx (Rule Limit)	SOx	PM10	CO	VOC		
Source Test Date	ppm (15% O ₂)	lb/MMBtu	lb/MMBtu	lb/MMBtu	ppm (15% O ₂)	lb/MMBtu	lb/MMBtu
2/2006	5	0.0184	0.0002	0.0066	43.9	0.0984	0.0021
2/2007	5	0.0184	0.0002	0.0066	48.2	0.1081	0.0021
2/2008	5	0.0184	0.0002	0.0066	39.2	0.0879	0.0021

Emissions Factors for S-1131-974							
	NOx (Rule Limit)	SOx	PM10	CO	VOC		
Source Test Date	ppm (15% O ₂)	lb/MMBtu	lb/MMBtu	lb/MMBtu	ppm (15% O ₂)	lb/MMBtu	lb/MMBtu
2/2006	5	0.0184	0.0002	0.0066	45.4	0.1018	0.0021
2/2007	5	0.0184	0.0002	0.0066	43.6	0.0978	0.0021
2/2008	5	0.0184	0.0002	0.0066	34.1	0.0765	0.0021

Emissions Factors for S-1131-1079							
Source Test Date	NOx (Rule Limit)		SOx	PM10	CO		VOC
	ppm (15% O ₂)	lb/MMBtu	lb/MMBtu	lb/MMBtu	ppm (15% O ₂)	lb/MMBtu	lb/MMBtu
5/2006	5	0.0184	0.0002	0.0066	1.4	0.0031	0.0021
5/2007	5	0.0184	0.0002	0.0066	1.66	0.0037	0.0021
5/2008	5	0.0184	0.0002	0.0066	33.0 ¹	0.0740	0.0021

¹Permitted limit. – failed source test

No other rules have emission limits more strict than the source test results for SOx and CO. There are no control measures noticed for workshop or include in the air quality attainment plan that apply to this unit.

B. Baseline Period Determination

Please note that the subject four turbines were located at two different locations. Turbines S-1131-970 and 973 are located at site Fee A and turbines S-1131-974 and 1079 are located at site Fee C. These two locations are approximately 5 miles apart and have operated independently. Therefore, a separate baseline period will be determined for each locations. The same baseline period will be used for both turbines at each location.

Per the following sections of Rule 2201, baseline period is defined as:

- 3.8.1 two consecutive years of operation immediately prior to submission of the complete application; or
- 3.8.2 another time period of at least two consecutive years within the five years immediately prior to submission of the complete application as determined by the APCO as more representative of normal operation;

Turbine engines were shut down in October 2010. Chevron has indicated that the two consecutive years prior to the shutdown, i.e. October 2008 – 2010 is not representative of normal source operation because the turbines had several months of downtime in this period.

To determine what period (of at least two years) during the past five years is representative of normal operation the fuel use for each turbine setting (sites Fee A and Fee C) has been collected from Jan 1999 through Oct 2010 (a total of 142 months).

The average monthly fuel use over this period was determined, i.e. normal source operation. Next, within the past five years, the average monthly fuel use for every consecutive 24, 36, 48, and 60 month was determined. Then the average monthly fuel use for each of these periods was compared to the NSO average monthly fuel use. The period for which the average monthly fuel use most closely matched the NSO fuel use is the period that is most representative of normal source operation.

Please see fuel usage records in Appendix C, Baseline Period Determination in Appendix D.

Baseline Periods		
Lease	Permit Unit	Dates
Fee A lease (S25, T28S, R27E)	S-1131-970	September 2006 – August 2008
	S-1131-973	
Fee C lease (S30, T28S, R27E)	S-1131-974	June 2006 – May 2008
	S-1131-1079	

C. Historical Actual Emissions (HAE)

The average fuel use per calendar quarter is determined from fuel use records supplied by the applicant as shown in the tables below (see fuel use records in Appendix C):

Fee A

S-1131-970 Fuel Usage by Quarter (MMBtu)						
Year	Q1		Q2	Q3		Q4
	Jan	Feb/Mar		July/Aug	Sept	
2006	--	--	--	--	32,941	75,904
2007	31,847	63,660	90,536	99,583		76,121
2008	31,322	65,034	100,255	18,380	--	--
Total Fuel Use	191,862		191,862	150,904		152,025
Average Fuel Use	95,931		95,931	75,452		76,013

S-1131-973 Fuel Usage by Quarter (MMBtu)						
Year	Q1		Q2	Q3		Q4
	Jan	Feb/Mar		July/Aug	Sept	
2006	--	--	--	--	34,048	74,940
2007	7,462	66,635	102,703	105,711		97,943
2008	34,023	65,623	105,328	16,450	--	--
Total Fuel Use	173,743		208,031	156,209		172,883
Average Fuel Use	86,872		104,016	78,105		86,442

Fee C

S-1131-970 Fuel Usage by Quarter (MMBtu)						
Year	Q1		Q2		Q3	Q4
	Jan	Feb/Mar	April/May	June		
2006	--	--	--	34,048	102,835	87,361
2007	30,822	66,581	100,861		104,610	103,196
2008	32,132	67,249	67,505	--	--	--
Total Fuel Use	196,784		202,414		207,445	190,557
Average Fuel Use	98,392		101,207		103,723	95,279

S-1131-1079 Fuel Usage by Quarter (MMBtu)					
Year	Q1	Q2		Q3	Q4
		April/May	June		
2006	--	--	33,575	101,360	61,686
2007	29,370	105,043		101,513	18,624
2008	8,988	22,455	--	--	--
Total Fuel Use	38,358	161,073		202,873	80,310
Average Fuel Use	19,179	80,537		101,437	40,155

Assumptions:

The HAE emissions are based on the following criteria:

- NOx – Rule 4703 emissions limit
- CO, and SOx -- annual source tests.
- VOC – AP 42, Stationary Gas Turbines, Table 3.1-2a (VOC)
- PM10 – AP 42, Stationary Gas Turbines, Table 3.1-2a (PM10 - Total)

The following example calculation shows how the emissions are calculated:

$$\text{HAE} = [(\text{Emissions factor from the relevant source test}) \times (\text{heat input per quarter})]$$

Example Equation

Permit S-1131-970, 4th Quarter, 2005:

$$\text{NOx} = [(\text{EF}) \times (\text{Heat Input})]$$

$$\text{NOx} = [(0.0184 \text{ lb/MMbtu}) \times (3,269 \text{ MMBtu}) = 60 \text{ lb/qtr}]$$

Quarterly NOx HAE:

Category	Rule 4703 EF	Energy Input (MMBtu)	NOx
Quarterly Emissions for S-1131-970 (NOx)			

	(lb/MMBtu)		Emissions
Sept 2006	0.0184	32,941	606
4 th Qtr 2006	0.0184	75,904	1397
1 st Qtr 2007	0.0184	95,507	1757
2 nd Qtr 2007	0.0184	90,536	1666
3 rd Qtr 2007	0.0184	99,583	1832
4 th Qtr 2007	0.0184	76,121	1401
1 st Qtr 2008	0.0184	96,355	1773
2 nd Qtr 2008	0.0184	100,255	1845
July/Aug 2008	0.0184	18,380	338

Quarterly HAE for S-1131-970 (NOx)					
	Q1	Q2	Q3		Q4
			Sept	July/Aug	
2006	--	--		606	1397
2007	1757	1666	1832		1401
2008	1773	1845	338	--	--
Total	3530	3511	2776		2798
HAE (Total/2)	1765	1756	1388		1399

Quarterly Emissions for S-1131-973 (NOx)			
Calendar Qtr	Rule 4703 EF (lb/MMBtu)	Energy Input (MMBtu)	NOx Emissions
Sept 2006	0.0184	34,048	626
4 th Qtr 2006	0.0184	74,940	1379
1 st Qtr 2007	0.0184	74,097	1363
2 nd Qtr 2007	0.0184	102,703	1890
3 rd Qtr 2007	0.0184	105,711	1945
4 th Qtr 2007	0.0184	97,943	1802
1 st Qtr 2008	0.0184	99,646	1833
2 nd Qtr 2008	0.0184	105,328	1938
July Aug 2008	0.0184	16,450	303

Quarterly HAE for S-1131-973 (NOx)					
	Q1	Q2	Q3		Q4
			July/Aug	Sept	
2006	--	--	--	1945	1379
2007	1363	1890	626		1802
2008	1833	1938	303	--	--
Total	3196	3828	2874		3181
HAE (Total/2)	1598	1914	1437		1591

Calendar Qtr	Quarterly Emissions for S-1131-974 (NO _x)		
	Rate (lb/MMBtu)	Energy Input (MMBtu)	NO _x Emissions
June 2006	0.0184	34,048	626
3 rd Qtr 2006	0.0184	102,835	1892
4 th Qtr 2006	0.0184	87,361	1607
1 st Qtr 2007	0.0184	97,403	1792
2 nd Qtr 2007	0.0184	100,861	1856
3 rd Qtr 2007	0.0184	104,610	1925
4 th Qtr 2007	0.0184	103,196	1899
1 st Qtr 2008	0.0184	99,381	1829
April/May 2008	0.0184	67,505	1242

	Quarterly HAE for S-1131-974 (NO _x)				
	Q1	Q2		Q3	Q4
		April/May	June		
2006	--	--	626	1892	1607
2007	1792	1856		1925	1899
2008	1829	1242	--	--	--
Total	3621	3724		3817	3506
HAE (Total/2)	1811	1862		1909	1753

Calendar Qtr	Quarterly Emissions for S-1131-1079 (NO _x)		
	Rate (lb/MMBtu)	Energy Input (MMBtu)	NO _x Emissions
June 2006	0.0184	33,575	618
3 rd Qtr 2006	0.0184	101,360	1865
4 th Qtr 2006	0.0184	61,686	1135
1 st Qtr 2007	0.0184	29,370	540
2 nd Qtr 2007	0.0184	105,043	1933
3 rd Qtr 2007	0.0184	101,513	1868
4 th Qtr 2007	0.0184	18,624	343
1 st Qtr 2008	0.0184	8,988	165
April/May 2008	0.0184	22,455	413

	Quarterly HAE for S-1131-1079 (NO _x)				
	Q1	Q2		Q3	Q4
		April/May	June		
2006	--	--	618	1865	1135
2007	540	1933		1868	343
2008	165	413	--	--	--

Total	705	3024	3733	1478
HAE (Total/2)	353	1512	1867	739

Quarterly SOx HAE:

Quarterly Emissions for S-1131-970 (SOx)			
Calendar Qtr	Source Treated	Energy Input (MMBtu)	SOx Emissions
Sept Qtr 2006	0.0002	32,941	7
4 th Qtr 2006	0.0002	75,904	15
1 st Qtr 2007	0.0002	95,507	19
2 nd Qtr 2007	0.0002	90,536	18
3 rd Qtr 2007	0.0002	99,583	20
4 th Qtr 2007	0.0002	76,121	15
1 st Qtr 2008	0.0002	96,355	19
2 nd Qtr 2008	0.0002	100,255	20
July/Aug 2008	0.0002	18,380	4

Quarterly HAE for S-1131-970 (SOx)					
	Q1	Q2	Q3	Q4	
			July/Aug	Sept	
2006	--	--	-	7	15
2007	19	18	20	-	15
2008	19	20	4	-	--
Total	38	38	31	-	30
HAE (Total2)	19	19	16	-	15

Quarterly Emissions for S-1131-973 (SOx)			
Calendar Qtr	Source Treated	Energy Input (MMBtu)	SOx Emissions
Sept 2006	0.0002	34,048	7
4 th Qtr 2006	0.0002	74,940	15
1 st Qtr 2007	0.0002	74,097	15
2 nd Qtr 2007	0.0002	102,703	21
3 rd Qtr 2007	0.0002	105,711	21
4 th Qtr 2007	0.0002	97,943	20
1 st Qtr 2008	0.0002	99,646	20
2 nd Qtr 2008	0.0002	105,328	21
July/Aug 2008	0.0002	16,450	3

Quarterly H/AE for S-1131-1076 (SOx)					
	Q1	Q2	Q3		Q4
			July/Aug	Sept	
2006	--	--	--	7	15
2007	15	21	21		20
2008	20	21	3	--	--
Total	35	42	31		35
HAE (Total/2)	18	21	16		18

Quarterly Emissions for S-1131-1074 (SOx)			
Calendar Qtr	Source Test	Energy Input (MMBtu)	SOx Emissions
Jun-06	0.0002	34,048	7
3 rd Qtr 2006	0.0002	102,835	21
4 th Qtr 2006	0.0002	87,361	17
1 st Qtr 2007	0.0002	97,403	19
2 nd Qtr 2007	0.0002	100,861	20
3 rd Qtr 2007	0.0002	104,610	21
4 th Qtr 2007	0.0002	103,196	21
1 st Qtr 2008	0.0002	99,381	20
April/May 2008	0.0002	67,505	14

Quarterly H/AE for S-1131-1074 (SOx)					
	Q1	Q2		Q3	Q4
		April/May	June		
2006	--	--	7	21	17
2007	19	20		21	21
2008	20	14	--	--	--
Total	39	41		42	38
HAE (Total/2)	20	21		21	19

Quarterly Emissions for S-1131-1079 (SOx)			
Calendar Qtr	Source Test	Energy Input (MMBtu)	SOx Emissions
June 2006	0.0002	33,575	7
3 rd Qtr 2006	0.0002	101,360	20
4 th Qtr 2006	0.0002	61,686	12
1 st Qtr 2007	0.0002	29,370	6
2 nd Qtr 2007	0.0002	105,043	21
3 rd Qtr 2007	0.0002	101,513	20
4 th Qtr 2007	0.0002	18,624	4

1 st Qtr 2008	0.0002	8,988	2
April/May 2008	0.0002	22,455	4

Quarterly H/AE for S-11131-11078 (SO _x)					
	Q1	Q2	Q3	Q4	
		April/May	June		
2006	--	--	7	20	12
2007	6	21		20	4
2008	2	4	--	--	--
Total	8	32		40	16
HAE (Total/2)	4	16		20	8

Quarterly PM10 HAE:

Quarterly Emissions for S-11131-9740 (PM10)			
Sept 2006	0.0066	32,941	217
4 th Qtr 2006	0.0066	75,904	501
1 st Qtr 2007	0.0066	95,507	630
2 nd Qtr 2007	0.0066	90,536	598
3 rd Qtr 2007	0.0066	99,583	657
4 th Qtr 2007	0.0066	76,121	502
1 st Qtr 2008	0.0066	96,355	636
2 nd Qtr 2008	0.0066	100,255	662
July/Aug 2008	0.0066	18,380	121

Quarterly H/AE for S-11131-9740 (PM10)				
	Q1	Q2	Q3	Q4
			July/Aug	Sept
2006	--	--	--	217
2007	630	598	657	502
2008	636	662	121	--
Total	1266	1260	995	1003
HAE (Total/2)	633	630	498	502

Quarterly Emissions for S-11131-9740 (PM10)			
Calendar Qtr	Permitted EF	Energy Input (MMBtu/10 ⁶)	PM10 Emissions
Sept 2006	0.0066	34,048	225
4 th Qtr 2006	0.0066	74,940	495
1 st Qtr 2007	0.0066	74,097	489
2 nd Qtr 2007	0.0066	102,703	678
3 rd Qtr 2007	0.0066	105,711	698

Quarterly H/AE for S-1101-973 (PM10)				
	Q1	Q2	Q3	Q4
			July/Aug	Sept
4 th Qtr 2007	0.0066		97,943	646
1 st Qtr 2008	0.0066		99,646	658
2 nd Qtr 2008	0.0066		105,328	695
July/Aug 2008	0.0066		16,450	109
2006	--	--	--	225
2007	489	678	698	
2008	658	695	109	--
Total	1147	1373	1032	
HAE (Total/2)	574	687	516	

Quarterly Emissions for S-1131-974 (PM10)			
Calendar Qtr	Permitted EF	Energy Input (MMBtu)	PM10 Emissions
June 2006	0.0066	34,048	225
3 rd Qtr 2006	0.0066	102,835	679
4 th Qtr 2006	0.0066	87,361	577
1 st Qtr 2007	0.0066	97,403	643
2 nd Qtr 2007	0.0066	100,861	666
3 rd Qtr 2007	0.0066	104,610	690
4 th Qtr 2007	0.0066	103,196	681
1 st Qtr 2008	0.0066	99,381	656
April/May 2008	0.0066	67,505	446

Quarterly H/AE for S-1131-974 (PM10)				
	Q1	Q2	Q3	Q4
		April/May	June	
2006	--	--	225	679
2007	643	666	690	
2008	656	446	--	--
Total	1299	1337	1369	
HAE (Total/2)	650	669	685	

Quarterly Emissions for S-1131-1079 (PM10)			
Calendar Qtr	Permitted EF	Energy Input (MMBtu)	PM10 Emissions
June 2006	0.0066	33,575	222
3 rd Qtr 2006	0.0066	101,360	669
4 th Qtr 2006	0.0066	61,686	407

1 st Qtr 2007	0.0066	29,370	194
2 nd Qtr 2007	0.0066	105,043	693
3 rd Qtr 2007	0.0066	101,513	670
4 th Qtr 2007	0.0066	18,624	123
1 st Qtr 2008	0.0066	8,988	59
April/May 2008	0.0066	22,455	148

	Quarterly HAE for S-1131-9770 (P/10)				
	Q1	Q2	Q3	Q4	
	Jan	Apr/May	June	Sept	
2006	--	--	222	669	407
2007	194	693		670	123
2008	59	148	--	--	--
Total	253	1063		1339	530
HAE (Total/2)	127	532		670	265

Quarterly CO HAE:

Calendar Qtr	Quarterly Emissions for S-1131-9770 (CO)			CO Emissions
	Source Test	Energy Input (MMBtu)		
Sept 2006	0.0978	32,941		3222
4 th Qtr 2006	0.0978	75,904		7423
Jan. 2007	0.0978	31,847		3115
Feb/Mar 2007	0.1123	63,660		7149
2 nd Qtr 2007	0.1123	90,536		10,167
3 rd Qtr 2007	0.1123	99,583		11,183
4 th Qtr 2007	0.1123	76,121		8548
Jan. 2008	0.1123	31,322		3517
Feb/Mar 2008	0.1123	65,034		7303
2 nd Qtr 2008	0.1123	100,255		11,259
July/Aug 2008	0.1123	18,380		2064

	Quarterly HAE for S-1131-9770 (CO)					
	Q1	Q2	Q3	Q4		
	Jan	Feb/Mar	July/Aug	Sept		
2006	--	--	--	3222		7423
2007	3115	7149	10,167	11,183		8548
2008	3517	7303	11,259	2064	--	--
Total	21,084	21,426	16,469			15,971
HAE (Total/2)	10,542	10,713	8235			7986

Quarterly Emissions for S-1131-973 (CO ₂)			
Calendar Qtr	Source EF	Energy Input (MMBtu)	CO ₂ Emissions
Sept 2006	0.0984	34,048	3350
4 th Qtr 2006	0.0984	74,940	7374
Jan. 2007	0.0984	7,462	734
Feb/Mar 2007	0.1081	66,635	7203
2 nd Qtr 2007	0.1081	102,703	11,102
3 rd Qtr 2007	0.1081	105,711	11,427
4 th Qtr 2007	0.1081	97,943	10,588
Jan. 2008	0.1081	34,023	3678
Feb/Mar 2008	0.0879	65,623	5768
2 nd Qtr 2008	0.0879	105,328	9258
July/Aug 2008	0.0879	16,450	1446

Quarterly HAE for S-1131-973 (CO ₂)						
	Q1		Q2	Q3		Q4
	Jan	Feb/Mar		Sep	July/Aug	
2006	--	--	--	--	3350	7374
2007	734	7203	11,102	11,427		10,588
2008	3678	5768	9258	1446	--	--
Total	17,383		20,360	16,223		17,962
HAE (Total/2)	8692		10,180	8112		8981

Quarterly Emissions for S-1131-974 (CO ₂)			
Calendar Qtr	Permitted EF	Energy Input (MMBtu)	CO ₂ Emissions
June 2006	0.1018	34,048	3466
3 rd Qtr 2006	0.1018	102,835	10,469
4 th Qtr 2006	0.1018	87,361	8893
Jan Qtr 2007	0.1018	30,822	3138
Feb/Mar 2007	0.0978	66,580	6512
2 nd Qtr 2007	0.0978	100,861	9864
3 rd Qtr 2007	0.0978	104,610	10,231
4 th Qtr 2007	0.0978	103,196	10,093
Jan 2008	0.0978	32,132	3143
Feb/Mar 2008	0.0765	67,249	5145
April/May 2008	0.0765	67,505	5164

Quarterly HAE for S-1131-974 (CO ₂)						
	Q1		Q2	Q3	Q4	
	Jan	Feb/Mar			April/May	June
2006	-	--	--	3466	10,469	8893
2007	3138	6512	9864	10,231	10,093	
2008	3143	5145	5164	--	--	--

Total	17,938	18,494	20,700	18,986
HAE (Total/2)	8969	9247	10,350	9493

Quarterly Emissions for S 1131 (CO ₂)			
Calendar Qtr	Permitted Emissions	Energy Input (MMBtu)	CO ₂ Emissions
June 2006	0.0031	34,048	104
3 rd Qtr 2006	0.0031	101,360	314
4 th Qtr 2006	0.0031	61,686	191
1 st Qtr 2007	0.0031	29,370	91
April 2007	0.0031	35,651	111
May/June 2007	0.0037	69,391	257
3 rd Qtr 2007	0.0037	101,513	376
4 th Qtr 2007	0.0037	18,624	69
1 st Qtr 2008	0.0037	8,988	33
April Qtr 2008	0.0037	21,845	81
May 2008	0.0765	611	45

Quarterly HAE for S 1131 (CO ₂)						
	Q1	Q2	Q3	Q4	Q5	Q6
		April	May	June		
2006	--	--	--	104	314	191
2007	91	111	257		376	69
2008	33	81	45	--	--	--
Total	124	598		690	260	
HAE (Total/2)	62	299		345	130	

Quarterly VOC HAE:

Quarterly Emissions for S 1131 (VOC)			
Calendar Qtr	Permitted Emissions	Energy Input (MMBtu)	VOC Emissions
Sept 2006	0.0021	32,941	69
4 th Qtr 2006	0.0021	75,904	159
1 st Qtr 2007	0.0021	95,507	201
2 nd Qtr 2007	0.0021	90,536	190
3 rd Qtr 2007	0.0021	99,583	209
4 th Qtr 2007	0.0021	76,121	160
1 st Qtr 2008	0.0021	96,355	202
2 nd Qtr 2008	0.0021	100,255	211
July/Aug 2008	0.0021	18,380	39

Quarterly HAE for S-1131-970 (VOC)				
	Q1	Q2	Q3 July/Aug	Q4 Sept
2006	--	--		69
2007	201	190	209	160
2008	202	211	39	--
Total	403	401	317	319
HAE (Total/2)	202	201	159	160

Quarterly Emissions for S-1131-970 (VOC)			
Calendar Qtr	Permitted Eff	Energy Input (MMBtu)	VOC Emissions
Sept 2006	0.0021	34,048	72
4 th Qtr 2006	0.0021	74,940	157
1 st Qtr 2007	0.0021	74,097	156
2 nd Qtr 2007	0.0021	102,703	216
3 rd Qtr 2007	0.0021	105,711	222
4 th Qtr 2007	0.0021	97,943	206
1 st Qtr 2008	0.0021	99,646	209
2 nd Qtr 2008	0.0021	105,328	221
July/Aug 2008	0.0021	16,450	35

Quarterly HAE for S-1131-973 (VOC)				
	Q1	Q2	Q3 July/Aug	Q4 Sept
2006	--	--	--	72
2007	156	216	222	206
2008	209	221	35	--
Total	365	437	329	363
HAE (Total/2)	183	219	165	182

Quarterly Emissions for S-1131-974 (VOC)			
Calendar Qtr	Permitted Eff	Energy Input (MMBtu)	VOC Emissions
Jun-06	0.0021	34,048	72
3 rd Qtr 2006	0.0021	102,835	216
4 th Qtr 2006	0.0021	87,361	183
1 st Qtr 2007	0.0021	97,403	205
2 nd Qtr 2007	0.0021	100,861	212
3 rd Qtr 2007	0.0021	104,610	220
4 th Qtr 2007	0.0021	103,196	217

1 st Qtr 2008	0.0021	99,381	209
April/May 2008	0.0021	67,505	142

Quarterly HAE for S-1131-11074 (VOE)					
	Q1	Q2		Q3	Q4
		April/May	June		
2006	--	--	72	216	183
2007	205	212		220	217
2008	209	142	--	--	--
Total	415	426		436	400
HAE (Total/2)	208	213		218	200

Quarterly Emissions for S-1131-11074 (VOE)			
Calendar Qtr	Permitted EIP	Energy Input (MMBtu)	VOE Emissions
June 2006	0.0021	33,575	71
3 rd Qtr 2006	0.0021	101,360	213
4 th Qtr 2006	0.0021	61,686	130
1 st Qtr 2007	0.0021	29,370	62
2 nd Qtr 2007	0.0021	105,043	221
3 rd Qtr 2007	0.0021	101,513	213
4 th Qtr 2007	0.0021	18,624	39
1 st Qtr 2008	0.0021	8,988	19
April/May 2008	0.0021	22,455	47

Quarterly HAE for S-1131-11074 (VOE)					
	Q1	Q2		Q3	Q4
		April/May	June		
2006	--	--	71	213	130
2007	62	221		213	39
2008	19	47	--	--	--
Total	81	339		426	169
HAE (Total/2)	41	134		213	85

D. Actual Emissions Reductions (AER)

Actual Emissions Reductions are calculated as follows:

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

Where:

HAE = Historic Actual Emissions
PE2 = Post-project Potential to Emit

The turbines in this project were removed, PE2 = 0 lb/Qtr and AER = HAE.

ERC S-3544, Lease A Fee lease, Permit Units S-1131-970 & -973:

Quarterly AER (NOx)				
	Q1	Q2	Q3	Q4
S-1131-970	1765	1756	1388	1399
S-1131-973	1598	1914	1437	1591
Total NOx	3363	3670	2825	2990

Quarterly AER (SOx)				
	Q1	Q2	Q3	Q4
S-1131-970	19	19	16	15
S-1131-973	18	21	16	18
Total SOx	37	40	32	33

Quarterly AER (PM10)				
	Q1	Q2	Q3	Q4
S-1131-970	633	630	498	502
S-1131-973	574	687	516	571
Total PM10	1207	1317	1014	1073

Quarterly AER (CO)				
	Q1	Q2	Q3	Q4
S-1131-970	10,542	10,713	8235	7986
S-1131-973	8692	10,180	8112	8981
Total CO	19,233	20,893	16,347	16,967

Quarterly AER (VOC)				
	Q1	Q2	Q3	Q4
S-1131-970	202	201	159	160
S-1131-973	183	219	165	182
Total VOC	385	420	324	342

ERC S-3604, Lease C Fee lease, Permit Units S-1131-974 & '-1079:

Quarterly AER (NOx)				
	Q1	Q2	Q3	Q4
S-1131-974	1811	1862	1909	1753
S-1131-1079	353	1512	1867	739
Total NOx	2164	3374	3776	2492

Quarterly AER (SOx)				
	Q1	Q2	Q3	Q4
S-1131-974	20	21	21	19
S-1131-1079	4	16	20	8
Total SOx	24	37	41	27

Quarterly AER (PM10)				
	Q1	Q2	Q3	Q4
S-1131-974	650	669	685	629
S-1131-1079	127	532	670	265
Total PM10	777	1201	1355	894

Quarterly AER (CO)				
	Q1	Q2	Q3	Q4
S-1131-974	8969	9247	10,350	9493
S-1131-1079	62	299	345	130
Total CO	9,031	9546	10,695	9,623

Quarterly AER (VOC)				
	Q1	Q2	Q3	Q4
S-1131-974	207	213	218	200
S-1131-1079	41	170	213	85
Total VOC	248	383	431	285

E. Air Quality Improvement Deduction (AQID)

Actual Emission Reductions must be discounted by 10% for Air Quality Improvement.

Sample calculation:

$$\begin{aligned}
 \text{Q1 NOx lb} &= \text{AER X (0.1)} \\
 &= (3363 \text{ lb}) \text{ X (0.1)} \\
 &= 336 \text{ lb}
 \end{aligned}$$

ERC S-3544, Lease A Fee lease, Permit Units S-1131-970 & '-973:

	AQID (lb)			
	Q1	Q2	Q3	Q4
NOx	336	367	283	299
SOx	4	4	3	3
PM10	121	132	101	107
CO	1923	2089	1635	1697
VOC	39	42	32	34

ERC S-3604, Lease C Fee lease, Permit Units S-1131-974 & '-1079:

	AQID (lb)			
	Q1	Q2	Q3	Q4
NOx	216	337	378	249
SOx	2	4	4	3
PM10	78	120	136	89
CO	903	955	1070	962
VOC	25	38	43	29

F. Increases in Permitted Emissions

The permit units have been shutdown and the Permits to Operate have been surrendered to the District. No emission increases are being authorized at this or any other location. Therefore, the Increase in Permitted Emissions for this application is zero.

G. Bankable Emissions Reductions Credits

The bankable emission reduction (ERC) is equal to the AER minus the AQID.

Sample calculation:

$$\begin{aligned}
 \text{Q1 NOx lb} &= \text{AER} - \text{AQID} \\
 &= 3363 \text{ lb} - 336 \text{ lb} \\
 &= 3027 \text{ lb}
 \end{aligned}$$

ERC S-3544, Lease A Fee lease, Permit Units S-1131-970 & '-973:

ERC #		ERC (lb)			
		Q1	Q2	Q3	Q4
S-3544-2	NOx	3027	3303	2542	2691
S-3544-5	SOx	33	36	29	30
S-3544-4	PM10	1086	1185	913	966
S-3544-3	CO	17,310	18,804	14,712	15,270
S-3544-1	VOC	346	378	292	308

ERC S-3604, Lease C Fee lease, Permit Units S-1131-974 & -1079:

ERC #		ERC (lb)			
		Q1	Q2	Q3	Q4
S-3604-2	NOx	1948	3037	3398	2243
S-3604-5	SOx	22	33	37	24
S-3604-4	PM10	699	1081	1219	805
S-3604-3	CO	8128	9591	9625	8661
S-3604-1	VOC	223	345	388	256

VI. COMPLIANCE:

To be eligible for banking, emission reduction credits (ERC's) must be verified as being real, enforceable, quantifiable, permanent, and surplus pursuant to District Rules 2201 and 2301. In addition, the application must be submitted within the timeline specified in Rule 2301.

A. Real

The AER quantified above are based on actual, historical emissions and were calculated from actual fuel use data, source tests, and representative emission factors. The gas turbines have been removed from service and PTOs have been surrendered.

Therefore, the AER due to shutting down the turbines is real.

B. Enforceable

The equipment authorized by the permits has been removed from service and the Permits to Operate have been cancelled. Therefore, the quantified AER is enforceable.

C. Quantifiable

The actual emission reductions (AER) quantified above are based on actual, historical emissions calculated from fuel use data, source tests, and emission factors. Therefore, the AER is quantifiable.

D. Permanent

The applicant has removed the units from service and surrendered the PTO's. Therefore, the AER is permanent.

E. Surplus

The emission reductions are not mandated by any law, rule, regulation, agreement, or order of the District, State, or Federal Government. Rule 4703 applies to the gas turbines.

The Rule 4703 limits the NOx emissions to 5 ppmv@15% O₂. Source tests performed on the turbines were below the CO Rule limits. The emissions reductions are surplus of Rule 4703. Therefore, the AER is surplus.

F. Timeliness

The ERC application was submitted on November 30, 2010. The units were retired permanently on March 8, 2011. The PTOs have been surrendered and canceled.

Because the ERC application was submitted within 180 days after the date that shutdown occurred, the application is timely.

VII. RECOMMENDATION:

After public notice, comments and review, issue ERCs to Chevron USA in the amounts shown below:

ERC S-3544, Lease A Fee lease, Permit Units S-1131-970 & '-973:

		ERC (lb)			
ERC #		Q1	Q2	Q3	Q4
S-3544-1	VOC	346	378	292	308
S-3544-2	NOx	3027	3303	2542	2691
S-3544-3	CO	17,310	18,804	14,712	15,270
S-3544-4	PM10	1086	1185	913	966
S-3544-5	SOx	33	36	29	30

ERC S-3604, Lease C Fee lease, Permit Units S-1131-974 & '-1079:

		ERC (lb)			
ERC #		Q1	Q2	Q3	Q4
S-3604-1	VOC	223	345	388	256
S-3604-2	NOx	1948	3037	3398	2243
S-3604-3	CO	8128	9591	9625	8661
S-3604-4	PM10	699	1081	1219	805
S-3604-5	SOx	22	33	37	24

Appendix A

S-1131-970, '-973, '-974 , and '-1079

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1131-970-9

EXPIRATION DATE: 02/28/2006

SECTION: 25 TOWNSHIP: 28S RANGE: 27E

EQUIPMENT DESCRIPTION:

COGENERATION UNIT #1 (NORTH UNIT) SOLAR CENTAUR TYPE H, 52.4 MMBTU/HR GAS FIRED TURBINE ENGINE, 3.725 MW, WITH WATER INJECTION AND STRUTHERS UNFIRED HEAT RECOVERY STEAM GENERATOR - LEASE FEE A

PERMIT UNIT REQUIREMENTS

1. Units shall be fired exclusively on PUC-regulated or FERC-regulated natural gas which has a sulfur content less than or equal to 0.017% by weight. [40 CFR 60.333(a) & (b); 60.332(a); Kern County Rule 407] Federally Enforceable Through Title V Permit
2. Operator shall not discharge into the atmosphere combustion contaminants (PM) exceeding in concentration at the point of discharge, 0.1 gr/dscf. [District Rule 4201; Kern County Rule 404] Federally Enforceable Through Title V Permit
3. Operator shall be required to conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081; Kern County Rule 108.1] Federally Enforceable Through Title V Permit
4. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
5. If the turbine is not fired on PUC-regulated or FERC-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. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
6. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
7. Nitrogen oxides (NOx) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O2) concentrations shall be determined using EPA Method 3, 3A, or 20. [40 CFR 60.335(b) and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit
8. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332(a), (b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
9. If the turbine is fired on PUC-regulated or FERC-regulated natural gas, then maintain on file copies of natural gas bills or other relevant records. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] 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.

Facility Name: CHEVRON USA INC
Location: HEAVY OIL CENTRAL, KERN COUNTY, CA
S-1131-970-9; Sep 15 2003 11:44AM - MARAONMP

11. Permittee shall install, operate and maintain in calibration a predictive emissions monitoring system which continuously measures and records the water-to-fuel ratio and which correlates the water-to-fuel ratio with the NOx concentration in the exhaust by using the method described in 40 CFR 60.335(c). [40 CFR 60.334] Federally Enforceable Through Title V Permit
12. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NOx output. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit
13. Permittee shall install, operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [40 CFR 60.334 and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
14. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit
15. Permittee shall submit an excess NSPS emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.7(c)] Federally Enforceable Through Title V Permit
16. Except during periods of startup/shutdown, any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the NOx emissions limit required by NSPS shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c)] Federally Enforceable Through Title V Permit
17. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [District NSR Rule] Federally Enforceable Through Title V Permit
18. Gas turbine engine shall be equipped with water injection system for NOx control. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Gas turbine engine water injection rate shall be maintained such that water to fuel ratio is no less than that amount determined necessary to ensure emission limits compliance. [District NSR Rule] Federally Enforceable Through Title V Permit
20. Gas turbine engine shall be equipped with continuously recording water injection rate monitor accurate to within +/- 5%. [District NSR Rule] Federally Enforceable Through Title V Permit
21. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours and two hours, respectively, per occurrence. [District Rule 4703] Federally Enforceable Through Title V Permit
22. Except during periods of startup/shutdown, if water injection system is inoperative, gas turbine engine shall be shut down. [40 CFR 60.8(c), District NSR Rule] Federally Enforceable Through Title V Permit
23. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas sample consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit
24. All steam produced by this source operation shall be used only in existing TEOR operation(s) served by existing vapor control system(s). [District NSR Rule] Federally Enforceable Through Title V Permit
25. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit
26. Emissions increases from new wells in zone steamed by this equipment shall be controlled and mitigated as required by District NSR Rule and District Rule 4401 (amended 1/15/98). [District NSR Rule] 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.

27. Source testing shall be conducted for at least three levels of operating range of water to fuel ratio to demonstrate previously established ratio correlation with NOx emissions remains valid. [District NSR Rule and District Rule 1081] Federally Enforceable Through Title V Permit
28. Compliance with nitrogen oxide, and CO emission limits shall be demonstrated by District-witnessed sample collection by independent testing laboratory within 60 days of permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit
29. Source test results and fuel test data shall be submitted within 60 days after sample collection with water to fuel injection ratio, on mass basis, determined at time of stack gas sampling. [District Rule 1081] Federally Enforceable Through Title V Permit
30. Permittee shall keep accurate daily records of turbine water to fuel injection ratio and such records shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
31. Gas turbine engine shall be equipped with continuously recording oxides of nitrogen and oxygen monitors. NOx monitoring system requirement may be substituted or replaced upon documentation that H2O/fuel ratio correlates well with NOx emission rate. [District NSR Rule] Federally Enforceable Through Title V Permit
32. Permittee shall submit compliance testing plan to the District within 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit
33. Except during periods of startup/shutdown, emission rates for this unit shall not exceed any of the following: PM-10: 0.015 lb/MMBTU, SOx (as SO2): 0.0031 lb/MMBTU, NOx (as NO2): 0.129 lb/MMBTU or VOC: 0.010 lb/MMBTU. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit
34. Except during periods of thermal stabilization or reduced load, CO emissions rate shall not exceed 65.0 ppmv @ 15% O2. [District NSR Rule] Federally Enforceable Through Title V Permit
35. Except during periods of thermal stabilization or reduced loads, NOx emission rate shall not exceed 35 ppmv at 15% O2 on a 3 hour rolling average basis. [District Rule 4703, 5.1.2 and 7.2.1]
36. Emission rates for this unit shall not exceed any of the following: PM-10: 18.9 lb/day, SOx (as SO2): 3.9 lb/day, NOx (as NO2): 162.2 lb/day, VOC: 12.6 lb/day, or CO: 183.6 lb/day [District NSR Rule and 4703] Federally Enforceable Through Title V Permit
37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; 40 CFR 60.332(a) and (b); 60.333(a) and (b); 60.334 (a), (b), and (c)(1); 60.335(a), (b), (c), and (e). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
38. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 407; 40 CFR 60.332(c), (d); 60.334(b), and (c)(2); 60.335(d). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1131-973-9

EXPIRATION DATE: 02/28/2006

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

EQUIPMENT DESCRIPTION:

COGENERATION UNIT #1 (WEST) SOLAR CENTAUR TYPE H, 52.4 MM BTU/HR GAS FIRED TURBINE ENGINE, 3,725 MW, WITH WATER INJECTION AND STRUTHERS UNFIRED HEAT RECOVERY STEAM GENERATOR - LEASE FEE B

PERMIT UNIT REQUIREMENTS

1. Units shall be fired exclusively on PUC-regulated or FERC-regulated natural gas which has a sulfur content less than or equal to 0.017% by weight. [40 CFR 60.333(a) & (b); 60.332(a); Kern County Rule 407] Federally Enforceable Through Title V Permit
2. Operator shall not discharge into the atmosphere combustion contaminants (PM) exceeding in concentration at the point of discharge, 0.1 gr/dscf. [District Rule 4201; Kern County Rule 404] Federally Enforceable Through Title V Permit
3. Operator shall be required to conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081; Kern County Rule 108.1] Federally Enforceable Through Title V Permit
4. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
5. If the turbine is not fired on PUC-regulated or FERC-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. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
6. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
7. Nitrogen oxides (NOx) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O2) concentrations shall be determined using EPA Method 3, 3A, or 20. [40 CFR 60.335(b) and District Rule 4703, 6.4]
8. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332(a), (b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
9. If the turbine is fired on PUC-regulated or FERC-regulated natural gas, then maintain on file copies of natural gas bills or other relevant records. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit
11. Permittee shall install, operate and maintain in calibration a predictive emissions monitoring system which continuously measures and records the water-to-fuel ratio and which correlates the water-to-fuel ratio with the NOx concentration in the exhaust by using the method described in 40 CFR 60.335(c). [40 CFR 60.334] 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.

Facility Name: CHEVRON USA INC
Location: HEAVY OIL CENTRAL, KERN COUNTY, CA
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12. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NOx output. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit
13. Permittee shall install, operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [40 CFR 60.334 and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
14. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)]
15. Permittee shall submit an excess NSPS emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.7(c)] Federally Enforceable Through Title V Permit
16. Except during periods of startup/shutdown, any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the NOx emissions limit required by NSPS shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c)] Federally Enforceable Through Title V Permit
17. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [District NSR Rule] Federally Enforceable Through Title V Permit
18. Gas turbine engine shall be equipped with water injection system for NOx control. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Gas turbine engine water injection rate shall be maintained such that water to fuel ratio is no less than that amount determined necessary to ensure emission limits compliance. [District NSR Rule] Federally Enforceable Through Title V Permit
20. Gas turbine engine shall be equipped with continuously recording water injection rate monitor accurate to within +/- 5%. [District NSR Rule] Federally Enforceable Through Title V Permit
21. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours and two hours, respectively, per occurrence. [District Rule 4703] Federally Enforceable Through Title V Permit
22. Except during periods of startup/shutdown, if water injection system is inoperative, gas turbine engine shall be shut down. [40 CFR 60.8(c), District NSR Rule] Federally Enforceable Through Title V Permit
23. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas sample consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit
24. All steam produced by this source operation shall be used only in existing TEOR operation(s) served by existing vapor control system(s). [District NSR Rule] Federally Enforceable Through Title V Permit
25. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit
26. Emissions increases from new wells in zone steamed by this equipment shall be controlled and mitigated as required by District NSR Rule and District Rule 4401 (amended 1/15/98). [District NSR Rule] Federally Enforceable Through Title V Permit
27. Source testing shall be conducted for at least three levels of operating range of water to fuel ratio to demonstrate previously established ratio correlation with NOx emissions remains valid. [District NSR Rule and District Rule 1081] Federally Enforceable Through Title V Permit
28. Compliance with nitrogen oxide, and CO emission limits shall be demonstrated by District-witnessed sample collection by independent testing laboratory within 60 days of permit anniversary date. [District Rule 1081] 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.

29. Source test results and fuel test data shall be submitted within 60 days after sample collection with water to fuel injection ratio, on mass basis, determined at time of stack gas sampling. [District Rule 1081] Federally Enforceable Through Title V Permit
30. Permittee shall keep accurate daily records of turbine water to fuel injection ratio and such records shall be made readily available for District inspection upon request. [District NSR Rule]
31. Gas turbine engine shall be equipped with continuously recording oxides of nitrogen and oxygen monitors. NOx monitoring system requirement may be substituted or replaced upon documentation that H2O/fuel ratio correlates well with NOx emission rate. [District NSR Rule] Federally Enforceable Through Title V Permit
32. Permittee shall submit compliance testing plan to the District within 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit
33. Except during periods of startup/shutdown, emission rates for this unit shall not exceed any of the following: PM-10: 0.015 lb/MMBTU, SOx (as SO2): 0.0031 lb/MMBTU, NOx (as NO2): 0.129 lb/MMBTU or VOC: 0.010 lb/MMBTU. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit
34. Except during periods of thermal stabilization or reduced load, CO emissions rate shall not exceed 65.0 ppmv @ 15% O2. [District NSR Rule] Federally Enforceable Through Title V Permit
35. Except during periods of thermal stabilization or reduced loads, NOx emission rate shall not exceed 35 ppmv at 15% O2 on a 3 hour rolling average basis. [District Rule 4703, 5.1.2 and 7.2.1]
36. Emission rates for this unit shall not exceed any of the following: PM-10: 18.9 lb/day, SOx (as SO2): 3.9 lb/day, NOx (as NO2): 162.2 lb/day, VOC: 12.6 lb/day, or CO: 183.6 lb/day [District NSR Rule and 4703] Federally Enforceable Through Title V Permit
37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; 40 CFR 60.332(a) and (b); 60.333(a) and (b); 60.334 (a), (b), and (c)(1); 60.335(a), (b), (c), and (e). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
38. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 407; 40 CFR 60.332(c), (d); 60.334(b), and (c)(2); 60.335(d). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1131-974-8

EXPIRATION DATE: 02/28/2006

SECTION: NE30 TOWNSHIP: 28S RANGE: 28E

EQUIPMENT DESCRIPTION:

COGENERATION UNIT #2 (EAST): SOLAR CENTAUR TYPE H, 52.4 MMBTU/HR GAS FIRED TURBINE ENGINE, 3.725 MV, WITH WATER INJECTION AND STRUTHERS UNFIRED HEAT RECOVERY STEAM GENERATOR - LEASE FEE C

PERMIT UNIT REQUIREMENTS

1. Units shall be fired exclusively on PUC-regulated or FERC-regulated natural gas which has a sulfur content less than or equal to 0.017% by weight. [40 CFR 60.333(a) & (b); 60.332(a); Kern County Rule 407] Federally Enforceable Through Title V Permit
2. Operator shall not discharge into the atmosphere combustion contaminants (PM) exceeding in concentration at the point of discharge, 0.1 gr/dscf. [District Rule 4201; Kern County Rule 404] Federally Enforceable Through Title V Permit
3. Operator shall not exceed a NOx emission rate of 35 ppmvd @ 15% O2, excluding thermal stabilization and reduced load periods. [40 CFR 60.332(a)(1) & 60.332(a)(2) and District Rule 4703, 5.1.2] Federally Enforceable Through Title V Permit
4. Operator shall be required to conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081; Kern County Rule 108.1] Federally Enforceable Through Title V Permit
5. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
6. If the turbine is not fired on PUC-regulated or FERC-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. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
7. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
8. Nitrogen oxides (NOx) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O2) concentrations shall be determined using EPA Method 3, 3A, or 20. [40 CFR 60.335(b) and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit
9. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332(a), (b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
10. If the turbine is fired on PUC-regulated or FERC-regulated natural gas, then maintain on file copies of natural gas bills or other relevant records. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] 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.

12. Permittee shall install, operate and maintain in calibration a predictive emissions monitoring system which continuously measures and records the water-to-fuel ratio and which correlates the water-to-fuel ratio with the NO_x concentration in the exhaust by using the method described in 40 CFR 60.335(c). [40 CFR 60.334] Federally Enforceable Through Title V Permit
13. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NO_x output. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit
14. Permittee shall install, operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [40 CFR 60.334 and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
15. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit
16. Permittee shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.7(c)] Federally Enforceable Through Title V Permit
17. Except during periods of startup/shutdown, any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c)] Federally Enforceable Through Title V Permit
18. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Gas turbine engine shall be equipped with water injection system for NO_x control. [District NSR Rule] Federally Enforceable Through Title V Permit
20. Gas turbine engine water injection rate shall be maintained such that water to fuel ratio is no less than that amount determined necessary to ensure emission limits compliance. [District NSR Rule] Federally Enforceable Through Title V Permit
21. Gas turbine engine shall be equipped with continuously recording water injection rate monitor accurate to within +/- 5%. [District NSR Rule] Federally Enforceable Through Title V Permit
22. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours and two hours, respectively, per occurrence. [District Rule 4703] Federally Enforceable Through Title V Permit
23. Except during periods of startup/shutdown, if water injection system is inoperative, gas turbine engine shall be shut down. [40 CFR 60.8(c), District NSR Rule] Federally Enforceable Through Title V Permit
24. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas sample consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit
25. All steam produced by this source operation shall be used only in existing TEOR operation(s) served by existing vapor control system(s). [District NSR Rule] Federally Enforceable Through Title V Permit
26. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit
27. Emissions increases from new wells in zone steamed by this equipment shall be controlled and mitigated as required by District NSR Rule and District Rule 4401 (amended 1/15/98). [District NSR Rule] 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.

28. Source testing shall be conducted for at least three levels of operating range of water to fuel ratio to demonstrate previously established ratio correlation with NOx emissions remains valid. [District NSR Rule and 1081] Federally Enforceable Through Title V Permit
29. Compliance with nitrogen oxide, and CO emission limits shall be demonstrated by District-witnessed sample collection by independent testing laboratory annually within 60 days of permit anniversary date. [District Rules 1081 and 4703] Federally Enforceable Through Title V Permit
30. Source test results and fuel test data shall be submitted within 60 days after sample collection with water to fuel injection ratio, on mass basis, determined at time of stack gas sampling. [District Rule 1081] Federally Enforceable Through Title V Permit
31. Permittee shall keep accurate daily records of turbine water to fuel injection ratio and such records shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
32. Gas turbine engine shall be equipped with continuously recording oxides of nitrogen and oxygen monitors. NOx monitoring system requirement may be substituted or replaced upon documentation that H2O/fuel ratio correlates well with NOx emission rate. [District NSR Rule] Federally Enforceable Through Title V Permit
33. Permittee shall submit compliance testing plan to the District within 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit
34. Except during periods of startup/shutdown, emission rates for this unit shall not exceed any of the following: PM-10: 0.015 lb/MMBTU, SOx (as SO2): 0.0031 lb/MMBTU, NOx (as NO2): 35 ppmv @ 15% O2, VOC: 0.010 lb/MMBTU, or CO: 57.0 ppmv @ 15% O2. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit
35. Emission rates for this unit shall not exceed any of the following: PM-10: 18.9 lb/day, SOx (as SO2): 3.9 lb/day, NOx (as NO2): 163.4 lb/day, VOC: 12.6 lb/day, or CO: 162.2 lb/day [District NSR Rule and 4703] Federally Enforceable Through Title V Permit
36. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; 40 CFR 60.332(a) and (b); 60.333(a) and (b); 60.334 (a), (b), and (c)(1); 60.335(a), (b), (c), and (e). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
37. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 407; 40 CFR 60.332(c), (d); 60.334(b), and (c)(2); 60.335(d). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1131-1079-6

EXPIRATION DATE: 02/28/2006

SECTION: NE6 TOWNSHIP: 29S RANGE: 28E

EQUIPMENT DESCRIPTION:

COGENERATION UNIT #1 (FEE C LEASE - WEST UNIT) SOLAR CENTAUR 50-T5901S, 48.7 MMBTU/HR GAS FIRED DOE CERAMIC GTE, 4.1 MW, WITH LUBE OIL MIST ELIMINATOR, UNFIRED HEAT RECOVERY STEAM GENERATOR, AND CONTINUOUS MONITORING SYSTEM.

PERMIT UNIT REQUIREMENTS

1. Gas turbine shall be fired exclusively with PUC or FERC regulated natural gas or natural gas documented to be of comparable quality. [District Rule 2201] 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. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Heat recovery steam generator exhaust stack shall be equipped with permanent provisions to allow collection of gas sample consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed any of the following: PM-10: 0.015 lb/MMBTU, SO_x (as SO₂): 0.003 lb/MMBTU, NO_x (as NO₂): 25 ppmv @ 15% O₂, VOC: 0.016 lb/MMBTU, or CO: 33 ppmv @ 15% O₂. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Emissions shall not exceed either of the following NSPS Subpart GG limits (1 hour standard): NO_x (as NO₂): 171 ppmvd @ 15% O₂, or SO_x (as SO₂): 150 ppmvd @ 15% O₂. [District Rule 4001] Federally Enforceable Through Title V Permit
7. Permittee shall satisfy all applicable requirements of District Rule 4001, New Source Performance Standards - Subpart GG and notification and reporting requirements. [District Rule 4001] Federally Enforceable Through Title V Permit
8. Compliance source testing for NO_x, CO and demonstrated percent efficiency shall be conducted within 60 days of initial startup, and not less than once every 12 months for each mode of operation (standard operation and each experimental mode of operation). [District Rule 4703] Federally Enforceable Through Title V Permit
9. Compliance source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
10. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District 1081] Federally Enforceable Through Title V Permit
11. 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
12. Compliance with SO_x emission limits shall be demonstrated by fuel gas sulfur content analysis at the time of NO_x testing. Sulfur testing is not required for PUC or FERC regulated natural gas. [District Rule 1081] 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.

Facility Name: CHEVRON USA INC
Location: HEAVY OIL CENTRAL, KERN COUNTY, CA
S-1131-1079-6; Sep 4 2003 10:18AM - MARFUSA

13. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or EPA Method 20, CO (ppmv) - EPA Method 10 or 10B, stack gas oxygen - EPA Methods 3, 3A or 20, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081 and 4703] Federally Enforceable Through Title V Permit
14. Permittee shall maintain onsite for a period of at least five years accurate daily records of Predictive Emissions Monitoring System (PEMS) gas turbine engine exhaust NOx concentrations and such records shall be made readily available for District inspection upon request. [District NSR Rule and 2520, 9.4.2] Federally Enforceable Through Title V Permit
15. Permittee's written request for approval of experimental components and operating conditions shall include at minimum the following information: components to be installed and conditions for operation, expected duration of operation, and description of, and justification for, expected emissions and maximum heat input rate. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit
16. Permittee's request for approval of experimental components and operating conditions shall be submitted to the District at least 30 days prior to the initial planned installation date. The permittee shall also notify the District at least 15 days prior to the initial actual installation of the experimental components or start of operating conditions. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit
17. Permittee shall notify the District, in writing, of turbine operating mode (standard or experimental) no later than 48 hours after changing mode of operation. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit
18. Operator shall not discharge into the atmosphere combustion contaminants (PM) exceeding in concentration at the point of discharge, 0.1 gr/dscf. [District Rule 4201; Kern County Rule 404] Federally Enforceable Through Title V Permit
19. Operator shall not exceed a NOx emission rate of: A. (If Rating <10 MW) 42 ppmvd @ 15% O2, excluding the thermal stabilization periods or reduced load periods. [40 CFR 60.332(a)(1) & 60.332(a)(2); District Rule 4703, 5.1.1] Federally Enforceable Through Title V Permit
20. Operator shall be required to conform to the compliance testing procedures described in District Rule 1081. [Kern County Rule 108.1; District Rule 1081] Federally Enforceable Through Title V Permit
21. The HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, OR ASTM 1945. [40 CFR 60.332(a),(b)] Federally Enforceable Through Title V Permit
22. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332(a),(b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
23. The operator shall provide source test information annually regarding the demonstrated percent efficiency (EFF) as defined in District Rule 4703, 5.1.1. [40 CFR 60.332(a),(b) and 4703, 5.1.1] Federally Enforceable Through Title V Permit
24. Operations during periods of startup and shutdown shall not constitute representative conditions for the purpose of a NOx performance test nor shall NOx emissions in excess of the level of the emission limit shown in this permit during periods of startup and shutdown be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard. Operation during periods of malfunction shall not constitute representative conditions for the purpose of determining compliance with emission limits based on 40 CFR 60.8 [40 CFR 60.8(c)] Federally Enforceable Through Title V Permit
25. If the turbine is fired on PUC or FERC-regulated natural gas or natural gas documented to be of comparable quality, then maintain on file copies of natural gas bills. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and 4703, 6.2.4] Federally Enforceable Through Title V Permit
27. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] 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.

28. Permittee shall maintain onsite for a period of at least five years accurate records of daily fuel consumption, daily fuel sulfur content, and daily fuel nitrogen content and shall make such records readily available for District inspection upon request. Daily monitoring of fuel sulfur and nitrogen contents is not required for PUC or FERC regulated natural gas. [District Rules 4001 and 2201] Federally Enforceable Through Title V Permit

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

Appendix B
Source Tests

Facility: S 1131 CHEVRON USA INC

Permit ID: 970

Mod#: 10

970

Test Tracking

Periodic Test Setup

Test Equipment Details

Test Result Details

Representative Test

Unit Identification:

Fee A CG-1

Description:

Add New Unit

Save

Cancel

1 Unit Total

Test Results For: Fee A CG-1

Pollutant	Units	Limit	Result	Failed	O2 Correction (%)	# Runs	Description
CO	ppm	65.0	43.6	<input type="checkbox"/>	15	3	
CO	lbs/day	183.6	112.6	<input type="checkbox"/>		3	
Fuel S	%	0.017	0.0	<input type="checkbox"/>		3	
NOx	lbs/day	162.2	137.0	<input type="checkbox"/>		3	
NOx	ppm	35.0	32.3	<input type="checkbox"/>	15	3	
NOx	lbs/MMBtu	0.129	0.1176	<input type="checkbox"/>		3	
SO2	lb/MMBtu	0.0031	0.0002	<input type="checkbox"/>		3	

Add New Pollutant...

Close

Save

2-2006

Facility: 9 113 CHEVRON USA INC

Permit ID: 970

Mod#: 18

970

Test Tracking

Periodic Test Setup

Test Equipment Details

Test Result Details

Representative Test

Unit Identification:

Fee A CG-1

1 Unit Total

Description:

Add New Unit

Save

Cancel

Test Results For: Fee A CG-1

Pollutant	Units	Limit	Result	Failed	O2 Correction (%)	# Runs	Description
CO	ppm	65.0	50.1	<input type="checkbox"/>	15	3	
CO	lbs/day	183.6	125.0	<input type="checkbox"/>		3	
Fuel S	%	0.017		<input type="checkbox"/>		3	
NOx	lbs/day	162.2	112.3	<input type="checkbox"/>		3	
NOx	ppm	35.0	27.4	<input type="checkbox"/>	15	3	
NOx	lbs/MMBtu	0.129	0.0996	<input type="checkbox"/>		3	
SO2	lb/MMBtu	0.0031	0.0002	<input type="checkbox"/>		3	

Add New Pollutant...

Close

Save

2 2007

Test Tracking Periodic Test Setup Test Equipment Details **Test Result Details**

Representative Test

Unit Identification:

CG-1

1 Unit Total

Description:

Add New Unit

Save

Cancel

Test Results For: FEE A CG-1

Pollutant	Units	Limit	Result	Failed	O2 Correction (%)	# Runs	Description
CO	ppm	65.0	50.1	<input type="checkbox"/>	15	3	
NOx	ppm	35.0	32.4	<input type="checkbox"/>	15	3	

Add New Pollutant...

Close

Save

2-2008

Facility: S 1131 CHEVRON USA INC

Permit ID: 974

Mod#: 9

Test Tracking

Periodic Test Setup

Test Equipment Details

Test Result Details

Representative Test

Unit Identification:

FEE C CG-2

1 Unit Total

Description:

Add New Unit

Save

Cancel

Test Results For: FEE C CG-2

Pollutant	Units	Limit	Result	Failed	O2 Correction (%)	# Runs	Description
CO	ppm	57.0	45.4	<input type="checkbox"/>	15	3	
CO	lbs/day	162.2	114.5	<input type="checkbox"/>		3	
Fuel S	%	0.017		<input type="checkbox"/>		3	
NOx	ppm	35.0	28.9	<input type="checkbox"/>	15	3	
NOx	lbs/day	163.4	119.6	<input type="checkbox"/>		3	
SO2	lb/MMBtu	0.0031	0.0002	<input type="checkbox"/>		3	
SO2	lbs/day	3.9	0.18	<input type="checkbox"/>		3	

Add New Pollutant...

Close

Save

512006

Facility: S 1131 CHEVRON USA INC

Permit ID: 974

Mod#: 9

Test Tracking

Periodic Test Setup

Test Equipment Details

Test Result Details

Representative Test

Unit Identification:

FEE C CG-2

1 Unit Total

Description:

Add New Unit

Save

Cancel

Test Results For: FEE C CG-2

Pollutant	Units	Limit	Result	Failed	O2 Correction (%)	# Runs	Description
CO	ppm	57.0	43.6	<input type="checkbox"/>	15	3	
CO	lbs/day	162.2	111.4	<input type="checkbox"/>		3	
Fuel S	%	0.017		<input type="checkbox"/>		3	
NOx	ppm	35.0	28.3	<input type="checkbox"/>	15	3	
NOx	lbs/day	163.4	118.6	<input type="checkbox"/>		3	
SO2	lb/MMBtu	0.0031	0.0002	<input type="checkbox"/>		3	
SO2	lbs/day	3.9	0.192	<input type="checkbox"/>		3	

Add New Pollutant...

Close

Save

5-2007

Facility: S 1131 CHEVRON USA INC

Permit ID: 974

Mod#: 9

Test Tracking

Periodic Test Setup

Test Equipment Details

Test Result Details

Representative Test

Unit Identification:

Turbine CG-2

1 Unit Total

Description:

Add New Unit

Save

Cancel

Test Results For: FEE 'C' CG-2

Pollutant	Units	Limit	Result	Failed	O2 Correction (%)	# Runs	Description
CO	ppm	57.0	34.1	<input type="checkbox"/>	15	3	
NOx	ppm	35.0	30.7	<input type="checkbox"/>	15	3	
SO2	lb/MMBtu	0.0031	0.0002	<input type="checkbox"/>		3	

Add New Pollutant...

Close

Save

5/2008

Facility: S 1131 CHEVRON USA INC

Permit ID: 1079

Mod#: 7

Test Tracking

Periodic Test Setup

Test Equipment Details

Test Result Details

Representative Test

Unit Identification:

CG-1

1 Unit Total

Description:

Add New Unit

Save

Cancel

Test Results For: FEE C CG-1

Pollutant	Units	Limit	Result	Failed	O2 Correction (%)	# Runs	Description
CO	ppm	33.0	1.4	<input type="checkbox"/>	15	3	
NOx	ppm	25.0	7.4	<input type="checkbox"/>	15	3	
SO2	lb/MMBtu	0.003	0.0002	<input type="checkbox"/>		3	

Add New Pollutant...

Close

Save

5/2006

Facility: S 1131 CHEVRON USA INC

Permit ID: 1079

Mod#: 7

Test Tracking	Periodic Test Setup	Test Equipment Details	Test Result Details
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Representative Test

Unit Identification: Description:

1 Unit Total

Test Results For: FEE C CG-1

Pollutant	Units	Limit	Result	Failed	O2 Correction (%)	# Runs	Description
CO	ppm	33.0	16.6	<input type="checkbox"/>	15	3	
NOx	ppm	25.0	17.0	<input type="checkbox"/>	15	3	
SO2	lb/MMBtu	0.003	0.0002	<input type="checkbox"/>		3	

5/2007

Facility: S 1133 CHEVRON USA INC

Permit ID: 1079

Mod#: 7

Test Tracking

Periodic Test Setup

Test Equipment Details

Test Result Details

Representative Test

Unit Identification:

Turbine CG-1

1 Unit Total

Description:

Add New Unit

Save

Cancel

Test Results For: FEE 'C' CG-1

Pollutant	Units	Limit	Result	Failed	O2 Correction (%)	# Runs	Description
CO	ppm	33.0	38.7	<input checked="" type="checkbox"/>	15	3	
NOx	ppm	25.0	11.5	<input type="checkbox"/>	15	3	
SO2	lb/MMBtu	0.003	0.0002	<input type="checkbox"/>		3	

Add New Pollutant...

Close

Save

5-2008

Appendix C
Fuel Use Records

Kern River Fee Cogen Operational Data

Month	A Fee #1 S-1131-970			A Fee #2 S-1131-973			C Fee #2 S-1131-974			C Fee #1 S-1131-1079		
	Mscf	HHV (btu/s	MMBtu	Mscf	HHV (btu/s	MMBtu	Mscf	HHV (btu/scf)	MMBtu	Mscf	HHV (btu/sc	MMBtu
		cf)			cf)			f)				

Kern River Fee Cogen Operational Data

Month	A Fee #1 S-1131-970			A Fee #2 S-1131-973			C Fee #2 S-1131-974			C Fee #1 S-1131-1079		
	Mscf	HHV	MMBtu	Mscf	HHV	MMBtu	Mscf	HHV	MMBtu	Mscf	HHV	MMBtu
Oct-05	3,137	1,042	3,269	3,077	1,042	3,206	32,271	1,051	33,917	32,433	1,051	34,087
Nov-05	0	1050	0	0	1050	0	16,934	1,053	17,832	26,210	1,053	27,599
Dec-05	0	1062	0	0	1062	0	33,820	1,053	35,612	0	1,053	0
Jan-06	3,410	1,047	3,570	4,498	1,047	4,709	0	1,053	0	0	1,053	0
Feb-06	30,205	1,054	31,836	31,322	1,054	33,013	29,224	1,054	30,802	29,293	1,054	30,875
Mar-06	28,721	1,050	30,157	30,302	1,050	31,817	29,528	1,050	31,004	29,860	1,050	31,353
Apr-06	26,070	1,046	27,269	27,291	1,046	28,546	27,045	1,046	28,289	26,771	1,046	28,002
May-06	26,070	1,045	27,243	34,170	1,045	35,708	33,281	1,045	34,779	31,263	1,045	32,670
Jun-06	31,873	1,047	33,371	32,527	1,047	34,056	32,520	1,047	34,048	32,068	1,047	33,575
Jul-06	30,728	1,052	32,326	31,705	1,052	33,354	32,607	1,052	34,303	31,633	1,052	33,278
Aug-06	32,875	1,053	34,617	33,988	1,053	35,789	33,072	1,053	34,825	32,977	1,053	34,725
Sep-06	31,313	1,052	32,941	32,365	1,052	34,048	32,041	1,052	33,707	31,708	1,052	33,357
Oct-06	32,877	1,051	34,554	33,730	1,051	35,450	32,271	1,051	33,917	32,433	1,051	34,087
Nov-06	18,053	1,053	19,010	25,820	1,053	27,188	16,934	1,053	17,832	26,210	1,053	27,599
Dec-06	21,216	1,053	22,340	11,682	1,053	12,301	33,820	1,053	35,612	0	1,053	0
Jan-07	30,302	1,051	31,847	7,100	1,051	7,462	29,326	1,051	30,822	0	1,053	0
Feb-07	29,731	1,054	31,336	30,916	1,054	32,585	30,345	1,054	31,984	1,865	1,051	1,960
Mar-07	31,080	1,040	32,323	32,740	1,040	34,050	33,266	1,040	34,597	26,356	1,040	27,410
Apr-07	28,359	1,045	29,635	33,124	1,045	34,615	31,864	1,045	33,298	34,116	1,045	35,651
May-07	33,077	1,045	34,565	34,298	1,045	35,841	33,588	1,045	35,099	35,184	1,045	36,767
Jun-07	25,250	1,043	26,336	30,918	1,043	32,247	31,125	1,043	32,463	31,279	1,043	32,624
Jul-07	30,825	1,045	32,212	34,251	1,045	35,792	33,766	1,045	35,285	32,875	1,045	34,354
Aug-07	32,795	1,049	34,402	33,938	1,049	35,601	33,926	1,049	35,588	33,543	1,049	35,187
Sep-07	31,519	1,046	32,969	32,809	1,046	34,318	32,253	1,046	33,737	30,566	1,046	31,972
Oct-07	32,994	1,048	34,578	34,395	1,048	36,046	34,315	1,048	35,962	17,108	1,048	17,929
Nov-07	31,831	1,051	33,454	33,269	1,051	34,966	33,407	1,051	35,111	92	1,051	97
Dec-07	7,682	1,053	8,089	25,576	1,053	26,932	30,506	1,053	32,123	568	1,053	598
Jan-08	29,802	1,051	31,322	32,372	1,051	34,023	30,573	1,051	32,132	1,871	1,051	1,966
Feb-08	29,972	1,044	31,291	29,368	1,044	30,660	31,119	1,044	32,488	87	1,044	91
Mar-08	32,445	1,040	33,743	33,618	1,040	34,963	33,424	1,040	34,761	6,664	1,040	6,931

Apr-08	31,911	1,048	33,443	32,899	1,048	34,478	31,861	1,048	33,390	20,844	1,048	21,845
May-08	32,618	1,042	33,988	34,408	1,042	35,853	32,740	1,042	34,115	586	1,042	611
Jun-08	31,321	1,048	32,824	33,394	1,048	34,997	24,507	1,048	25,683	0	1,048	0
Jul-08	17,555	1,047	18,380	15,712	1,047	16,450	0	1,048	0	0	1,047	0
Aug-08	0	1,047	0	0	1,047	0	0	1,048	0	0	1,047	0
Sep-08	0	1,044	0	0	1,044	0	0	1,044	0	0	1,044	0
Oct-08	0	1,036	0	0	1,036	0	0	1,036	0	0	1,036	0
Nov-08	0	1,037	0	0	1,037	0	0	1,037	0	0	1,037	0
Dec-08	0	1,047	0	0	1,047	0	0	1,047	0	0	1,051	0
Jan-09	0	1,040	0	0	1,040	0	0	1,040	0	0	1040	0
Feb-09	17,396	1,042	18,127	16,581	1,042	17,277	0	1,042	0	0	1042	0
Mar-09	3,760	1,034	3,888	1,183	1,034	1,223	0	1,034	0	0	1034	0
Apr-09	0	1,036	0	0	1,036	0	0	1,036	0	0	1036	0
May-09	0	1,037	0	0	1,037	0	11,482	1,037	11,907	0	1037	0
Jun-09	0	958	0	13,773	958	13,195	4,298	1,035	4,448	0	1035	0
Jul-09	41,859	919	38,468	41,524	919	38,161	27,239	938	25,550	0	938	0
Aug-09	20,939	976	20,436	29,768	976	29,054	30,088	966	29,065	0	966	0
Sep-09	32,338	1,038	33,567	31,859	1,038	33,070	21,676	1,038	22,500	0	1038	0
Oct-09	34,762	1,036	36,013	33,796	1,036	35,013	29,594	1,036	30,659	0	1036	0
Nov-09	32,876	1,031	33,895	32,022	1,031	33,015	30,255	1,031	31,193	0	1031	0
Dec-09	30,667	1,030	31,587	29,039	1,030	29,910	25,168	1,030	25,923	0	1030	0
Jan-10	33,733	1,031	34,779	32,687	1,031	33,700	21,470	1,031	22,136	0	1031	0
Feb-10	30,908	1,031	31,866	30,458	1,031	31,402	29,239	1,031	30,145	0	1031	0
Mar-10	32,885	1,036	34,069	33,072	1,036	34,263	33,221	1,036	34,417	0	1036	0
Apr-10	31,570	1,032	32,580	28,852	1,032	29,775	31,099	1,032	32,094	0	1032	0
May-10	33,975	1,033	35,096	32,746	1,033	33,827	33,695	1,033	34,807	0	1033	0
Jun-10	19,874	1,037	20,609	19,659	1,037	20,386	20,018	1,037	20,759	0	1037	0
Jul-10	0	1,037	0	0	1,037	0	0	1,037	0	0	1037	0
Aug-10	0	1,035	0	0	1,037	0	0	1,037	0	0	1037	0
Sep-10	0	1,036	0	0	1,037	0	0	1,037	0	0	1037	0
Oct-10	0	1,036	0	0	1,037	0	0	1,037	0	0	1037	0

60-Mo

Avg MMBtu =

1,039

1,039

1,040

1,041

From previous month

Appendix D
Baseline Period Determination

11/15/2011 10:00:00 AM

Fee A	S-1131-970 MMBtu	S-1131-973 MMBtu	Total MMBtu	24 month block averages *	36 month block averages *	48 month block averages *	60 month *
1999	443,172	457,105	900,277				
2000-2005	2,302,762	2,381,462	4,684,224				
Oct -05 *	3,269	3,206	6,475				
Nov - 05 *	-	-	-				
Dec - 05 *	-	-	-				
Jan-06	3,570	4,709	8,280				
Feb-06	31,836	33,013	64,849				
Mar-06	30,157	31,817	61,974				
Apr-06	27,269	28,546	55,816				
May-06	27,243	35,708	62,951				
Jun-06	33,371	34,056	67,427				
Jul-06	32,326	33,354	65,680				
Aug-06	34,617	35,789	70,407				
Sep-06	32,941	34,048	66,989				
Oct-06	34,554	35,450	70,004				
Nov-06	19,010	27,188	46,198				
Dec-06	22,340	12,301	34,642				
Jan-07	31,847	7,462	39,310				
Feb-07	31,336	32,585	63,922				
Mar-07	32,323	34,050	66,373				
Apr-07	29,635	34,615	64,250				
May-07	34,565	35,841	70,407				
Jun-07	26,336	32,247	58,583				
Jul-07	32,212	35,792	68,004				
Aug-07	34,402	35,601	70,003				
Sep-07	32,969	34,318	67,287	59,207			
Oct-07	34,578	36,046	70,624	59,726			
Nov-07	33,454	34,966	68,420	60,104			
Dec-07	8,089	26,932	35,021	59,059			
Jan-08	31,322	34,023	65,345	61,437			
Feb-08	31,291	30,660	61,951	61,316			
Mar-08	33,743	34,963	68,706	61,597			
Apr-08	33,443	34,478	67,921	62,101			
May-08	33,988	35,853	69,841	62,388			
Jun-08	32,824	34,997	67,821	62,404			
Jul-08	18,380	16,450	34,831	61,119			
Aug-08	-	-	-	58,185			
Sep-08	-	-	-	55,394	56,177		
Oct-08	-	-	-	52,477	54,525		
Nov-08	-	-	-	50,552	52,967		
Dec-08	-	-	-	49,109	51,495		
Jan-09	-	-	-	47,471	51,265		

* shown separately as these months are part of the preceding 5 year period, but fuel use included in 2000-2005 total

This preceding 24 month period has an average monthly fuel use closest to the historic monthly fuel use.
Therefore, the 24 month period Sep 2006 - Aug 2008 most closely represent normal source operation. As such, the baseline period is Sep 2006 - Aug 2008.

* block averages are for periods (24, 46, 48, 60 month) preceding the date indicated. Block averages are for periods that begin no earlier than Oct 2005, i.e. 5 years before the date the shutdown occurred.

Fee A	S-1131-970 MMBtu	S-1131-973 MMBtu	Total MMBtu	24 month block averages *	36 month block averages *	48 month block averages *	60 month *
Feb-09	18,127	17,277	35,404	46,283	50,447		
Mar-09	3,888	1,223	5,111	43,730	48,868		
Apr-09	-	-	-	41,053	47,318		
May-09	-	-	-	38,120	45,569		
Jun-09	-	13,195	13,195	36,228	44,062		
Jul-09	38,468	38,161	76,629	36,588	44,367		
Aug-09	20,436	29,054	49,490	35,733	43,786		
Sep-09	33,567	33,070	66,636	35,706	43,776	46,673	
Oct-09	36,013	35,013	71,026	35,723	43,804	47,203	
Nov-09	33,895	33,015	66,910	35,660	44,379	47,622	
Dec-09	31,587	29,910	61,497	36,763	45,125	47,911	
Jan-10	34,779	33,700	68,479	36,894	45,936	49,165	
Feb-10	31,866	31,402	63,268	36,949	45,918	49,132	
Mar-10	34,069	34,263	68,331	36,933	45,972	49,265	
Apr-10	32,580	29,775	62,356	36,701	45,919	49,401	
May-10	35,096	33,827	68,923	36,663	45,878	49,525	
Jun-10	20,609	20,386	40,996	35,545	45,390	48,975	
Jul-10	-	-	-	34,094	43,501	47,606	
Aug-10	-	-	-	34,094	41,556	46,140	
Sep-10	-	-	-	34,094	39,687	44,744	
Oct-10	-	-	-	34,094	37,725	43,286	46,070

Average monthly fuel use
over 142 months of data provided
Normal source operation (NSO) 58,145

* block averages are for periods (24, 46, 48, 60 month) preceding the date indicated. Block averages are for periods that begin no earlier than Oct 2005, i.e. 5 years before the date the shutdown occurred.

Fee C	S-1131-974 MMBtu	S-1131-1079 MMBtu	Total Lease MMBtu	24 month block averages *	36 month block averages *	48 month block averages *	60 month *
Jan - Dec 1999	477,962	460,167	938,129				
2000-2005	2,340,058	2,308,193	4,648,251				
Oct -05 *	33,917	34,087	68,004				
Nov - 05 *	17,832	27,599	45,431				
Dec - 05 *	35,612	-	35,612				
Jan-06	-	-	-				
Feb-06	30,802	30,875	61,677				
Mar-06	31,004	31,353	62,357				
Apr-06	28,289	28,002	56,292				
May-06	34,779	32,670	67,448				
Jun-06	34,048	33,575	67,624				
Jul-06	34,303	33,278	67,580				
Aug-06	34,825	34,725	69,550				
Sep-06	33,707	33,357	67,064				
Oct-06	33,917	34,087	68,004				
Nov-06	17,832	27,599	45,431				
Dec-06	35,612	0	35,612				
Jan-07	30,822	0	30,822				
Feb-07	31,984	1,960	33,944				
Mar-07	34,597	27,410	62,007				
Apr-07	33,298	35,651	68,949				
May-07	35,099	36,767	71,867				
Jun-07	32,463	32,624	65,087				
Jul-07	35,285	34,354	69,640				
Aug-07	35,588	35,187	70,775				
Sep-07	33,737	31,972	65,709	56,520			
Oct-07	35,962	17,929	53,891	55,932			
Nov-07	35,111	97	35,207	55,506			
Dec-07	32,123	598	32,721	55,386			
Jan-08	32,132	1,966	34,099	56,807			
Feb-08	32,488	91	32,579	55,594			
Mar-08	34,761	6,931	41,692	54,733			
Apr-08	33,390	21,845	55,235	54,689			
May-08	34,115	611	34,726	53,326			
Jun-08	25,683	0	25,683	51,578			
Jul-08	0	0	0	48,762			
Aug-08	0	0	0	45,864			
Sep-08	0	0	0	43,070	47,287		
Oct-08	0	0	0	40,236	45,398		
Nov-08	0	0	0	38,344	44,136		
Dec-08	0	0	0	36,860	43,146		
Jan-09	0	0	0	35,575	43,146		

* shown separately as these months are part of the preceding 5 year period, but fuel use included in 2000-2005 total

This period has an average monthly fuel use closest to the historic monthly fuel use.

Therefore, the 24 months period Sep 2006 Aug 2008 most closely represent normal source operation. As such, the baseline period is Sep 2006 - Aug 2008.

* block averages are for periods (24, 46, 48, 60 month) preceding the date indicated. Block averages are for periods that begin no earlier than Oct 2005, i.e. 5 years before the date the shutdown occurred.

Fee C	S-1131-974 MMBtu	S-1131-1079 MMBtu	Total Lease MMBtu	24 month block averages *	36 month block averages *	48 month block averages *	60 month *
Feb-09	0	0	0	34,161	41,433		
Mar-09	0	0	0	31,577	39,701		
Apr-09	0	0	0	28,705	38,137		
May-09	11,907	0	11,907	26,206	36,595		
Jun-09	4,448	0	4,448	23,680	34,840		
Jul-09	25,550	0	25,550	21,843	33,672		
Aug-09	29,065	0	29,065	20,105	32,548		
Sep-09	22,500	0	22,500	18,304	31,310	37,412	
Oct-09	30,659	0	30,659	17,336	30,272	36,634	
Nov-09	31,193	0	31,193	17,169	29,877	36,338	
Dec-09	25,923	0	25,923	16,886	29,608	36,136	
Jan-10	22,136	0	22,136	16,387	29,366	36,597	
Feb-10	30,145	0	30,145	16,286	29,261	35,940	
Mar-10	34,417	0	34,417	15,983	28,495	35,358	
Apr-10	32,094	0	32,094	15,019	27,471	34,854	
May-10	34,807	0	34,807	15,022	26,441	34,174	
Jun-10	20,759	0	20,759	14,817	25,210	33,197	
Jul-10	0	0	0	14,817	23,276	31,789	
Aug-10	0	0	0	14,817	21,310	30,341	
Sep-10			0	14,817	19,484	28,943	
Oct-10			0	14,817	17,987	27,527	33,165

Average monthly fuel use
over 142 months of data provided
Normal source operation (NSO) 52,783

* block averages are for periods (24, 46, 48, 60 month) preceding the date indicated. Block averages are for periods that begin no earlier than Oct 2005, i.e. 5 years before the date the shutdown occurred.

Appendix E

Draft ERCs

San Joaquin Valley
Air Pollution Control District

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

Emission Reduction Credit Certificate
S-3544-1

ISSUED TO: CHEVRON USA INC
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: HEAVY OIL CENTRAL
KERN COUNTY, CA
SECTION: 25 TOWNSHIP: 28S RANGE: 27E

For VOC Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
346 lbs	378 lbs	292 lbs	308 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shut down of two (S-1131-970 & '-973) Solar gas turbines at the Kern River Oil Field

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-3544-2

ISSUED TO: CHEVRON USA INC
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: HEAVY OIL CENTRAL
KERN COUNTY, CA
SECTION: 25 TOWNSHIP: 28S RANGE: 27E

For NOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
3,027 lbs	3,303 lbs	2,542 lbs	2,691 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shut down of two (S-1131-970 & '973) Solar gas turbines at the Kern River Oil Field

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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-3544-3

ISSUED TO: CHEVRON USA INC
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: HEAVY OIL CENTRAL
KERN COUNTY, CA
SECTION: 25 TOWNSHIP: 28S RANGE: 27E

For CO Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
17,310 lbs	18,804 lbs	14,712 lbs	15,270 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shut down of two (S-1131-970 & '-973) Solar gas turbines at the Kern River Oil Field

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-3544-4

ISSUED TO: CHEVRON USA INC
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: HEAVY OIL CENTRAL
KERN COUNTY, CA
SECTION: 25 TOWNSHIP: 28S RANGE: 27E

For PM10 Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
1,086 lbs	1,185 lbs	913 lbs	966 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shut down of two (S-1131-970 & '973) Solar gas turbines at the Kern River Oil Field

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-3544-5

ISSUED TO: CHEVRON USA INC
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: HEAVY OIL CENTRAL
KERN COUNTY, CA
SECTION: 25 TOWNSHIP: 28S RANGE: 27E

For SOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
33 lbs	36 lbs	29 lbs	30 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shut down of two (S-1131-970 & '-973) Solar gas turbines at the Kern River Oil Field

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.

Seyyed Sadredin, Executive Director / APCO

DRAFT

David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

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Emission Reduction Credit Certificate
S-3604-1

ISSUED TO: CHEVRON USA INC
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: HEAVY OIL CENTRAL
KERN COUNTY, CA
SECTION: 30 TOWNSHIP: 23S RANGE: 27E

For VOC Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
223 lbs	345 lbs	388 lbs	256 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shut down of two (S-1131-974 & '-1079) Solar gas turbines at the Kern River Oil Field

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-3604-2

ISSUED TO: CHEVRON USA INC
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: HEAVY OIL CENTRAL
KERN COUNTY, CA
SECTION: 30 TOWNSHIP: 28S RANGE: 27E

For NOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
1,948 lbs	3,037 lbs	3,398 lbs	2,243 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shut down of two (S-1131-974 & '-1079) Solar gas turbines at the Kern River Oil Field

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Seyed Sadredin, Executive Director / APCO

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David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

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Emission Reduction Credit Certificate
S-3604-3

ISSUED TO: CHEVRON USA INC
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: HEAVY OIL CENTRAL
KERN COUNTY, CA
SECTION: 30 TOWNSHIP: 28S RANGE: 27E

For CO Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
8,128 lbs	9,591 lbs	9,625 lbs	8,661 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shut down of two (S-1131-974 & '-1079) Solar gas turbines at the Kern River Oil Field

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David Warner, Director of Permit Services

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Air Pollution Control District

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Emission Reduction Credit Certificate
S-3604-4

ISSUED TO: CHEVRON USA INC
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: HEAVY OIL CENTRAL
KERN COUNTY, CA
SECTION: 30 TOWNSHIP: 28S RANGE: 27E

For PM10 Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
699 lbs	1,081 lbs	1,219 lbs	805 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shut down of two (S-1131-974 & '-1079) Solar gas turbines at the Kern River Oil Field

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David Warner, Director of Permit Services

San Joaquin Valley
Air Pollution Control District

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Emission Reduction Credit Certificate
S-3604-5

ISSUED TO: CHEVRON USA INC
ISSUED DATE: <DRAFT>
LOCATION OF REDUCTION: HEAVY OIL CENTRAL
KERN COUNTY, CA
SECTION: 30 TOWNSHIP: 28S RANGE: 27E

For SOx Reduction In The Amount Of:

Quarter 1	Quarter 2	Quarter 3	Quarter 4
22 lbs	33 lbs	37 lbs	24 lbs

Conditions Attached

Method Of Reduction

- Shutdown of Entire Stationary Source
 Shutdown of Emissions Units
 Other

Shut down of two (S-1131-974 & '-1079) Solar gas turbines at the Kern River Oil Field

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