



APR 21 2017

Jay Blackmon
Sycamore Cogeneration Facility
PO Box 81438
Bakersfield, CA 93380

RE: Notice of Final Action – Emission Reduction Credits
Facility Number: S-511
Project Number: S-1123816

Dear Mr. Blackmon:

The Air Pollution Control Officer has issued Emission Reduction Credits (ERCs) to Chevron USA Inc. for emission reduction generated by reducing the permitted operation of four gas turbine engines, in Central Kern County. The quantity of ERCs to be issued is 257,426 metric tons CO₂e/yr.

Sycamore Cogeneration has requested that the ERC be issued to their parent company Chevron USA Inc. As such, enclosed is a copy of the ERC Certificate issued to Chevron USA Inc., a revised application review, and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District's preliminary decision to issue the ERC Certificate was published on May 26, 2016. The District's analysis of the proposal was also sent to CARB and US EPA Region IX on May 26, 2016. Comments received by the District during the public notice period resulted in a reduction of the quantity of ERCs eligible for banking. The comments received and District response are included as Appendix E of the revised final evaluation (enclosed).

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Leonard Scandura at (661) 392-5500.

Seyed Sadredin

Executive Director/Air Pollution Control Officer

Northern Region

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

Central Region (Main Office)

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

Southern Region

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

Jay Blackmon
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Sincerely,



Arnaud Marjollet
Director of Permit Services

AM:dk

Enclosures

cc: Tung Le, CARB (w/enclosure) via email
cc: Gerardo C. Rios, EPA (w/enclosure) via email
cc: Anna Mortiz, Center for Biological Diversity (w/ enclosure) via email
mmortiz@biologicaldiversity.org

San Joaquin Valley Air Pollution Control District
ERC Application Review - Greenhouse Gases
Reduction in Gas Turbine Engine Use
Revised Final Decision

Facility Name: Sycamore Cogeneration Company

Date: March 8, 2017

Mailing Address: P O Box 80598
Bakersfield, CA 93380

Engineer: Dan Klevann
Lead Engineer: Leonard Scandura

Contact Person: Neil Burgess

Telephone: (661) 615-4630

Project #: S-1123816

Received: December 27, 2011

Deemed Complete: March 10, 2014

ERC #: S-4320-24

The District received comments during the public comment period. We have addressed these comments and made an adjustment to the calculation of the bankable emissions by using the U.S. EPA developed CO₂e emission factor. This adjustment resulted in a decrease in bankable CO₂e credits. See comments and responses in Appendix E.

I. Summary

Sycamore Cogeneration Company (Sycamore) has reduced permitted operation of four gas turbine engines (GTE) at their operation in the Kern River oilfield. Sycamore is requesting an emission reduction credit (ERC) banking certificate for CO₂e. The primary business of this facility is steam and electricity generation. Sycamore has also submitted an application to bank the emission reduction credits (ERCs) for the actual emission reductions (AER) of the NO_x emissions (ERC Project S-1114928).

Selection of Geographical Boundary for Determining Permanence of the GHG Emission Reduction

Rule 2301 contains several eligibility criteria for emission reduction credit banking, including that the emission reduction must be permanent. When determining the geographical boundary in which the emission reduction is determined to be permanent, the applicant may consider how the GHG ERC may likely be used.

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

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

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

For this application, the facility has selected California as the geographical boundary for which the emission reduction is permanent. Sycamore has provided data showing the decline in California Oil Production from 1995 to 2012 (see Appendix B). The power and steam produced by the GTE's was used for oil production in California. Additionally, Sycamore is an entity covered by California Cap and Trade (AB32), AB32 requires California to return to 1990 levels of greenhouse gas emissions by 2020. This information validates California as the geographical boundary selection for a permanent GHG emission reduction.

The following emission reductions have been found to qualify for banking:

GHG ERCs		
ERC Certificate	Pollutant	Amount
S-4320-24	CO ₂ e	257,426 metric tons/year

II. Applicable Rules

Rule 2301 Emission Reduction Credit Banking (1/19/12)

III. Location of Reduction

The equipment is located at Sycamore's facility in the Kern River Oilfield within Chevron's Kern County Heavy Oil Central stationary source. The location is below.

ERC: S-4320-24

S-511-1: Section 31, Township 28S, Range 28E
S-511-2: Section 31, Township 28S, Range 28E
S-511-3: Section 31, Township 28S, Range 28E
S-511-4: Section 31, Township 28S, Range 28E

IV. Method of Generating Reductions

The emission reductions are being generated by reducing the allowable usage and resulting NOx emissions from the four natural gas fired GE gas turbines. This NOx limit is only achieved by reducing the fuel combusted in the turbines. The reduction in fuel burned results in a reduction in GHG produced.

V. Equipment Description

PTO	Equipment
S-511-1	75 MW GENERAL ELECTRIC MODEL 7EA NATURAL GAS-FIRED COMBUSTION TURBINE COGENERATION UNIT WITH GE ENHANCED DRY LOW NOX DLN1+ COMBUSTOR TECHNOLOGY DISCHARGING TO ATMOSPHERE THROUGH A BYPASS STACK WHEN OPERATED IN SIMPLE CYCLE MODE OR THROUGH UNFIRED 450,000 LB/HR HEAT RECOVERY STEAM GENERATOR WHEN OPERATED IN COGENERATION MODE (SYCAMORE UNIT #1)
S-511-2	75 MW GENERAL ELECTRIC MODEL 7EA NATURAL GAS-FIRED COMBUSTION TURBINE COGENERATION UNIT WITH GE ENHANCED DRY LOW NOX DLN1+ COMBUSTOR TECHNOLOGY DISCHARGING TO ATMOSPHERE THROUGH A BYPASS STACK WHEN OPERATED IN SIMPLE CYCLE MODE OR THROUGH UNFIRED 450,000 LB/HR HEAT RECOVERY STEAM GENERATOR WHEN OPERATED IN COGENERATION MODE (SYCAMORE UNIT #2)
S-511-3	75 MW GENERAL ELECTRIC MODEL 7EA NATURAL GAS-FIRED COMBUSTION TURBINE COGENERATION UNIT WITH GE ENHANCED DRY LOW NOX DLN1+ COMBUSTOR TECHNOLOGY DISCHARGING TO ATMOSPHERE THROUGH A BYPASS STACK WHEN OPERATED IN SIMPLE CYCLE MODE OR THROUGH UNFIRED 450,000 LB/HR HEAT RECOVERY STEAM GENERATOR WHEN OPERATED IN COGENERATION MODE (SYCAMORE UNIT #3)
S-511-4	75 MW GENERAL ELECTRIC MODEL 7EA NATURAL GAS-FIRED COMBUSTION TURBINE COGENERATION UNIT WITH GE ENHANCED DRY LOW NOX DLN1+ COMBUSTOR TECHNOLOGY DISCHARGING TO ATMOSPHERE THROUGH A BYPASS STACK WHEN OPERATED IN SIMPLE CYCLE MODE OR THROUGH UNFIRED 450,000 LB/HR HEAT RECOVERY STEAM GENERATOR WHEN OPERATED IN COGENERATION MODE (SYCAMORE UNIT #4)

VI. Calculations

A. Assumptions and Emission Factors

Assumptions

The actual emissions will be calculated annually in the baseline period. The Historical Actual Emissions (HAE) will be calculated using actual fuel use data.

The applicant provided monthly fuel use data for the subject GTE's.

- Units of GHG AER is metric tons of CO₂e per year, rounded to the nearest metric ton
- 1,000 kg = 1 metric ton
- 1 therm of Natural Gas = 100 scf
- EPA Standard emission factors for natural gas combustion for CO₂, CH₄, and N₂O along with global warming potentials for CO₂, CH₄, and N₂O (from Rule 2301) will be used to calculate actual emission CO₂e emissions and post project potential CO₂e emissions.

Emission Factors (EF)

The U.S. EPA standard CO₂e equivalent emission factor for natural gas combustion will be used for both pre project and post project calculations. This emission factor is a combination of the CO₂, CH₄ and N₂O components listed in 40 CFR 98.30 Table C-1 and C-2. These emission factors have been determined by EPA, through a public process, to be representative for natural gas combustion in the U.S.

EF CO ₂	=	53.06 kg/MMBtu
EF CH ₄	=	1.0 E-3 kg/MMBtu
EF N ₂ O	=	1.0 E-4 kg/MMBtu

To convert CO₂, CH₄, and N₂O emission factors into a CO₂e emission factor, the global warming potentials of CO₂, CH₄, and N₂O from Rule 2301 shall be used.

GWP CO ₂	=	1 (from Rule 2301)
GWP CH ₄	=	21 (from Rule 2301)
GWP N ₂ O	=	310 (from Rule 2301)

$$\begin{aligned} \text{EF}_{\text{CO}_2\text{e}} &= (53.06 \text{ kg/MMBtu} * 1) + (1.0\text{E-}3 \text{ kg/MMBtu} * 21) + (1.0\text{E-}4 \text{ kg/MMBtu} * 310) \\ &= 53.06 \text{ kg/MMBtu} + 0.021 \text{ kg/MMBtu} + 0.031 \text{ kg/MMBtu} \\ &= 53.11 \text{ kgCO}_2\text{e/MMBtu} \times (1 \text{ metric ton} / 1000 \text{ kg}) \\ &= \mathbf{0.0531 \text{ metric tons CO}_2\text{e/MMBtu}} \end{aligned}$$

B. Baseline Period Determination

Pursuant to Rule 2301 section 4.5.4, the Baseline Period is the following:

The consecutive 24 month period immediately prior to the date the emission reduction occurred, or another consecutive 24 month period in the 60 months prior to the date the emission reduction occurred.

The baseline period was determined using the fuel usage records for the turbines during a consecutive 24-month period in the 60 months prior to the date the emission reduction occurred. The date the emission reduction occurred is when the ATC application to restrict the turbines usage was deemed complete. In this case, the reduction occurred December 29, 2011. This same baseline was also used for the criteria pollutant ERC banking project S-1114928. (See fuel usage records in Appendix C, Calculations in Appendix D).

Baseline Period		
Location	Permit Unit	Dates
Sycamore Cogeneration (S31, T28S, R28E)	S-511-1	January 2007 – December 2008
	S-511-2	
	S-511-3	
	S-511-4	

C. Baseline Data

The baseline fuel use is determined from the fuel usage records supplied by the applicant (Appendix C).

Baseline Fuel Usage All 4 Turbines	
Year	Annual Fuel Use (MMBtu)
2007	32,542,838
2008	26,462,122
Average	29,502,480

D. Historical Actual Emissions (HAE)

The HAE from the fuel use is determined by multiplying the fuel-use by the emission factor as presented above. The full calculations are in Appendix D.

$$\text{CO}_2\text{e} = [(\text{EF}) \times (\text{Fuel Heat Input})]$$

$$\text{CO}_2\text{e} = [(0.0531 \text{ metric tons CO}_2\text{e/MMBtu}) \times (29,502,480 \text{ MMBtu}) = 1,566,582 \text{ Mt CO}_2\text{e}$$

E. Post Project Potential to Emit (PE2)

As discussed above, the turbines in this project have an annual specific limiting condition on all four units of 271,200 lb NOx/yr. (see Appendix A).

The CO₂e emissions are calculated by using the NO_x limit, CO₂e emission factor, and NO_x emission factor. The potential emissions from all four turbines are 1,309,156 Mt CO₂e / yr. (see Appendix D).

F. Emission Reductions Eligible for Banking

The emission reductions eligible for banking are the difference between the historical actual emissions and the potential to emit after the project.

$$\begin{aligned} \text{ERCs eligible for banking} &= 1,566,582 \text{ Mt CO}_2\text{e/year} - 1,309,156 \text{ Mt CO}_2\text{e/year} \\ &= 257,426 \text{ Mt CO}_2\text{e/year} \end{aligned}$$

VII. Compliance

Rule 2301 – Emission Reduction Credit Banking

Section 4.5: Per District Rule 2301 Section 4.5, the following criteria must be met in order to deem such reductions eligible for banking:

- 4.5.1** The greenhouse gas emission reduction must have actually occurred on or after January 1, 2005, except as allowed in specific CARB approved GHG emission reduction project protocols.

The emission reductions occurred when the facility had stopped operating the turbines in a full time status. Sycamore had applied to change the permits in December 2011. As the emission reduction occurred after 1/1/05, this criteria has been satisfied.

- 4.5.2** The greenhouse gas emission reductions must have occurred within the San Joaquin Valley Unified Air Pollution Control District.

The emissions occurred at Sycamore's facility in the Kern River Oilfield within Chevron's Kern County Heavy Oil Central stationary source. Since this location is within the District, this criteria has been satisfied.

4.5.3 The greenhouse gas emission reductions are real, surplus, permanent, quantifiable, and enforceable, except as provided in Section 4.5.5.

Real:

The GHG emission reductions were generated by limitations of operation of the GTE's. The AER quantified above are based on actual, historical emissions and were calculated from actual fuel use data and source tests emission factors. The gas turbines have a new annual NOx emission limitation that inherently limits fuel use. Therefore, the AER due to limiting the turbines operation is real.

Surplus:

The facility is subject to the CARB cap and trade regulation; however, the reductions occurred prior January 1, 2012; therefore, the emission reductions satisfy the surplus requirement in Section 4.5.3.1.

The facility is subject to the CARB cap and trade regulation; however, the reductions occurred prior to the baseline period of cap and trade. Therefore, the emission reductions satisfy the surplus requirement in Section 4.5.3.2.

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

The Certificates will be identified according to Section 6.15.3 below.

Permanent:

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

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

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

When a lead agency determines if the retirement of a particular GHG ERC provides adequate GHG mitigation for a project, the lead agency may choose to consider the

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

Sycamore has selected California as the geographical boundary for which the emission reduction is permanent. Sycamore/Chevron has provided information verifying that the total oil production in the state of California has been in decline since 1985 (see graph in Appendix B). Additionally, Sycamore/Chevron is subject to the California Cap-and-Trade regulation which requires Chevron to reduce or mitigate a permanent reduction in GHG emissions. The combination of the decline in oil production in California and the reductions required by California's Cap-and-Trade regulation verify that the reductions are permanent within California. The geographical boundary for the ERCs will be the State of California and the ERC will include the following identifier:

"Reduction in permitted usage of gas turbine engines (S-511-1, '-2, '-3, &' -4) verified as permanent within the State of California."

Quantifiable:

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

Enforceable:

The gas turbines have an annual NOx emission limit on their permits which limits the fuel used in the turbines. Operation of the equipment resulting in NOx emissions over the allowable annual limit would subject the permittee to enforcement action. Therefore, the emission reductions are enforceable.

- 4.5.4** Greenhouse gas emission reductions are calculated as the difference between the historic annual average greenhouse gas emissions (as CO₂e) calculated using the consecutive 24 month period immediately prior to the date the emission reduction occurred, or another consecutive 24 month period in the 60 months prior to the date the emission reduction occurred if determined by the APCO as being more representative of normal operations, and the potential greenhouse gas emissions (as CO₂e) after the project is complete, except as provided in section 4.5.5.

The GHG emission reductions were calculated according to the baseline period identified above. The turbines have permit conditions which restrict the NOx emissions and thus the GHG emissions from the four combined units. The post-project GHG emissions are calculated above.

- 4.5.5** Greenhouse gas emission reductions proposed to be quantified using CARB approved emission reduction project protocols shall be calculated in accordance with the applicable protocol.

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

- 4.5.6** Emission reduction credits shall be made enforceable through permit conditions. If the District, pursuant to state laws, is prohibited from permitting the emission unit, the source creating the greenhouse gas emission reduction shall execute a legal binding contract with the District which ensures that the emission reductions will be generated in accordance with the provisions of this rule, and shall continue for the reasonably

The steam turbines hold a legal District operating permit. Since the operation of the steam turbines more than the allowable NOx limit would require a new Authority to Construct, as discussed above the emission reduction is enforceable.

Section 5 identifies ERC Certificate application procedures.

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

The greenhouse gas ERC application was submitted on 12/27/2011 as part of project S1114928, therefore the application is timely.

Section 6.15 specifies the registration requirements for GHG ERCs.

Section 6.15.13 requires, the emission reductions are surplus and additional of all requirements pursuant to Section 4.5.3.4. Therefore the ERC certificate shall include the following notation:

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

Compliance with Rule 2301 has been demonstrated and no adjustments are required under this Rule.

VIII. Recommendation

Issue the ERC Certificate in the amount posted in the table below.

GHG ERCs		
ERC Certificate	Pollutant	Amount
S-4320-24	CO ₂ e	257,426 metric tons/year

List of Appendixes

- A. Current PTO's
- B. California production
- C. Fuel use data
- D. Calculations
- E. Comments and Responses

Appendix A Current PTO

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-511-1-17

EXPIRATION DATE: 11/30/2015

SECTION: 31 **TOWNSHIP:** 28S **RANGE:** 28E

EQUIPMENT DESCRIPTION:

75 MW GENERAL ELECTRIC MODEL 7EA NATURAL GAS-FIRED COMBUSTION TURBINE COGENERATION UNIT WITH GE ENHANCED DRY LOW NOX DLN1+ COMBUSTOR TECHNOLOGY DISCHARGING TO ATMOSPHERE THROUGH A BYPASS STACK WHEN OPERATED IN SIMPLE CYCLE MODE OR THROUGH UNFIRED 450,000 LB/HR HEAT RECOVERY STEAM GENERATOR WHEN OPERATED IN COGENERATION MODE (SYCAMORE UNIT #1)

PERMIT UNIT REQUIREMENTS

1. Excess emissions indicated by the CEM system shall be considered violations of the applicable emission limit for the purposes of this permit. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
2. The CGT combustors shall be a dry low NOx design capable of achieving 3 ppm or lower at 15% O₂. [PSD SJ 85-09, X.B] Federally Enforceable Through Title V Permit
3. Sulfur compound emissions shall not exceed 0.015% by volume, 150 ppmv, on a dry basis averaged over 15 consecutive minutes. [40 CFR 60.333(a) and Kern County Rule 407] Federally Enforceable Through Title V Permit
4. Exhaust gas particulate matter concentration shall not exceed 0.0072 gr/scf calculated at 12% CO₂. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Emission rates from CGT shall not exceed any of the following: PM₁₀ - 5.0 lb/hr, SO_x (as SO₂) - 0.9 lb/hr, or VOC - 2.5 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Emission rates from CGT shall not exceed any of the following: PM₁₀ - 120.0 lb/day, SO_x (as SO₂) - 21.6 lb/day, NO_x (as NO₂) - 552.8 lb/day, VOC - 60.0 lb/day, or CO - 1056.0 lb/day. [District Rule 2201 and PSD SJ 85-09, X.E] Federally Enforceable Through Title V Permit
7. Emission rates from CGT, except during startup, shutdown, tuning start-up, and/or reduced load periods, shall not exceed any of the following: NO_x (as NO₂) - 3 ppmvd @ 15% O₂, 12.4 lb/hr on a 3-hr avg, or CO - 25 ppmvd @ 15% O₂, 44.0 lb/hr on a 3-hr avg. [District Rules 2201 and 4703, 5.1.2 & 5.2; and PSD SJ 85-09, X.E] Federally Enforceable Through Title V Permit
8. NO₂ and CO daily emissions during days of startup/shutdown shall be calculated from natural gas combustion rates and CEM results. [District Rule 1080] Federally Enforceable Through Title V Permit
9. During startup, shutdown, and tuning start-up, emissions shall not exceed any of the following: 140.0 lb/hr of NO_x on a 2-hr avg, 140 lb/hr of CO on a 2-hr avg, or 200 lb/hr of CO on a 1-hr avg. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Annual NO_x emissions (as NO₂) from all four CTG's (S-511-1, S-511-2, S-511-3, and S-511-4) calculated on a twelve month rolling basis shall not exceed 271,200 lb NO_x / yr. [District Rule 2201] 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: SYCAMORE COGENERATION CO

Location: HEAVY OIL CENTRAL, CA

S-511-1-17 Jun 4 2014 2:41PM - KLEVANN

11. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rule 4703, 3.29 and 3.26] Federally Enforceable Through Title V Permit
12. A tuning start-up shall be defined as "the period after a combustor unit replacement in which dynamic performance testing and corresponding operating optimization set point adjustment of the combustion system of the CGT is performed to meet the limits of this permit and Rule 4703". A tuning start-up period shall not exceed a time period of 12 consecutive hours per occurrence. [District Rule 4703, 5.3] Federally Enforceable Through Title V Permit
13. The duration of each startup or each shut down time shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rule 4703, 5.3.1] Federally Enforceable Through Title V Permit
14. Operations during periods of startup, shutdown, and tuning startup 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. [40 CFR 60.8(c)] Federally Enforceable Through Title V Permit
15. Each CGT shall have a maximum heat input rate of 1020 MMBTU/hr on an LHV basis. Firing rate can be increased upon District witnessed emission sampling demonstration that compliance with emission sampling limits can be achieved at higher fuel rates. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Permit unit shall include one unfired heat recovery steam generator (HRSG) for gas turbine engine assembly with rated steam output of 450,000 lb/hr at 80% quality steam production. [District NSR Rule] Federally Enforceable Through Title V Permit
17. CGT may exhaust either through unfired 450,000 lb/hr heat recovery steam generator or through bypass stack. [District NSR Rule] Federally Enforceable Through Title V Permit
18. When operating in cogeneration mode, exhaust gas ducting from CGT's through HRSG's to the atmosphere shall be gas-tight. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Bypass stack valve preceding each HRSG shall be designed to be gas-tight to the atmosphere when exhaust is discharged through HRSG and shall be designed to be gas-tight to the HRSG when exhaust is discharged through the bypass stack. [District NSR Rule] Federally Enforceable Through Title V Permit
20. At such times as specified by the USEPA, permittee shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for CO on the exhaust stack gases and furnish the District, the California ARB and the USEPA a written report of the results of such tests. All performance tests shall be conducted on an annual basis and at the maximum operating capacity of the emissions unit being tested. Upon written request from permittee, and adequate justification, USEPA may waive a specific annual test and/or allow for testing to be done at less than maximum operating capacity. [PSD SJ 85- 09] Federally Enforceable Through Title V Permit
21. All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b)] Federally Enforceable Through Title V Permit
22. The USEPA shall be notified in writing at least 30 days in advance of such test to allow time for development of an approvable performance test plan and to arrange for an observer to be present at the test. Such prior approval shall minimize the possibility of USEPA rejection of test results for procedural deficiencies. In lieu of the above mentioned test methods, equivalent methods may be used with prior written approval from the USEPA. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
23. Annual compliance tests shall be conducted by an independent laboratory in accordance with EPA guidelines, witnessed or authorized by the District. Results shall be submitted to the District within 60 days. [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.

24. Operator shall conform with the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
25. For performance test purposes, sampling ports, platforms, and access shall be provided by the facility on the emission unit exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 85-09] Federally Enforceable Through Title V Permit
26. Source testing to determine NOx and CO emissions and fuel gas sulfur content shall be conducted annually. [District Rule 1081] Federally Enforceable Through Title V Permit
27. The owner or operator shall provide source test information annually regarding the exhaust gas NOx and CO concentration corrected to 15% O2 (dry). EPA Methods 7E or 20 shall be used for NOx emissions. EPA Methods 10 or 10B shall be used for CO emissions. EPA Methods 3, 3A, or 20 shall be used for Oxygen content of the exhaust gas. [40 CFR 60.8(a), 40 CFR 60.335(b) and District Rule 4703, 5.1, 6.3.1, 6.4.1, 6.4.2, and 6.4.3] Federally Enforceable Through Title V Permit
28. Performance tests for the emissions of CO shall be conducted and results reported in accordance with the test methods set forth in 40 CFR 60.8 and 40 CFR 60, Appendix A. The performance tests for the emissions of CO shall be conducted using EPA Methods 1 through 4 and 10. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
29. The owner or operator shall provide source test information annually regarding the demonstrated percent efficiency (EFF) as defined in District Rule 4703 (as amended 9/20/07), 5.1.1 and 6.4.6. [40 CFR 60.332(a) and (b) and District Rule 4703, 5.1.1 and 6.4.6] Federally Enforceable Through Title V Permit
30. The operator shall perform source testing for PM10 concentration and emission rate once per permit term using EPA Method 5. [40 CFR 60.8 (b) and (c)] Federally Enforceable Through Title V Permit
31. Audits of continuous emission monitoring system shall be conducted in accordance with EPA guidelines, witnessed at the District's discretion, and reports shall be submitted to the District within 60 days of such an audit. [District Rule 1080 and PSD SJ 85-09, X.D.3] Federally Enforceable Through Title V Permit
32. The Relative Accuracy Audit shall be conducted by an independent laboratory in accordance with EPA guidelines, witnessed or authorized by the District. Results shall be submitted to the District within 60 days. [District Rule 1080 and PSD SJ 85-09, X.D.3] Federally Enforceable Through Title V Permit
33. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.1.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit
34. Continuous emission monitoring system for NOx as NO2 and continuous monitoring system for CO & CO2 shall serve each CGT flue gas stream, shall conform to SJVUAPCD Rule 1080 specifications, shall meet EPA monitoring performance specifications, & shall be operational whenever the turbine is in operation. [District Rule 1080 and PSD SJ 85-09, X.D.1 and .2] Federally Enforceable Through Title V Permit
35. The continuous NOx and O2 monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.3, 6.5, 6.6 and 7.2] Federally Enforceable Through Title V Permit
36. All continuous emissions monitoring systems shall be calibrated and operated according to EPA guidelines as specified in 40 CFR 60, Appendix B and 40 CFR 52, Appendix E. CEM ppm and lb/hr shall be calculated as a three-hour and a 1-hour average. [District Rule 1080 and PSD SJ 85-09 X.D.2] Federally Enforceable Through Title V Permit
37. Results of the CEM system shall be averaged over a three hour period, using consecutive 15-minute sampling periods in accordance with either EPA Method 7E or EPA Method 20 for NOx, EPA Test Methods 10 or 10B for CO, or EPA Methods 3, 3A, or 20 for O2, or, if continuous emission monitors are used, all applicable requirements of CFR 60.13. [40 CFR 60.13 and District Rule 4703, 5.1, 6.4] 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.

38. Each 1-hour period in a 1, 2 or 3-hour average will commence on the hour. The 3-hour average will be compiled from the three most recent 1-hour periods. The 2-hour average will be compiled from the two most recent 1-hour periods. [District Rule 1080] Federally Enforceable Through Title V Permit
39. CEM cycling times shall be those specified in 40 CFR, Part 51, Appendix P, Sections 3.4 and 3.4.2, or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4] Federally Enforceable Through Title V Permit
40. Operator shall operate and maintain in calibration a system which continuously measures and records the following: control system operating parameters, elapsed time of operation, the exhaust gas NOx and O2 or CO2 concentration. [40 CFR 60.334(b),(c) and District Rules 2520, 9.4.2 and 4703, 6.2.1] Federally Enforceable Through Title V Permit
41. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown, tuning start-up, or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.7(b) and District Rule 1080, 7.3] Federally Enforceable Through Title V Permit
42. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4703, 6.2.4] Federally Enforceable Through Title V Permit
43. Daily records of NO2 and CO emission calculations during days of gas turbine startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1080] Federally Enforceable Through Title V Permit
44. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
45. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the following: 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(b); District Rules 2520, 9.4.2 and 4703, 6.2.6; PSD SJ 85-09, X.D.1] Federally Enforceable Through Title V Permit
46. Reduced Load Period shall be defined as the time during which a gas turbine is operated at less than rated capacity in order to change the exhaust gas diverter gate not exceeding one hour. [District Rule 4703, 3.23] Federally Enforceable Through Title V Permit
47. The operator performing start-up or shutdown of this unit shall keep records of the duration of start-up or shutdown. [District Rule 4703, 6.2.8] Federally Enforceable Through Title V Permit
48. APCO or an authorized representative shall be allowed to inspect, as he or she determines to be necessary, the monitoring devices required by this rule to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
49. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
50. Each exhaust stack shall be equipped with permanent stack sampling provisions consistent with District Rule 1081, EPA reference Methods 5 and 8 and OSHA requirements. [District Rule 1081] Federally Enforceable Through Title V Permit
51. Each CGT shall have a fuel consumption monitor/recorder. [District NSR Rule and PSD SJ 85-09, X.D.1] Federally Enforceable Through Title V Permit
52. Operational records (including but not limited to: fuel characteristics, etc.) shall be maintained by Sycamore Cogeneration Company. [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.

53. Accurate records of NO_x (as NO₂) and carbon monoxide (CO) flue gas concentrations corrected to 15% O₂, dry and CGT fuel sulfur content shall be maintained and shall be reported as described by District Rule 1080 and upon request. [District Rule 1080] Federally Enforceable Through Title V Permit
54. Operator shall submit a quarterly 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(i)] Federally Enforceable Through Title V Permit
55. Quarterly continuous emission monitoring system reports shall be submitted to the District, EPA and CEC, as required by EPA regulations as specified in CFR Title 40, Part 58, Appendix B and Part 60 Appendix B. [District Rule 1080 and PSD SJ 85-09, X.D.5] Federally Enforceable Through Title V Permit
56. Operators of CEM's installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO and EPA. The report is due on the 30th day following the end of the calendar quarter and shall include the following: A. time intervals, data and magnitude of excess emissions (computed in accordance with 40 CFR 60.13(h)), nature and cause of excess (if known), corrective actions taken and preventive measures adopted; B. averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard. [40 CFR 60.334 (j)(5); District Rule 1080, 8.0 and PSD SJ 85-09, X.D.3 and X.D.5.a through e] Federally Enforceable Through Title V Permit
57. The written report for each calendar quarter shall also include the following: C. applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; D. a negative declaration when no excess emissions occurred. Excess emissions shall be defined as any 3-hour period during which the average emissions for CO, as measured by the CEM system, exceeds the emission limit set forth in PSD SJ 85-09, X.E. [District Rule 1080, 8.0; PSD SJ 85-09, X.D.3 and X.D.5.a through e] Federally Enforceable Through Title V Permit
58. A violation of NO_x emission standards indicated by the NO_x CEM shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
59. The APCO shall be notified no later than one hour after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [District Rules 1080, 10.0 and 1100, 6.1; PSD SJ 85-09, X.D.3] Federally Enforceable Through Title V Permit
60. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in this permit. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
61. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions of this permit, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
62. CGT shall be fired on natural gas only. There shall be no provisions for oil firing. Natural gas used as fuel shall be pipeline quality with sulfur content of 0.3 gr/100 scf or less (0.001% sulfur by weight). [District NSR Rule; Kern County Rule 407] Federally Enforceable Through Title V Permit
63. The HHV and LHV of the gaseous fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
64. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
65. If the turbine is not fired on PUC-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 3246, D4468 or D6667. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit

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

Facility Name: SYCAMORE COGENERATION CO

Location: HEAVY OIL CENTRAL, CA

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66. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested in accordance with the requirements of 40 CFR 60.334 (h) and 40 CFR 60.334(i). [40 CFR 60.334 (h) and 40 CFR 60.334(i)] Federally Enforceable Through Title V Permit
67. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
68. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable Federal, State and local air quality regulations. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
69. The cogeneration facility is subject to the federal regulations entitled Standards of Performance for New Stationary Sources (40 CFR 60). The owner or operator shall meet all applicable requirements of Subparts A and GG of this regulation. [PSD SJ 85- 09] Federally Enforceable Through Title V Permit
70. All correspondence as required by this permit shall be forwarded to: a) Director, Enforcement Div (Attn: A-5), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726-0244; and d) the California Energy Commission, 1516 Ninth Street, Sacramento, CA, 95814-5512. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
71. Compliance with permit conditions in the Title V permit shall be deem compliance with the Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
72. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332 (a), and (b); 60.333 (a); 60.334 (b), (c), (h), (i) and (j)(5); and 60.335 (b). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
73. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(b), 60.8, 60.8(d), 60.13, and 60.13(b); District Rules 1080 (as amended 12/17/92), Sections 6.3, 6.4, 6.5, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, and 11.0; and 1081 (as amended 12/16/93) as of the date of permit issuance. 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.

Facility Name: SYCAMORE COGENERATION CO

Location: HEAVY OIL CENTRAL, CA

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-511-2-18

EXPIRATION DATE: 11/30/2015

SECTION: 31 **TOWNSHIP:** 28S **RANGE:** 28E

EQUIPMENT DESCRIPTION:

75 MW GENERAL ELECTRIC MODEL 7EA NATURAL GAS-FIRED COMBUSTION TURBINE COGENERATION UNIT WITH GE ENHANCED DRY LOW NOX DLN1+ COMBUSTOR TECHNOLOGY DISCHARGING TO ATMOSPHERE THROUGH A BYPASS STACK WHEN OPERATED IN SIMPLE CYCLE MODE OR THROUGH UNFIRED 450,000 LB/HR HEAT RECOVERY STEAM GENERATOR WHEN OPERATED IN COGENERATION MODE (SYCAMORE UNIT #2)

PERMIT UNIT REQUIREMENTS

1. Excess emissions indicated by the CEM system shall be considered violations of the applicable emission limit for the purposes of this permit. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
2. The CGT combustors shall be a dry low NOx design capable of achieving 3 ppm or lower at 15% O₂. [PSD SJ 85-09, X.B] Federally Enforceable Through Title V Permit
3. Sulfur compound emissions shall not exceed 0.015% by volume, 150 ppmv, on a dry basis averaged over 15 consecutive minutes. [40 CFR 60.333(a) and Kern County Rule 407] Federally Enforceable Through Title V Permit
4. Exhaust gas particulate matter concentration shall not exceed 0.0072 gr/scf calculated at 12% CO₂. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Emission rates from CGT shall not exceed any of the following: PM₁₀ - 5.0 lb/hr, SO_x (as SO₂) - 0.9 lb/hr, or VOC - 2.5 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Emission rates from CGT shall not exceed any of the following: PM₁₀ - 120.0 lb/day, SO_x (as SO₂) - 21.6 lb/day, NO_x (as NO₂) - 552.8 lb/day, VOC - 60.0 lb/day, or CO - 1056.0 lb/day. [District Rule 2201 and PSD SJ 85-09, X.E] Federally Enforceable Through Title V Permit
7. Emission rates from CGT, except during startup, shutdown, tuning start-up, and/or reduced load periods, shall not exceed any of the following: NO_x (as NO₂) - 3 ppmvd @ 15% O₂, 12.4 lb/hr on a 3-hr avg, or CO - 25 ppmvd @ 15% O₂, 44.0 lb/hr on a 3-hr avg. [District Rules 2201 and 4703, 5.1.2 & 5.2; and PSD SJ 85-09, X.E] Federally Enforceable Through Title V Permit
8. NO₂ and CO daily emissions during days of startup/shutdown shall be calculated from natural gas combustion rates and CEM results. [District Rule 1080] Federally Enforceable Through Title V Permit
9. During startup, shutdown, and tuning start-up, emissions shall not exceed any of the following: 140.0 lb/hr of NO_x on a 2-hr avg, 140 lb/hr of CO on a 2-hr avg, or 200 lb/hr of CO on a 1-hr avg. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Annual NO_x emissions (as NO₂) from all four CTG's (S-511-1, S-511-2, S-511-3, and S-511-4) calculated on a twelve month rolling basis shall not exceed 271,200 lb NO_x / yr. [District Rule 2201] Federally Enforceable Through Title V Permit

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Facility Name: SYCAMORE COGENERATION CO
Location: HEAVY OIL CENTRAL, CA
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11. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rule 4703, 3.29 and 3.26] Federally Enforceable Through Title V Permit
12. A tuning start-up shall be defined as "the period after a combustor unit replacement in which dynamic performance testing and corresponding operating optimization set point adjustment of the combustion system of the CGT is performed to meet the limits of this permit and Rule 4703". A tuning start-up period shall not exceed a time period of 12 consecutive hours per occurrence. [District Rule 4703, 5.3] Federally Enforceable Through Title V Permit
13. The duration of each startup or each shut down time shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rule 4703, 5.3.1] Federally Enforceable Through Title V Permit
14. Operations during periods of startup, shutdown, and tuning startup 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. [40 CFR 60.8(c)] Federally Enforceable Through Title V Permit
15. Each CGT shall have a maximum heat input rate of 1020 MMBTU/hr on an LHV basis. Firing rate can be increased upon District witnessed emission sampling demonstration that compliance with emission sampling limits can be achieved at higher fuel rates. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Permit unit shall include one unfired heat recovery steam generator (HRSG) for gas turbine engine assembly with rated steam output of 450,000 lb/hr at 80% quality steam production. [District NSR Rule] Federally Enforceable Through Title V Permit
17. CGT may exhaust either through unfired 450,000 lb/hr heat recovery steam generator or through bypass stack. [District NSR Rule] Federally Enforceable Through Title V Permit
18. When operating in cogeneration mode, exhaust gas ducting from CGT's through HRSG's to the atmosphere shall be gas-tight. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Bypass stack valve preceding each HRSG shall be designed to be gas-tight to the atmosphere when exhaust is discharged through HRSG and shall be designed to be gas-tight to the HRSG when exhaust is discharged through the bypass stack. [District NSR Rule] Federally Enforceable Through Title V Permit
20. At such times as specified by the USEPA, permittee shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for CO on the exhaust stack gases and furnish the District, the California ARB and the USEPA a written report of the results of such tests. All performance tests shall be conducted on an annual basis and at the maximum operating capacity of the emissions unit being tested. Upon written request from permittee, and adequate justification, USEPA may waive a specific annual test and/or allow for testing to be done at less than maximum operating capacity. [PSD SJ 85- 09] Federally Enforceable Through Title V Permit
21. All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b)] Federally Enforceable Through Title V Permit
22. The USEPA shall be notified in writing at least 30 days in advance of such test to allow time for development of an approvable performance test plan and to arrange for an observer to be present at the test. Such prior approval shall minimize the possibility of USEPA rejection of test results for procedural deficiencies. In lieu of the above mentioned test methods, equivalent methods may be used with prior written approval from the USEPA. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
23. Annual compliance tests shall be conducted by an independent laboratory in accordance with EPA guidelines, witnessed or authorized by the District. Results shall be submitted to the District within 60 days. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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24. Operator shall conform with the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
25. For performance test purposes, sampling ports, platforms, and access shall be provided by the facility on the emission unit exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 85-09] Federally Enforceable Through Title V Permit
26. Source testing to determine NOx and CO emissions and fuel gas sulfur content shall be conducted annually. [District Rule 1081] Federally Enforceable Through Title V Permit
27. The owner or operator shall provide source test information annually regarding the exhaust gas NOx and CO concentration corrected to 15% O2 (dry). EPA Methods 7E or 20 shall be used for NOx emissions. EPA Methods 10 or 10B shall be used for CO emissions. EPA Methods 3, 3A, or 20 shall be used for Oxygen content of the exhaust gas. [40 CFR 60.8(a), 40 CFR 60.335(b) and District Rule 4703, 5.1, 6.3.1, 6.4.1, 6.4.2, and 6.4.3] Federally Enforceable Through Title V Permit
28. Performance tests for the emissions of CO shall be conducted and results reported in accordance with the test methods set forth in 40 CFR 60.8 and 40 CFR 60, Appendix A. The performance tests for the emissions of CO shall be conducted using EPA Methods 1 through 4 and 10. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
29. The owner or operator shall provide source test information annually regarding the demonstrated percent efficiency (EFF) as defined in District Rule 4703 (as amended 9/20/07), 5.1.1 and 6.4.6. [40 CFR 60.332(a) and (b) and District Rule 4703, 5.1.1 and 6.4.6] Federally Enforceable Through Title V Permit
30. The operator shall perform source testing for PM10 concentration and emission rate once per permit term using EPA Method 5. [40 CFR 60.8 (b) and (c)] Federally Enforceable Through Title V Permit
31. Audits of continuous emission monitoring system shall be conducted in accordance with EPA guidelines, witnessed at the District's discretion, and reports shall be submitted to the District within 60 days of such an audit. [District Rule 1080 and PSD SJ 85-09, X.D.3] Federally Enforceable Through Title V Permit
32. The Relative Accuracy Audit shall be conducted by an independent laboratory in accordance with EPA guidelines, witnessed or authorized by the District. Results shall be submitted to the District within 60 days. [District Rule 1080 and PSD SJ 85-09, X.D.3] Federally Enforceable Through Title V Permit
33. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.1.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit
34. Continuous emission monitoring system for NOx as NO2 and continuous monitoring system for CO & CO2 shall serve each CGT flue gas stream, shall conform to SJVUAPCD Rule 1080 specifications, shall meet EPA monitoring performance specifications, & shall be operational whenever the turbine is in operation. [District Rule 1080 and PSD SJ 85-09, X.D.1 and .2] Federally Enforceable Through Title V Permit
35. The continuous NOx and O2 monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.3, 6.5, 6.6 and 7.2] Federally Enforceable Through Title V Permit
36. All continuous emissions monitoring systems shall be calibrated and operated according to EPA guidelines as specified in 40 CFR 60, Appendix B and 40 CFR 52, Appendix E. CEM ppm and lb/hr shall be calculated as a three-hour and a 1-hour average. [District Rule 1080 and PSD SJ 85-09 X.D.2] Federally Enforceable Through Title V Permit
37. Results of the CEM system shall be averaged over a three hour period, using consecutive 15-minute sampling periods in accordance with either EPA Method 7E or EPA Method 20 for NOx, EPA Test Methods 10 or 10B for CO, or EPA Methods 3, 3A, or 20 for O2, or, if continuous emission monitors are used, all applicable requirements of CFR 60.13. [40 CFR 60.13 and District Rule 4703, 5.1, 6.4] Federally Enforceable Through Title V Permit

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38. Each 1-hour period in a 1, 2 or 3-hour average will commence on the hour. The 3-hour average will be compiled from the three most recent 1-hour periods. The 2-hour average will be compiled from the two most recent 1-hour periods. [District Rule 1080] Federally Enforceable Through Title V Permit
39. CEM cycling times shall be those specified in 40 CFR, Part 51, Appendix P, Sections 3.4 and 3.4.2, or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4] Federally Enforceable Through Title V Permit
40. Operator shall operate and maintain in calibration a system which continuously measures and records the following: control system operating parameters, elapsed time of operation, the exhaust gas NOx and O2 or CO2 concentration. [40 CFR 60.334(b),(c) and District Rules 2520, 9.4.2 and 4703, 6.2.1] Federally Enforceable Through Title V Permit
41. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown, tuning start-up, or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.7(b) and District Rule 1080, 7.3] Federally Enforceable Through Title V Permit
42. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4703, 6.2.4] Federally Enforceable Through Title V Permit
43. Daily records of NO2 and CO emission calculations during days of gas turbine startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1080] Federally Enforceable Through Title V Permit
44. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
45. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the following: 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(b); District Rules 2520, 9.4.2 and 4703, 6.2.6; PSD SJ 85-09, X.D.1] Federally Enforceable Through Title V Permit
46. Reduced Load Period shall be defined as the time during which a gas turbine is operated at less than rated capacity in order to change the exhaust gas diverter gate not exceeding one hour. [District Rule 4703, 3.23] Federally Enforceable Through Title V Permit
47. The operator performing start-up or shutdown of this unit shall keep records of the duration of start-up or shutdown. [District Rule 4703, 6.2.8] Federally Enforceable Through Title V Permit
48. APCO or an authorized representative shall be allowed to inspect, as he or she determines to be necessary, the monitoring devices required by this rule to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
49. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
50. When CGT exhausts to bypass stack, the CEM probe located in the transition section shall be used to measure exhaust gas NOx, CO and O2 or CO2 concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
51. Each exhaust stack shall be equipped with permanent stack sampling provisions consistent with District Rule 1081, EPA reference Methods 5 and 8 and OSHA requirements. [District Rule 1081] Federally Enforceable Through Title V Permit
52. Each CGT shall have a fuel consumption monitor/recorder. [District NSR Rule and PSD SJ 85-09, X.D.1] Federally Enforceable Through Title V Permit
53. Operational records (including but not limited to: fuel characteristics, etc.) shall be maintained by Sycamore Cogeneration Company. [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.

54. Accurate records of NO_x (as NO₂) and carbon monoxide (CO) flue gas concentrations corrected to 15% O₂, dry and CGT fuel sulfur content shall be maintained and shall be reported as described by District Rule 1080 and upon request. [District Rule 1080] Federally Enforceable Through Title V Permit
55. Operator shall submit a quarterly 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(i)] Federally Enforceable Through Title V Permit
56. Quarterly continuous emission monitoring system reports shall be submitted to the District, EPA and CEC, as required by EPA regulations as specified in CFR Title 40, Part 58, Appendix B and Part 60 Appendix B. [District Rule 1080 and PSD SJ 85-09, X.D.5] Federally Enforceable Through Title V Permit
57. Operators of CEM's installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO and EPA. The report is due on the 30th day following the end of the calendar quarter and shall include the following: A. time intervals, data and magnitude of excess emissions (computed in accordance with 40 CFR 60.13(h)), nature and cause of excess (if known), corrective actions taken and preventive measures adopted; B. averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard. [40 CFR 60.334 (j)(5); District Rule 1080, 8.0 and PSD SJ 85-09, X.D.3 and X.D.5.a through e] Federally Enforceable Through Title V Permit
58. The written report for each calendar quarter shall also include the following: C. applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; D. a negative declaration when no excess emissions occurred. Excess emissions shall be defined as any 3-hour period during which the average emissions for CO, as measured by the CEM system, exceeds the emission limit set forth in PSD SJ 85-09, X.E. [District Rule 1080, 8.0; PSD SJ 85-09, X.D.3 and X.D.5.a through e] Federally Enforceable Through Title V Permit
59. A violation of NO_x emission standards indicated by the NO_x CEM shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
60. The APCO shall be notified no later than one hour after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [District Rules 1080, 10.0 and 1100, 6.1; PSD SJ 85-09, X.D.3] Federally Enforceable Through Title V Permit
61. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in this permit. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
62. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions of this permit, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
63. CGT shall be fired on natural gas only. There shall be no provisions for oil firing. Natural gas used as fuel shall be pipeline quality with sulfur content of 0.3 gr/100 scf or less (0.001% sulfur by weight). [District NSR Rule; Kern County Rule 407] Federally Enforceable Through Title V Permit
64. The HHV and LHV of the gaseous fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
65. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
66. If the turbine is not fired on PUC-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 3246, D4468 or D6667. [40 CFR 60.335(b)(10)] 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: SYCAMORE COGENERATION CO

Location: HEAVY OIL CENTRAL, CA

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67. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested in accordance with the requirements of 40 CFR 60.334 (h) and 40 CFR 60.334(i). [40 CFR 60.334 (h) and 40 CFR 60.334(i)] Federally Enforceable Through Title V Permit
68. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
69. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable Federal, State and local air quality regulations. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
70. The cogeneration facility is subject to the federal regulations entitled Standards of Performance for New Stationary Sources (40 CFR 60). The owner or operator shall meet all applicable requirements of Subparts A and GG of this regulation. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
71. All correspondence as required by this permit shall be forwarded to: a) Director, Enforcement Div (Attn: A-5), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726-0244; and d) the California Energy Commission, 1516 Ninth Street, Sacramento, CA, 95814-5512. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
72. Compliance with permit conditions in the Title V permit shall be deemed compliance with the Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
73. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332 (a), and (b); 60.333 (a); 60.334 (b), (c), (h), (i) and (j)(5); and 60.335 (b). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
74. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(b), 60.8, 60.8(d), 60.13, and 60.13(b); District Rules 1080 (as amended 12/17/92), Sections 6.3, 6.4, 6.5, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, and 11.0; and 1081 (as amended 12/16/93) as of the date of permit issuance. 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-511-3-18

EXPIRATION DATE: 11/30/2015

SECTION: 31 TOWNSHIP: 28S RANGE: 28E

EQUIPMENT DESCRIPTION:

75 MW GENERAL ELECTRIC MODEL 7EA NATURAL GAS-FIRED COMBUSTION TURBINE COGENERATION UNIT WITH GE ENHANCED DRY LOW NOX DLN1+ COMBUSTOR TECHNOLOGY DISCHARGING TO ATMOSPHERE THROUGH A BYPASS STACK WHEN OPERATED IN SIMPLE CYCLE MODE OR THROUGH UNFIRED 450,000 LB/HR HEAT RECOVERY STEAM GENERATOR WHEN OPERATED IN COGENERATION MODE (SYCAMORE UNIT #3)

PERMIT UNIT REQUIREMENTS

1. Excess emissions indicated by the CEM system shall be considered violations of the applicable emission limit for the purposes of this permit. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
2. The CGT combustors shall be a dry low NOx design capable of achieving 3 ppm or lower at 15% O2. [PSD SJ 85-09, X.B] Federally Enforceable Through Title V Permit
3. Sulfur compound emissions shall not exceed 0.015% by volume, 150 ppmv, on a dry basis averaged over 15 consecutive minutes. [40 CFR 60.333(a) and Kern County Rule 407] Federally Enforceable Through Title V Permit
4. Exhaust gas particulate matter concentration shall not exceed 0.0072 gr/scf calculated at 12% CO2. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Emission rates from CGT shall not exceed any of the following: PM10 - 5.0 lb/hr, SOx (as SO2) - 0.9 lb/hr, or VOC - 2.5 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Emission rates from CGT shall not exceed any of the following: PM10 - 120.0 lb/day, SOx (as SO2) - 21.6 lb/day, NOx (as NO2) - 552.8 lb/day, VOC - 60.0 lb/day, or CO - 1056.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from CGT, except during startup, shutdown, tuning start-up, and/or reduced load periods, shall not exceed any of the following: NOx (as NO2) - 3 ppmvd @ 15% O2, 12.4 lb/hr on a 3-hr avg, or CO - 25 ppmvd @ 15% O2, 44.0 lb/hr on a 3-hr avg. [District Rules 2201 and 4703, 5.1.2 & 5.2; and PSD SJ 85-09, X.E] Federally Enforceable Through Title V Permit
8. During startup, shutdown, and tuning start-up, emissions shall not exceed any of the following: 140.0 lb/hr of NOx on a 2-hr avg, 140 lb/hr of CO on a 2-hr avg, or 200 lb/hr of CO on a 1-hr avg. [District Rule 2201] Federally Enforceable Through Title V Permit
9. NO2 and CO daily emissions during days of startup/shutdown shall be calculated from natural gas combustion rates and CEM results. [District Rule 1080] Federally Enforceable Through Title V Permit
10. Annual NOx emissions (as NO2) from all four CTG's (S-511-1, S-511-2, S-511-3, and S-511-4) calculated on a twelve month rolling basis shall not exceed 271,200 lb NOx / yr. [District Rule 2201] 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.

11. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rule 4703, 3.29 and 3.26] Federally Enforceable Through Title V Permit
12. A tuning start-up shall be defined as "the period after a combustor unit replacement in which dynamic performance testing and corresponding operating optimization set point adjustment of the combustion system of the CGT is performed to meet the limits of this permit and Rule 4703". A tuning start-up period shall not exceed a time period of 12 consecutive hours per occurrence. [District Rule 4703, 5.3] Federally Enforceable Through Title V Permit
13. The duration of each startup or each shut down time shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rule 4703, 5.3.1] Federally Enforceable Through Title V Permit
14. Operations during periods of startup, shutdown, and tuning startup 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. [40 CFR 60.8(c)] Federally Enforceable Through Title V Permit
15. Each CGT shall have a maximum heat input rate of 1020 MMBTU/hr on an LHV basis. Firing rate can be increased upon District witnessed emission sampling demonstration that compliance with emission sampling limits can be achieved at higher fuel rates. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Permit unit shall include one unfired heat recovery steam generator (HRSG) for gas turbine engine assembly with rated steam output of 450,000 lb/hr at 80% quality steam production. [District NSR Rule] Federally Enforceable Through Title V Permit
17. CGT may exhaust either through unfired 450,000 lb/hr heat recovery steam generator or through bypass stack. [District NSR Rule] Federally Enforceable Through Title V Permit
18. When operating in cogeneration mode, exhaust gas ducting from CGT's through HRSG's to the atmosphere shall be gas-tight. [District NSR Rule] Federally Enforceable Through Title V Permit
19. When CGT exhausts to bypass stack, the CEM probe located in the transition section shall be used to measure exhaust gas NOx, CO and O2 or CO2 concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Bypass stack valve preceding each HRSG shall be designed to be gas-tight to the atmosphere when exhaust is discharged through HRSG and shall be designed to be gas-tight to the HRSG when exhaust is discharged through the bypass stack. [District NSR Rule] Federally Enforceable Through Title V Permit
21. At such times as specified by the USEPA, permittee shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for CO on the exhaust stack gases and furnish the District, the California ARB and the USEPA a written report of the results of such tests. All performance tests shall be conducted on an annual basis and at the maximum operating capacity of the emissions unit being tested. Upon written request from permittee, and adequate justification, USEPA may waive a specific annual test and/or allow for testing to be done at less than maximum operating capacity. [PSD SJ 85- 09] Federally Enforceable Through Title V Permit
22. All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b)] Federally Enforceable Through Title V Permit
23. The USEPA shall be notified in writing at least 30 days in advance of such test to allow time for development of an approvable performance test plan and to arrange for an observer to be present at the test. Such prior approval shall minimize the possibility of USEPA rejection of test results for procedural deficiencies. In lieu of the above mentioned test methods, equivalent methods may be used with prior written approval from the USEPA. [PSD SJ 85-09] 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.

24. Annual compliance tests shall be conducted by an independent laboratory in accordance with EPA guidelines, witnessed or authorized by the District. Results shall be submitted to the District within 60 days. [District Rule 1081] Federally Enforceable Through Title V Permit
25. Operator shall conform with the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
26. For performance test purposes, sampling ports, platforms, and access shall be provided by the facility on the emission unit exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 85-09] Federally Enforceable Through Title V Permit
27. Source testing to determine NOx and CO emissions and fuel gas sulfur content shall be conducted annually. [District Rule 1081] Federally Enforceable Through Title V Permit
28. The owner or operator shall provide source test information annually regarding the exhaust gas NOx and CO concentration corrected to 15% O2 (dry). EPA Methods 7E or 20 shall be used for NOx emissions. EPA Methods 10 or 10B shall be used for CO emissions. EPA Methods 3, 3A, or 20 shall be used for Oxygen content of the exhaust gas. [40 CFR 60.8(a), 40 CFR 60.335(b) and District Rule 4703, 5.1, 6.3.1, 6.4.1, 6.4.2, and 6.4.3] Federally Enforceable Through Title V Permit
29. Performance tests for the emissions of CO shall be conducted and results reported in accordance with the test methods set forth in 40 CFR 60.8 and 40 CFR 60, Appendix A. The performance tests for the emissions of CO shall be conducted using EPA Methods 1 through 4 and 10. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
30. The owner or operator shall provide source test information annually regarding the demonstrated percent efficiency (EFF) as defined in District Rule 4703 (as amended 9/20/07), 5.1.1 and 6.4.6. [40 CFR 60.332(a) and (b) and District Rule 4703, 5.1.1 and 6.4.6] Federally Enforceable Through Title V Permit
31. The operator shall perform source testing for PM10 concentration and emission rate once per permit term using EPA Method 5. [40 CFR 60.8 (b) and (c)] Federally Enforceable Through Title V Permit
32. Audits of continuous emission monitoring system shall be conducted in accordance with EPA guidelines, witnessed at the District's discretion, and reports shall be submitted to the District within 60 days of such an audit. [District Rule 1080 and PSD SJ 85-09, X.D.3] Federally Enforceable Through Title V Permit
33. The Relative Accuracy Audit shall be conducted by an independent laboratory in accordance with EPA guidelines, witnessed or authorized by the District. Results shall be submitted to the District within 60 days. [District Rule 1080 and PSD SJ 85-09, X.D.3] Federally Enforceable Through Title V Permit
34. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.1.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit
35. Continuous emission monitoring system for NOx as NO2 and continuous monitoring system for CO & CO2 shall serve each CGT flue gas stream, shall conform to SJVUAPCD Rule 1080 specifications, shall meet EPA monitoring performance specifications, & shall be operational whenever the turbine is in operation. [District Rule 1080 and PSD SJ 85-09, X.D.1 and .2] Federally Enforceable Through Title V Permit
36. The continuous NOx and O2 monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.3, 6.5, 6.6 and 7.2] Federally Enforceable Through Title V Permit
37. All continuous emissions monitoring systems shall be calibrated and operated according to EPA guidelines as specified in 40 CFR 60, Appendix B and 40 CFR 52, Appendix E. CEM ppm and lb/hr shall be calculated as a three-hour and a 1-hour average. [District Rule 1080 and PSD SJ 85-09 X.D.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.

Facility Name: SYCAMORE COGENERATION CO

Location: HEAVY OIL CENTRAL, CA

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38. Results of the CEM system shall be averaged over a three hour period, using consecutive 15-minute sampling periods in accordance with either EPA Method 7E or EPA Method 20 for NOx, EPA Test Methods 10 or 10B for CO, or EPA Methods 3, 3A, or 20 for O2, or, if continuous emission monitors are used, all applicable requirements of CFR 60.13. [40 CFR 60.13 and District Rule 4703, 5.1, 6.4] Federally Enforceable Through Title V Permit
39. Each 1-hour period in a 1, 2 or 3-hour average will commence on the hour. The 3-hour average will be compiled from the three most recent 1-hour periods. The 2-hour average will be compiled from the two most recent 1-hour periods. [District Rule 1080] Federally Enforceable Through Title V Permit
40. CEM cycling times shall be those specified in 40 CFR, Part 51, Appendix P, Sections 3.4 and 3.4.2, or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4] Federally Enforceable Through Title V Permit
41. Operator shall operate and maintain in calibration a system which continuously measures and records the following: control system operating parameters, elapsed time of operation, the exhaust gas NOx and O2 or CO2 concentration. [40 CFR 60.334(b),(c) and District Rules 2520, 9.4.2 and 4703, 6.2.1] Federally Enforceable Through Title V Permit
42. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown, tuning start-up, or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.7(b) and District Rule 1080, 7.3] Federally Enforceable Through Title V Permit
43. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4703, 6.2.4] Federally Enforceable Through Title V Permit
44. Daily records of NO2 and CO emission calculations during days of gas turbine startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1080] Federally Enforceable Through Title V Permit
45. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
46. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the following: 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(b); District Rules 2520, 9.4.2 and 4703, 6.2.6; PSD SJ 85-09, X.D.1] Federally Enforceable Through Title V Permit
47. Reduced Load Period shall be defined as the time during which a gas turbine is operated at less than rated capacity in order to change the exhaust gas diverter gate not exceeding one hour. [District Rule 4703, 3.23] Federally Enforceable Through Title V Permit
48. The operator performing start-up or shutdown of this unit shall keep records of the duration of start-up or shutdown. [District Rule 4703, 6.2.8] Federally Enforceable Through Title V Permit
49. APCO or an authorized representative shall be allowed to inspect, as he or she determines to be necessary, the monitoring devices required by this rule to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
50. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
51. Each exhaust stack shall be equipped with permanent stack sampling provisions consistent with District Rule 1081, EPA reference Methods 5 and 8 and OSHA requirements. [District Rule 1081] Federally Enforceable Through Title V Permit
52. Each CGT shall have a fuel consumption monitor/recorder. [District NSR Rule and PSD SJ 85-09, X.D.1] 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.

53. Operational records (including but not limited to: fuel characteristics, etc.) shall be maintained by Sycamore Cogeneration Company. [District NSR Rule] Federally Enforceable Through Title V Permit
54. Accurate records of NO_x (as NO₂) and carbon monoxide (CO) flue gas concentrations corrected to 15% O₂, dry and CGT fuel sulfur content shall be maintained and shall be reported as described by District Rule 1080 and upon request. [District Rule 1080] Federally Enforceable Through Title V Permit
55. Operator shall submit a quarterly 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(i)] Federally Enforceable Through Title V Permit
56. Quarterly continuous emission monitoring system reports shall be submitted to the District, EPA and CEC, as required by EPA regulations as specified in CFR Title 40, Part 58, Appendix B and Part 60 Appendix B. [District Rule 1080 and PSD SJ 85-09, X.D.5] Federally Enforceable Through Title V Permit
57. Operators of CEM's installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO and EPA. The report is due on the 30th day following the end of the calendar quarter and shall include the following: A. time intervals, data and magnitude of excess emissions (computed in accordance with 40 CFR 60.13(h)), nature and cause of excess (if known), corrective actions taken and preventive measures adopted; B. averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard. [40 CFR 60.334 (j)(5); District Rule 1080, 8.0 and PSD SJ 85-09, X.D.3 and X.D.5.a through e] Federally Enforceable Through Title V Permit
58. The written report for each calendar quarter shall also include the following: C. applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; D. a negative declaration when no excess emissions occurred. Excess emissions shall be defined as any 3-hour period during which the average emissions for CO, as measured by the CEM system, exceeds the emission limit set forth in PSD SJ 85-09, X.E. [District Rule 1080, 8.0; PSD SJ 85-09, X.D.3 and X.D.5.a through e] Federally Enforceable Through Title V Permit
59. A violation of NO_x emission standards indicated by the NO_x CEM shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
60. The APCO shall be notified no later than one hour after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [District Rules 1080, 10.0 and 1100, 6.1; PSD SJ 85-09, X.D.3] Federally Enforceable Through Title V Permit
61. The APCO shall be notified no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [PSD SJ 85-09, X.D.3] Federally Enforceable Through Title V Permit
62. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in this permit. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
63. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions of this permit, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
64. CGT shall be fired on natural gas only. There shall be no provisions for oil firing. Natural gas used as fuel shall be pipeline quality with sulfur content of 0.3 gr/100 scf or less (0.001% sulfur by weight). [District NSR Rule; Kern County Rule 407] Federally Enforceable Through Title V Permit
65. The HHV and LHV of the gaseous fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] 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.

66. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
67. If the turbine is not fired on PUC-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 3246, D4468 or D6667. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit
68. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested in accordance with the requirements of 40 CFR 60.334 (h) and 40 CFR 60.334(i). [40 CFR 60.334 (h) and 40 CFR 60.334(i)] Federally Enforceable Through Title V Permit
69. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
70. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable Federal, State and local air quality regulations. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
71. The cogeneration facility is subject to the federal regulations entitled Standards of Performance for New Stationary Sources (40 CFR 60). The owner or operator shall meet all applicable requirements of Subparts A and GG of this regulation. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
72. All correspondence as required by this permit shall be forwarded to: a) Director, Enforcement Div (Attn: A-5), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726-0244; and d) the California Energy Commission, 1516 Ninth Street, Sacramento, CA, 95814-5512. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
73. Compliance with permit conditions in the Title V permit shall be deemed compliance with the Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
74. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332 (a), and (b); 60.333 (a); 60.334 (b), (c), (h), (i) and (j)(5); and 60.335 (b). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
75. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(b), 60.8, 60.8(d), 60.13, and 60.13(b); District Rules 1080 (as amended 12/17/92), Sections 6.3, 6.4, 6.5, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, and 11.0; and 1081 (as amended 12/16/93) as of the date of permit issuance. 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-511-4-17

EXPIRATION DATE: 11/30/2015

SECTION: 31 **TOWNSHIP:** 28S **RANGE:** 28E

EQUIPMENT DESCRIPTION:

75 MW GENERAL ELECTRIC MODEL 7EA NATURAL GAS-FIRED COMBUSTION TURBINE COGENERATION UNIT WITH GE ENHANCED DRY LOW NOX DLN1+ COMBUSTOR TECHNOLOGY DISCHARGING TO ATMOSPHERE THROUGH A BYPASS STACK WHEN OPERATED IN SIMPLE CYCLE MODE OR THROUGH UNFIRED 450,000 LB/HR HEAT RECOVERY STEAM GENERATOR WHEN OPERATED IN COGENERATION MODE (SYCAMORE UNIT #4)

PERMIT UNIT REQUIREMENTS

1. Excess emissions indicated by the CEM system shall be considered violations of the applicable emission limit for the purposes of this permit. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
2. The CGT combustors shall be a dry low NOx design capable of achieving 3 ppm or lower at 15% O2. [PSD SJ 85-09, X.B] Federally Enforceable Through Title V Permit
3. Sulfur compound emissions shall not exceed 0.015% by volume, 150 ppmv, on a dry basis averaged over 15 consecutive minutes. [40 CFR 60.333(a) and Kern County Rule 407] Federally Enforceable Through Title V Permit
4. Exhaust gas particulate matter concentration shall not exceed 0.0072 gr/scf calculated at 12% CO2. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Emission rates from CGT shall not exceed any of the following: PM10 - 5.0 lb/hr, SOx (as SO2) - 0.9 lb/hr, or VOC - 2.5 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Emission rates from CGT shall not exceed any of the following: PM10 - 120.0 lb/day, SOx (as SO2) - 21.6 lb/day, NOx (as NO2) - 552.8 lb/day, VOC - 60.0 lb/day, or CO - 1056.0 lb/day. [District Rule 2201 and PSD SJ 85-09, X.E] Federally Enforceable Through Title V Permit
7. Emission rates from CGT, except during startup, shutdown, tuning start-up, and/or reduced load periods, shall not exceed any of the following: NOx (as NO2) - 3 ppmvd @ 15% O2, 12.4 lb/hr on a 3-hr avg, or CO - 25 ppmvd @ 15% O2, 44.0 lb/hr on a 3-hr avg. [District Rules 2201 and 4703, 5.1.2 & 5.2; and PSD SJ 85-09, X.E] Federally Enforceable Through Title V Permit
8. NO2 and CO daily emissions during days of startup/shutdown shall be calculated from natural gas combustion rates and CEM results. [District Rule 1080] Federally Enforceable Through Title V Permit
9. During startup, shutdown, and tuning start-up, emissions shall not exceed any of the following: 140.0 lb/hr of NOx on a 2-hr avg, 140 lb/hr of CO on a 2-hr avg, or 200 lb/hr of CO on a 1-hr avg. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Annual NOx emissions (as NO2) from all four CTG's (S-511-1, S-511-2, S-511-3, and S-511-4) calculated on a twelve month rolling basis shall not exceed 271,200 lb NOx / yr. [District Rule 2201] 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: SYCAMORE COGENERATION CO
Location: HEAVY OIL CENTRAL, CA
S-511-4-17 Jun 4 2014 2:42PM - KLEVANN

11. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rule 4703, 3.29 and 3.26] Federally Enforceable Through Title V Permit
12. A tuning start-up shall be defined as "the period after a combustor unit replacement in which dynamic performance testing and corresponding operating optimization set point adjustment of the combustion system of the CGT is performed to meet the limits of this permit and Rule 4703". A tuning start-up period shall not exceed a time period of 12 consecutive hours per occurrence. [District Rule 4703, 5.3] Federally Enforceable Through Title V Permit
13. The duration of each startup or each shut down time shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rule 4703, 5.3.1] Federally Enforceable Through Title V Permit
14. Operations during periods of startup, shutdown, and tuning startup 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. [40 CFR 60.8(c)] Federally Enforceable Through Title V Permit
15. Each CGT shall have a maximum heat input rate of 1020 MMBTU/hr on an LHV basis. Firing rate can be increased upon District witnessed emission sampling demonstration that compliance with emission sampling limits can be achieved at higher fuel rates. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Permit unit shall include one unfired heat recovery steam generator (HRSG) for gas turbine engine assembly with rated steam output of 450,000 lb/hr at 80% quality steam production. [District NSR Rule] Federally Enforceable Through Title V Permit
17. CGT may exhaust either through unfired 450,000 lb/hr heat recovery steam generator or through bypass stack. [District NSR Rule] Federally Enforceable Through Title V Permit
18. When operating in cogeneration mode, exhaust gas ducting from CGT's through HRSG's to the atmosphere shall be gas-tight. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Bypass stack valve preceding each HRSG shall be designed to be gas-tight to the atmosphere when exhaust is discharged through HRSG and shall be designed to be gas-tight to the HRSG when exhaust is discharged through the bypass stack. [District NSR Rule] Federally Enforceable Through Title V Permit
20. At such times as specified by the USEPA, permittee shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for CO on the exhaust stack gases and furnish the District, the California ARB and the USEPA a written report of the results of such tests. All performance tests shall be conducted on an annual basis and at the maximum operating capacity of the emissions unit being tested. Upon written request from permittee, and adequate justification, USEPA may waive a specific annual test and/or allow for testing to be done at less than maximum operating capacity. [PSD SJ 85- 09] Federally Enforceable Through Title V Permit
21. All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b)] Federally Enforceable Through Title V Permit
22. The USEPA shall be notified in writing at least 30 days in advance of such test to allow time for development of an approvable performance test plan and to arrange for an observer to be present at the test. Such prior approval shall minimize the possibility of USEPA rejection of test results for procedural deficiencies. In lieu of the above mentioned test methods, equivalent methods may be used with prior written approval from the USEPA. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
23. Annual compliance tests shall be conducted by an independent laboratory in accordance with EPA guidelines, witnessed or authorized by the District. Results shall be submitted to the District within 60 days. [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.

24. Operator shall conform with the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
25. For performance test purposes, sampling ports, platforms, and access shall be provided by the facility on the emission unit exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 85-09] Federally Enforceable Through Title V Permit
26. Source testing to determine NO_x and CO emissions and fuel gas sulfur content shall be conducted annually. [District Rule 1081] Federally Enforceable Through Title V Permit
27. The owner or operator shall provide source test information annually regarding the exhaust gas NO_x and CO concentration corrected to 15% O₂ (dry). EPA Methods 7E or 20 shall be used for NO_x emissions. EPA Methods 10 or 10B shall be used for CO emissions. EPA Methods 3, 3A, or 20 shall be used for Oxygen content of the exhaust gas. [40 CFR 60.8(a), 40 CFR 60.335(b) and District Rule 4703, 5.1, 6.3.1, 6.4.1, 6.4.2, and 6.4.3] Federally Enforceable Through Title V Permit
28. Performance tests for the emissions of CO shall be conducted and results reported in accordance with the test methods set forth in 40 CFR 60.8 and 40 CFR 60, Appendix A. The performance tests for the emissions of CO shall be conducted using EPA Methods 1 through 4 and 10. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
29. The owner or operator shall provide source test information annually regarding the demonstrated percent efficiency (EFF) as defined in District Rule 4703 (as amended 9/20/07), 5.1.1 and 6.4.6. [40 CFR 60.332(a) and (b) and District Rule 4703, 5.1.1 and 6.4.6] Federally Enforceable Through Title V Permit
30. The operator shall perform source testing for PM₁₀ concentration and emission rate once per permit term using EPA Method 5. [40 CFR 60.8 (b) and (c)] Federally Enforceable Through Title V Permit
31. Audits of continuous emission monitoring system shall be conducted in accordance with EPA guidelines, witnessed at the District's discretion, and reports shall be submitted to the District within 60 days of such an audit. [District Rule 1080 and PSD SJ 85-09, X.D.3] Federally Enforceable Through Title V Permit
32. The Relative Accuracy Audit shall be conducted by an independent laboratory in accordance with EPA guidelines, witnessed or authorized by the District. Results shall be submitted to the District within 60 days. [District Rule 1080 and PSD SJ 85-09, X.D.3] Federally Enforceable Through Title V Permit
33. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.1.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit
34. Continuous emission monitoring system for NO_x as NO₂ and continuous monitoring system for CO & CO₂ shall serve each CGT flue gas stream, shall conform to SJVUAPCD Rule 1080 specifications, shall meet EPA monitoring performance specifications, & shall be operational whenever the turbine is in operation. [District Rule 1080 and PSD SJ 85-09, X.D.1 and .2] Federally Enforceable Through Title V Permit
35. The continuous NO_x and O₂ monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.3, 6.5, 6.6 and 7.2] Federally Enforceable Through Title V Permit
36. All continuous emissions monitoring systems shall be calibrated and operated according to EPA guidelines as specified in 40 CFR 60, Appendix B and 40 CFR 52, Appendix E. CEM ppm and lb/hr shall be calculated as a three-hour and a 1-hour average. [District Rule 1080 and PSD SJ 85-09 X.D.2] Federally Enforceable Through Title V Permit
37. Results of the CEM system shall be averaged over a three hour period, using consecutive 15-minute sampling periods in accordance with either EPA Method 7E or EPA Method 20 for NO_x, EPA Test Methods 10 or 10B for CO, or EPA Methods 3, 3A, or 20 for O₂, or, if continuous emission monitors are used, all applicable requirements of CFR 60.13. [40 CFR 60.13 and District Rule 4703, 5.1, 6.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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38. Each 1-hour period in a 1, 2 or 3-hour average will commence on the hour. The 3-hour average will be compiled from the three most recent 1-hour periods. The 2-hour average will be compiled from the two most recent 1-hour periods. [District Rule 1080] Federally Enforceable Through Title V Permit
39. CEM cycling times shall be those specified in 40 CFR, Part 51, Appendix P, Sections 3.4 and 3.4.2, or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4] Federally Enforceable Through Title V Permit
40. Operator shall operate and maintain in calibration a system which continuously measures and records the following: control system operating parameters, elapsed time of operation, the exhaust gas NOx and O2 or CO2 concentration. [40 CFR 60.334(b),(c) and District Rules 2520, 9.4.2 and 4703, 6.2.1] Federally Enforceable Through Title V Permit
41. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown, tuning start-up, or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.7(b) and District Rule 1080, 7.3] Federally Enforceable Through Title V Permit
42. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4703, 6.2.4] Federally Enforceable Through Title V Permit
43. Daily records of NO2 and CO emission calculations during days of gas turbine startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1080] Federally Enforceable Through Title V Permit
44. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
45. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the following: 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(b); District Rules 2520, 9.4.2 and 4703, 6.2.6; PSD SJ 85-09, X.D.1] Federally Enforceable Through Title V Permit
46. Reduced Load Period shall be defined as the time during which a gas turbine is operated at less than rated capacity in order to change the exhaust gas diverter gate not exceeding one hour. [District Rule 4703, 3.23] Federally Enforceable Through Title V Permit
47. The operator performing start-up or shutdown of this unit shall keep records of the duration of start-up or shutdown. [District Rule 4703, 6.2.8] Federally Enforceable Through Title V Permit
48. APCO or an authorized representative shall be allowed to inspect, as he or she determines to be necessary, the monitoring devices required by this rule to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
49. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
50. Each exhaust stack shall be equipped with permanent stack sampling provisions consistent with District Rule 1081, EPA reference Methods 5 and 8 and OSHA requirements. [District Rule 1081] Federally Enforceable Through Title V Permit
51. Each CGT shall have a fuel consumption monitor/recorder. [District NSR Rule and PSD SJ 85-09, X.D.1] Federally Enforceable Through Title V Permit
52. Operational records (including but not limited to: fuel characteristics, etc.) shall be maintained by Sycamore Cogeneration Company. [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.

53. Accurate records of NO_x (as NO₂) and carbon monoxide (CO) flue gas concentrations corrected to 15% O₂, dry and CGT fuel sulfur content shall be maintained and shall be reported as described by District Rule 1080 and upon request. [District Rule 1080] Federally Enforceable Through Title V Permit
54. Operator shall submit a quarterly 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(i)] Federally Enforceable Through Title V Permit
55. Quarterly continuous emission monitoring system reports shall be submitted to the District, EPA and CEC, as required by EPA regulations as specified in CFR Title 40, Part 58, Appendix B and Part 60 Appendix B. [District Rule 1080 and PSD SJ 85-09, X.D.5] Federally Enforceable Through Title V Permit
56. Operators of CEM's installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO and EPA. The report is due on the 30th day following the end of the calendar quarter and shall include the following: A. time intervals, data and magnitude of excess emissions (computed in accordance with 40 CFR 60.13(h)), nature and cause of excess (if known), corrective actions taken and preventive measures adopted; B. averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard. [40 CFR 60.334 (j)(5); District Rule 1080, 8.0 and PSD SJ 85-09, X.D.3 and X.D.5.a through e] Federally Enforceable Through Title V Permit
57. The written report for each calendar quarter shall also include the following: C. applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; D. a negative declaration when no excess emissions occurred. Excess emissions shall be defined as any 3-hour period during which the average emissions for CO, as measured by the CEM system, exceeds the emission limit set forth in PSD SJ 85-09, X.E. [District Rule 1080, 8.0; PSD SJ 85-09, X.D.3 and X.D.5.a through e] Federally Enforceable Through Title V Permit
58. A violation of NO_x emission standards indicated by the NO_x CEM shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
59. The APCO shall be notified no later than one hour after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [District Rules 1080, 10.0 and 1100, 6.1; PSD SJ 85-09, X.D.3] Federally Enforceable Through Title V Permit
60. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in this permit. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
61. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions of this permit, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
62. CGT shall be fired on natural gas only. There shall be no provisions for oil firing. Natural gas used as fuel shall be pipeline quality with sulfur content of 0.3 gr/100 scf or less (0.001% sulfur by weight). [District NSR Rule; Kern County Rule 407] Federally Enforceable Through Title V Permit
63. The HHV and LHV of the gaseous fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
64. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
65. If the turbine is not fired on PUC-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 3246, D4468 or D6667. [40 CFR 60.335(b)(10)] 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.

66. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested in accordance with the requirements of 40 CFR 60.334 (h) and 40 CFR 60.334(i). [40 CFR 60.334 (h) and 40 CFR 60.334(i)] Federally Enforceable Through Title V Permit
67. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
68. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable Federal, State and local air quality regulations. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
69. The cogeneration facility is subject to the federal regulations entitled Standards of Performance for New Stationary Sources (40 CFR 60). The owner or operator shall meet all applicable requirements of Subparts A and GG of this regulation. [PSD SJ 85- 09] Federally Enforceable Through Title V Permit
70. All correspondence as required by this permit shall be forwarded to: a) Director, Enforcement Div (Attn: A-5), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726-0244; and d) the California Energy Commission, 1516 Ninth Street, Sacramento, CA, 95814-5512. [PSD SJ 85-09] Federally Enforceable Through Title V Permit
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72. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332 (a), and (b); 60.333 (a); 60.334 (b), (c), (h), (i) and (j)(5); and 60.335 (b). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
73. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(b), 60.8, 60.8(d), 60.13, and 60.13(b); District Rules 1080 (as amended 12/17/92), Sections 6.3, 6.4, 6.5, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, and 11.0; and 1081 (as amended 12/16/93) as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

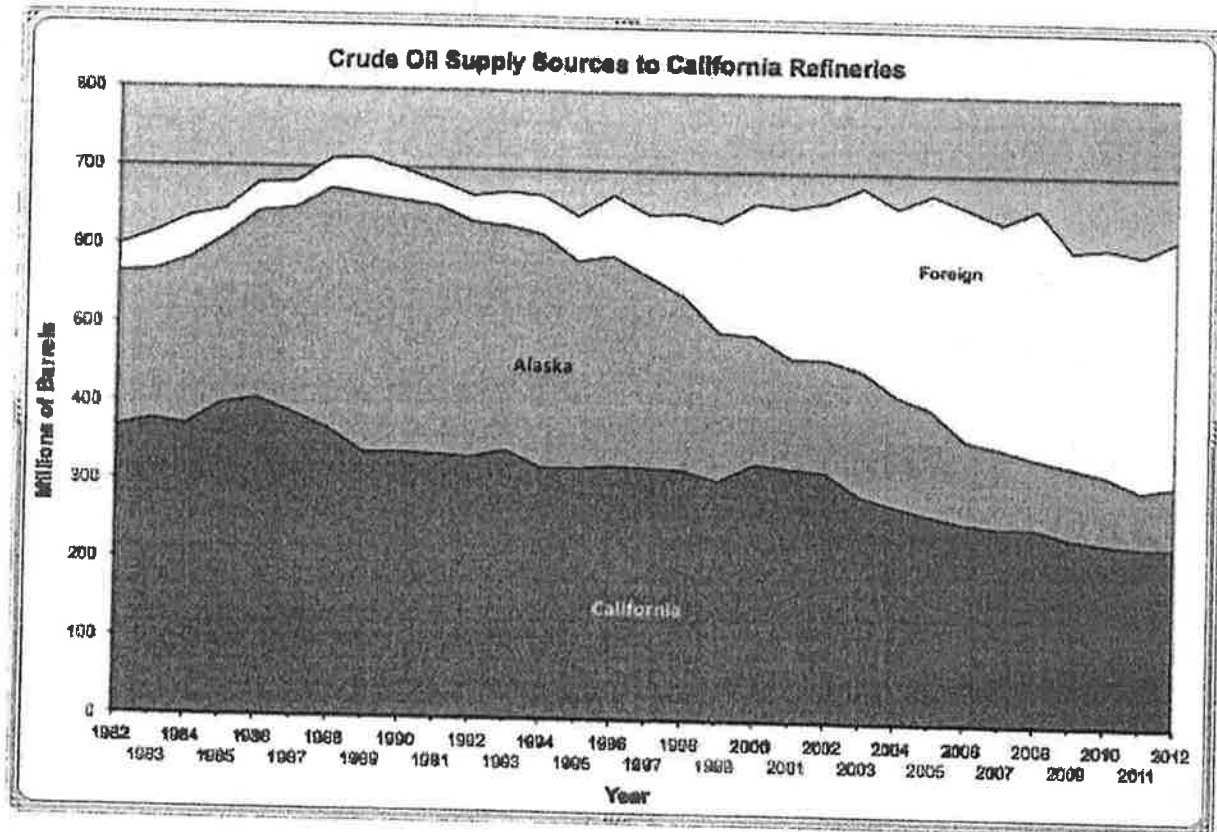
These terms and conditions are part of the Facility-wide Permit to Operate.

Appendix B

California production

ATTACHMENT 1

Oil Production Graph



[http://energyalmanac.ca.gov/petroleum/statistics/crude oil receipts.html](http://energyalmanac.ca.gov/petroleum/statistics/crude%20oil%20receipts.html)

ATTACHMENT 2

Historical Fuel Use from Steam Generators/Turbines at S-1127 & S-1131 (Fuel in mmcf)

Facility	2205	2006	2007	2008	2009	2010	2011
S-1127	5237.11	5015.33	3871.22	3911.45	3681.65	3684.86	3540.13
S-1131	4232.48	6496.02	6447.84	6400.62	3854.54	4265.13	3225.11
TOTAL	9469.59	11511.35	10319.06	10312.07	7536.19	7949.99	6765.24

Notes:

- 1) KRCC (S-88) went from 4 units to 3 units in August 2005
- 2) KRCC went from 3 units to 2 units in 2006 (with new PPA)
- 3) Sycamore (S-511) went from 4 units to 3 units in January 2008
- 4) Sycamore went from 3 units to 2 units in 2010 (new PPA)
- 5) Data for S-1131 for 2006 has been adjusted (appears to have been a transposition error in annual emissions inventory)

Appendix C

Fuel Use Data

	MMBtu				
	Unit 1	Unit 2	Unit 3	Unit 4	Total all 4 units
Jan-97	713,232	668,348	755,824	707,797	2,845,201
Feb-97	407,072	595,313	651,484	592,355	2,246,224
Mar-97	159,405	662,182	729,357	654,979	2,205,923
Apr-97	683,355	602,181	668,509	475,715	2,429,760
May-97	693,766	597,327	693,348	242,313	2,226,754
Jun-97	653,569	581,074	648,550	614,005	2,497,198
Jul-97	695,939	645,442	694,804	618,528	2,652,713
Aug-97	714,053	653,390	707,375	707,293	2,782,111
Sep-97	685,977	618,076	673,842	677,523	2,655,418
Oct-97	700,139	46,268	669,726	715,476	2,131,609
Nov-97	624,217	577,494	649,417	665,287	2,516,415
Dec-97	707,084	726,648	717,122	694,384	2,845,238
Jan-98	721,913	707,341	719,567	723,037	2,871,858
Feb-98	630,760	655,947	642,254	641,911	2,570,872
Mar-98	698,238	707,178	694,684	716,927	2,817,027
Apr-98	696,728	706,008	682,443	702,492	2,787,671
May-98	692,721	705,959	690,982	683,547	2,773,209
Jun-98	682,125	689,424	683,056	688,902	2,743,507
Jul-98	684,488	689,056	664,672	695,025	2,733,241
Aug-98	686,091	696,754	677,177	694,290	2,754,312
Sep-98	652,143	673,156	662,708	668,576	2,656,583
Oct-98	706,794	694,540	647,967	711,645	2,760,946
Nov-98	699,218	709,098	681,985	705,436	2,795,737
Dec-98	716,760	724,118	737,561	734,381	2,912,820
Jan-99	640,123	702,953	689,275	710,943	2,743,294
Feb-99	655,186	650,585	638,208	653,925	2,597,904
Mar-99	70,368	701,521	706,330	620,101	2,098,320
Apr-99	697,951	682,128	687,248	699,305	2,766,632
May-99	696,247	675,224	678,873	685,628	2,735,972
Jun-99	668,632	677,895	662,772	670,828	2,680,127
Jul-99	693,825	690,814	686,354	688,607	2,759,600
Aug-99	691,514	689,999	691,797	689,538	2,762,848
Sep-99	669,024	666,505	652,116	670,854	2,658,499
Oct-99	693,157	589,423	691,093	672,367	2,646,040
Nov-99	705,313	701,239	686,788	694,693	2,788,033
Dec-99	726,232	678,818	707,639	700,126	2,812,815
Jan-00	723,877	714,036	708,708	705,560	2,852,181
Feb-00	658,116	672,480	671,775	614,843	2,617,214
Mar-00	721,557	700,256	717,107	715,723	2,854,643
Apr-00	673,924	672,846	618,061	673,936	2,638,767
May-00	711,231	703,424	573,430	696,500	2,684,585
Jun-00	641,356	648,017	657,303	633,140	2,579,816
Jul-00	695,082	691,797	704,676	665,509	2,757,064
Aug-00	689,033	696,826	709,579	694,560	2,789,998
Sep-00	679,367	675,264	688,213	672,377	2,715,221
Oct-00	690,004	716,758	716,785	707,388	2,830,935
Nov-00	678,883	702,771	710,839	618,249	2,710,742
Dec-00	687,522	684,296	689,705	679,085	2,740,608
Jan-01	554,752	708,101	712,481	701,027	2,676,361
Feb-01	606,138	605,289	598,275	422,089	2,231,791
Mar-01	611,549	611,704	616,688	616,443	2,456,384
Apr-01	679,435	512,681	631,872	659,051	2,483,039
May-01	700,769	713,956	698,119	689,208	2,802,052
Jun-01	672,439	676,363	665,834	661,331	2,675,967
Jul-01	660,995	679,800	655,833	644,905	2,641,533
Aug-01	687,832	701,556	686,171	683,456	2,759,015
Sep-01	657,125	673,719	652,118	654,227	2,637,189
Oct-01	689,040	694,638	681,344	671,601	2,736,623
Nov-01	674,539	692,491	671,726	664,427	2,703,183
Dec-01	728,978	485,195	711,344	715,931	2,641,448
Jan-02	724,733	739,693	726,791	713,937	2,905,154
Feb-02	641,946	662,873	641,434	628,142	2,574,395
Mar-02	713,569	735,761	720,485	716,669	2,886,484

EPA CO₂e Emission Factor
53.11 kg CO₂e/MMBtu
117.09 lb CO₂e/MMBtu

Apr-02	687,193	701,733	562,663	678,108	2,629,697	
May-02	684,675	702,134	421,252	676,848	2,484,909	
Jun-02	665,835	675,947	710,142	660,106	2,712,030	
Jul-02	677,152	694,601	722,426	674,161	2,768,340	
Aug-02	672,581	693,908	719,961	675,710	2,762,160	
Sep-02	644,998	676,363	698,824	655,123	2,675,308	
Oct-02	253,040	714,442	736,185	685,352	2,389,019	
Nov-02	720,151	683,073	695,378	614,316	2,712,918	
Dec-02	691,711	704,320	720,666	291,722	2,408,419	
Jan-03	733,571	706,129	729,611	737,291	2,906,602	
Feb-03	654,000	631,589	660,482	661,621	2,607,692	
Mar-03	694,891	601,468	693,391	698,718	2,688,468	
Apr-03	673,599	684,312	698,533	671,745	2,728,189	
May-03	709,279	672,336	704,645	704,622	2,790,882	
Jun-03	671,667	657,663	680,215	666,500	2,676,045	
Jul-03	701,446	683,586	706,836	700,495	2,792,363	
Aug-03	692,695	692,695	702,906	696,951	2,785,247	
Sep-03	678,230	661,250	674,987	675,176	2,689,643	
Oct-03	724,077	696,934	718,235	711,424	2,850,670	
Nov-03	707,318	691,380	717,969	710,728	2,827,395	
Dec-03	721,473	703,440	725,789	721,937	2,872,639	
Jan-04	738,479	715,773	747,127	740,705	2,942,084	
Feb-04	675,905	661,110	686,122	662,842	2,685,979	
Mar-04	715,235	276,822	724,369	709,645	2,426,071	
Apr-04	676,481	725,438	630,944	687,105	2,719,968	
May-04	705,223	732,273	712,334	699,394	2,849,224	
Jun-04	675,336	699,817	684,677	674,076	2,733,906	
Jul-04	674,900	694,634	683,117	671,721	2,724,372	
Aug-04	701,693	718,763	709,700	699,897	2,830,053	
Sep-04	680,318	698,098	685,960	673,594	2,737,970	
Oct-04	580,955	599,602	671,002	657,214	2,508,773	
Nov-04	705,875	709,590	709,097	636,902	2,761,464	
Dec-04	720,258	740,889	727,912	735,465	2,924,524	
Jan-05	730,399	737,605	734,194	726,546	2,928,744	
Feb-05	647,180	654,893	648,853	649,089	2,600,015	
Mar-05	714,500	727,623	723,178	712,204	2,877,505	
Apr-05	678,039	702,068	677,774	668,540	2,726,421	
May-05	700,649	679,546	703,685	706,165	2,790,045	
Jun-05	681,608	691,517	683,718	679,585	2,736,428	
Jul-05	689,841	697,727	681,769	684,627	2,753,964	
Aug-05	691,543	700,941	699,146	688,341	2,779,971	
Sep-05	675,729	687,433	683,826	675,718	2,722,706	
Oct-05	704,859	713,298	714,388	698,544	2,831,089	
Nov-05	685,992	692,573	678,468	692,194	2,749,227	
Dec-05	699,397	710,119	706,696	704,495	2,820,707	
Jan-06	721,730	730,569	726,471	720,369	2,899,139	
Feb-06	641,673	652,101	645,084	645,032	2,583,890	
Mar-06	716,953	638,093	717,428	714,812	2,787,286	
Apr-06	680,010	679,718	550,037	671,560	2,581,325	
May-06	691,605	698,425	711,705	691,792	2,793,527	
Jun-06	660,357	664,104	681,581	653,314	2,659,356	
Jul-06	674,548	678,138	697,190	663,941	2,713,817	
Aug-06	675,380	675,916	705,478	676,463	2,733,237	
Sep-06	593,222	541,821	619,517	577,218	2,331,778	
Oct-06	429,769	710,843	680,137	456,076	2,276,825	
Nov-06	717,181	666,776	503,751	714,073	2,601,781	
Dec-06	764,907	705,644	734,908	759,974	2,965,433	
Jan-07	742,580	707,164	746,672	760,046	2,956,462	2,719,664
Feb-07	618,982	635,263	669,829	683,259	2,607,333	2,719,969
Mar-07	742,046	694,759	727,596	738,886	2,903,287	2,721,043
Apr-07	713,467	664,813	700,892	708,902	2,788,074	2,723,612
May-07	710,255	664,313	688,332	703,355	2,766,255	2,722,621
Jun-07	676,415	646,789	674,135	678,571	2,675,910	2,720,099
Jul-07	702,809	650,956	690,336	698,910	2,743,011	2,719,643
Aug-07	701,455	654,862	691,824	689,269	2,737,410	2,717,869
Sep-07	682,453	609,927	672,920	674,401	2,639,701	2,714,411

Oct-07	699,763	465,734	624,136	709,291	2,498,924	2,700,571	
Nov-07	689,670	597,071	597,071	675,217	2,559,029	2,692,646	
Dec-07	745,581	741,180	447,756	732,925	2,667,442	2,686,260	
Jan-08	735,238	682,880	712,466	686,469	2,817,053	2,682,839	
Feb-08	630,734	633,736	574,152	635,346	2,473,968	2,678,259	
Mar-08	366,649	666,250	494,741	711,379	2,239,019	2,655,415	
Apr-08	576,621	418,692	540,568	542,205	2,078,086	2,634,447	
May-08	713,861	697,043	665,498	-	2,076,402	2,604,566	
Jun-08	660,682	685,745	557,142	208,075	2,111,644	2,581,745	
Jul-08	416,290	633,526	533,301	518,565	2,101,682	2,556,239	
Aug-08	319,777	584,629	661,162	572,100	2,137,668	2,531,424	
Sep-08	407,225	609,781	400,581	636,452	2,054,039	2,519,852	
Oct-08	347,324	548,798	626,288	602,687	2,125,097	2,513,530	
Nov-08	161,092	670,669	552,719	633,163	2,017,643	2,489,191	
Dec-08	97,140	730,887	698,098	703,696	2,229,821	2,458,540	
Jan-09	268,426	566,252	624,860	672,893	2,132,431	2,424,205	
Feb-09	248,328	529,200	588,304	552,762	1,918,594	2,395,508	
Mar-09	727,103	716,175	708,045	525,428	2,676,751	2,386,069	
Apr-09	615,970	619,001	459,685	403,613	2,098,269	2,357,327	
May-09	636,669	679,332	98,819	674,168	2,088,988	2,329,108	
Jun-09	621,036	565,478	196,232	674,490	2,057,236	2,303,330	
Jul-09	609,450	674,034	148,007	685,849	2,117,340	2,277,260	
Aug-09	573,634	532,208	399,227	641,726	2,146,795	2,252,651	
Sep-09	570,541	457,373	457,373	648,634	2,133,921	2,231,577	
Oct-09	453,749	316,041	664,988	584,687	2,019,465	2,211,599	
Nov-09	418,597	481,110	460,501	674,586	2,034,794	2,189,756	
Dec-09	595,777	733,496	707,961	468,836	2,506,070	2,183,032	2,359,323
Jan-10	292,157	703,563	659,203	137,781	1,792,704	2,140,351	2,326,996
Feb-10	48,198	528,851	588,323	110,506	1,275,878	2,090,431	2,290,011
Mar-10	113,221	241,344	593,484	462,928	1,410,977	2,055,929	2,248,558
Apr-10	22,904	672,271	687,799	123,531	1,506,505	2,032,113	2,212,959
May-10	12,292	614,325	661,549	311,448	1,599,614	2,012,247	2,180,552
Jun-10	237,023	561,983	517,263	274,827	1,591,096	1,990,557	2,150,419
Jul-10	252,484	224,023	640,250	413,081	1,529,838	1,966,731	2,116,719
Aug-10	141,194	611,525	652,750	209,110	1,614,579	1,944,935	2,085,530
Sep-10	175,591	602,489	602,489	112,624	1,493,193	1,921,567	2,053,682
Oct-10	6,452	655,752	687,929	42,401	1,392,534	1,891,043	2,022,949
Nov-10	196	688,434	413,742	477,313	1,579,685	1,872,795	1,995,745
Dec-10	205	367,848	522,440	528,378	1,418,871	1,839,005	1,961,063
Jan-11	536,019	138,376	222,475	539,284	1,436,154	1,809,994	1,922,704
Feb-11	604,616	2,226	108,942	574,814	1,290,598	1,783,827	1,889,833
Mar-11	4,892	678,493	711,819	31,923	1,427,127	1,731,760	1,867,280
Apr-11	6,899	310,047	624,159	450,047	1,391,152	1,702,296	1,848,199
May-11	645,468	428,743	531,914	149,380	1,755,505	1,688,401	1,839,285
Jun-11	386,460	214,480	543,736	408,864	1,553,540	1,667,414	1,823,782
Jul-11	268,917	117,837	668,777	491,697	1,547,228	1,643,659	1,808,381
Aug-11	664,824	145,855	615,905	156,132	1,582,716	1,620,156	1,792,965
Sep-11	342,496	138,790	615,171	391,097	1,487,554	1,593,224	1,777,230
Oct-11	524,792	390,382	629,208	75,097	1,619,479	1,576,558	1,763,185
Nov-11	467,355	105,370	651,483	173,640	1,397,848	1,550,019	1,745,968
Dec-11	691,641	97,993	603,495	44,400	1,437,529	1,505,496	1,723,960
Unit 1	Unit 2	Unit 3	Unit 4	Total all 4 units			

Average Month = 2,465,331

total avg 24-mo avg 36-mo avg 48-mo avg 60-mo avg

Appendix D

Calculations

Fuel Usage During Baseline Period January 2007 - December 2008

	Unit 1	Unit 2	Unit 3	Unit 4	All Units
Jan-07	742,580	707,164	746,672	760,046	2,956,462
Feb-07	618,982	635,263	669,829	683,259	2,607,333
Mar-07	742,046	694,759	727,596	738,886	2,903,287
Apr-07	713,467	664,813	700,892	708,902	2,788,074
May-07	710,255	664,313	688,332	703,355	2,766,255
Jun-07	676,415	646,789	674,135	678,571	2,675,910
Jul-07	702,809	650,956	690,336	698,910	2,743,011
Aug-07	701,455	654,862	691,824	689,269	2,737,410
Sep-07	682,453	609,927	672,920	674,401	2,639,701
Oct-07	699,763	465,734	624,136	709,291	2,498,924
Nov-07	689,670	597,071	597,071	675,217	2,559,029
Dec-07	745,581	741,180	447,756	732,925	2,667,442
Jan-08	735,238	682,880	712,466	686,469	2,817,053
Feb-08	630,734	633,736	574,152	635,346	2,473,968
Mar-08	366,649	666,250	494,741	711,379	2,239,019
Apr-08	576,621	418,692	540,568	542,205	2,078,086
May-08	713,861	697,043	665,498	-	2,076,402
Jun-08	660,682	685,745	557,142	208,075	2,111,644
Jul-08	416,290	633,526	533,301	518,565	2,101,682
Aug-08	319,777	584,629	661,162	572,100	2,137,668
Sep-08	407,225	609,781	400,581	636,452	2,054,039
Oct-08	347,324	548,798	626,288	602,687	2,125,097
Nov-08	161,092	670,669	552,719	633,163	2,017,643
Dec-08	97,140	730,887	698,098	703,696	2,229,821

59,004,960 Total Baseline Fuel Usage

29,502,480 Average Annual Fuel Usage

CO2e Emissions During Baseline Period

Fuel usage	29,502,480	MMBtu/yr
Emission Factor	0.0531	Mt CO2e / MMBtu
Baseline Historical Average Annual Emissions	1,566,582	Mt CO2e / yr

Current Permitted limits for S-511-1, '2, '3, '4

NOx limitation

271,200 lb NOx/yr combined 4 turbines
67,800 lb NOx/qtr combined 4 turbines

lb NOx/yr * emission factor 0.011 lb NOx/Mmbtu * 0.0531 metric ton CO2e/MMBtu = metric ton CO2e/yr

271200	0.011	0.0531	1,309,156	Mt CO2e/yr
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All 4 GTE Combined

Annual HAE	1,566,582	Mt CO2e/yr
current permitted	1,309,156	Mt CO2e/yr
Bankable AER	257,426	Mt CO2e/yr

Appendix E

Comments and Responses

The following are comments received from the Center for Biological Diversity on June 29, 2016 and District responses:

Comment I.A. Any GHG Reductions After January 1, 2012 Must be Applied to Compliance with State Cap-and-Trade Obligations

The proposed ERCs are not "surplus" reductions, and thus are invalid. Under Rule 2301, "Greenhouse gas emission reductions that occur at a facility subject to the CARB greenhouse gas cap-and-trade regulation on or after January 1, 2012 are not surplus." Rule 2301 § 4.5.3.1. Because reductions that occur after January 1, 2012 will be used to comply with cap-and-trade obligations, granting these same reductions a bankable credit would result in "double counting." The proposed ERCs result from a voluntary reduction in output, which first became a permit requirement in June 2012. Thus, all enforceable emission reductions occurred after January 1, 2012. These ERCs are thus clearly invalid under Rule 2301, section 4.5.3.1.

The District appears to assume the emission reductions occurred prior to January 1, 2012, but the basis for this assumption is unclear. Neither of the potential reasons for concluding the reductions pre-date the facility's coverage under state cap-and-trade regulations is legally defensible. One possibility is that the District may be assuming the date of emission reductions relates back to the date Sycamore applied to have the total NOx emissions limit placed on the Title V permits for the four turbines (December 2011). This interpretation is clearly contrary to Rule 2301's unambiguous requirement that the actual GHG reductions- not the application- occur prior to January 1, 2012. As such, it would be contrary to the principle behind Rule 2301's surplus requirements to count an unenforceable application to change permit conditions-an application that might not be approved as submitted, regarding a change that could easily be reversed by the applicant-as indicative of actual emission reductions.

Another possibility is that the District may be assuming the date when the facility had stopped operating turbines in full time status" is when emission reductions occurred. If this is the logic behind the date of reductions, it is flawed for several reasons. First, we note that if the date of reduced operation is treated as when reductions occurred, the application analysis provides absolutely no indication when operation was curtailed and by how much, making quantification- one of the criteria for valid ERCs- entirely impossible. Second, if the date of reduced operations is treated as the onset of emission reductions rather than the date those reductions were incorporated into a permit condition, it would fail the requirement under Rule 2301 that emission reductions be enforceable. Rule 2301 § 4.5.6. Third, treating voluntary declines in operation as the date of reductions would violate Rule 2301's requirement for permanence. By its nature, a voluntary decrease in output is fully reversible and subject to the vagaries of the market where there are no guarantees of future behavior. In sum, the date of voluntary reductions in operations is an invalid measure for the onset of actual emission reductions.

Finally, even if emission reductions voluntarily undertaken prior to January 1, 2012 could generate ERCs, any reductions that occurred after this date would not be eligible for ongoing ERCs because the intervening event of cap-and-trade compliance obligations would render the reductions ineligible for ERCs going forward under Rule 2301.

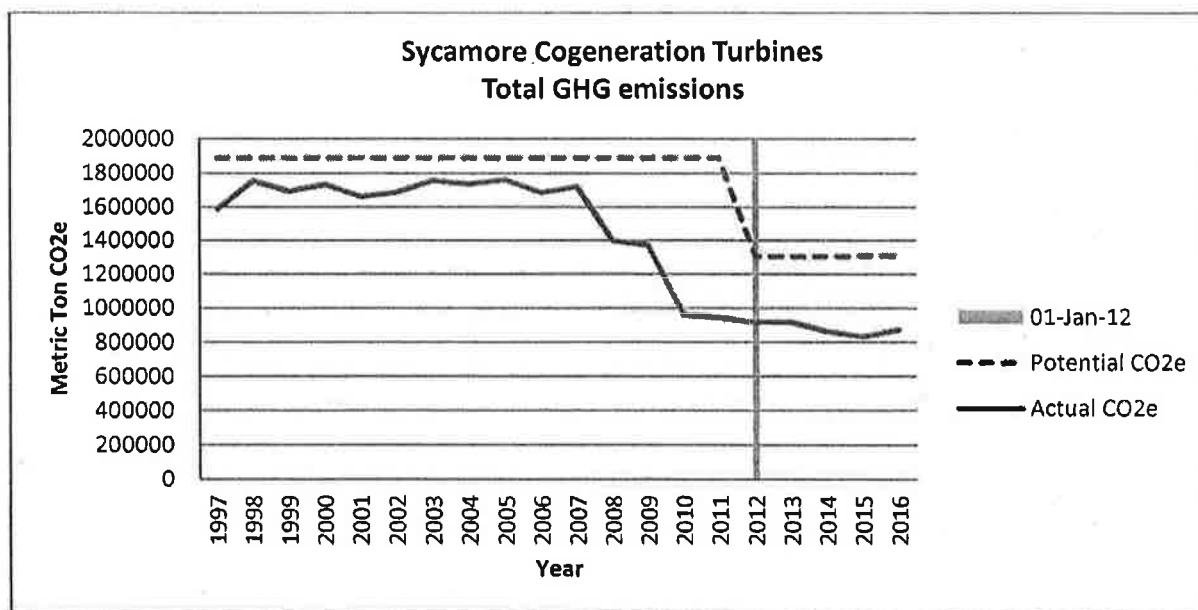
District's Response I. A.:

Rule 2301 section 4.5 specifies the criteria that GHG emission reductions must meet to be eligible for banking. Section 4.5.3 states that emission reductions must be real, surplus, permanent, and enforceable, except as provided in Section 4.5.5. Section 4.5.5 specifies the requirements for emission reductions quantified using a CARB approved protocol.

The emission reduction is surplus:

Sections 4.5.3.1 through 4.5.3.4 of Rule 2301 specify criteria for GHG emission reduction to be surplus. Section 4.5.3.1 states that GHG emission reductions that occur at a facility subject to the CARB GHG cap-and-trade regulation on or after 1/1/12 are not surplus. GHG emission reductions that are not otherwise required and that occur prior to 1/1/12 are surplus.

The facility has provided fuel usage data showing a decrease in fuel usage (and associated reduction in GHG emissions) prior to January 1, 2012. This emission reduction can be seen in the chart below which shows the turbines GHG potential emissions and actual emissions from 1997 – 2016. As shown below, the emission reduction occurred prior to 1/1/12 and has remained below the post project potential to emit since that time. As the emission reduction occurred prior to 1/1/12, the emission reduction is surplus.



The emission reduction is enforceable:

The emission reduction was made enforceable upon issuing of revised Permits to Operate that inherently limit the GTEs GHG emissions prior to the District's preliminary decision to grant GHG ERCs.

The emission reduction is permanent:

The emission reduction is permanent as the allowable operation of the GTEs, and the associated potential GHG emissions, are limited by conditions in the Permits to Operate. Any possible proposed increase in the allowable operation of the GTEs would be subject to the District's New Source Review permitting requirements. Furthermore, as an additional safeguard, in accordance with the requirements California's cap-and-trade regulation, overall GHG emission from covered facilities (including Sycamore Cogeneration) are required to decrease over time. For the reasons stated above, the GHG emission reduction is permanent.

Comment I. B: The State-wide Geographic Boundary Is Impermissibly Broad

The application analysis indicates that the entire state of California is the geographic boundary for the ERCs without providing sufficient evidence that the emission reductions will be "real" and "permanent" within the entire state. Choice of geographic boundary is designed to prevent emissions leakage. Because there is no assurance that the decreased energy production from this facility will not be substituted by different energy sources within the state of California, this geographic boundary is too broad.

Emission reductions that are achieved through the expedient of reduced production—as opposed to more efficient technology or practices—are particularly likely to lead to emissions "leakage" whereby another source of energy is used to supply the same demand, with no net decrease in GHG emissions. To qualify as a "real" and "permanent" emission reduction under Rule 2301, the applicant would need to provide evidence of both enforceable and lasting decreased demand for energy. There is no such evidence in the publicly available materials here.

The application analysis makes an unsuccessful attempt to support a finding of permanence through the mere presentation of general historic trends in fossil fuel production. The application indicates that power and steam from these turbines has been used for production in the Kern River oilfield and that energy requirements have declined. To support its decision to scale back operations, the application review provides data in a single plot depicting a general decline in California crude oil production since the 1980's. The application review also provides what appears to be data on fuel use at various turbines in Kern County between 2005 and 2011 (no explanation provided in application). The materials are presumably intended to show there is a downward trend. The application fails, however, to provide any evidence that any such trend will continue, much less that it will be permanent.

Several lines of evidence suggest that the future of oil production in California may buck historic trends. It is well-established that the oil market is highly volatile, making historic trends questionable predictors. More specifically, Kern County recently issued an environmental impact report ("EIR") for its ordinance creating a ministerial process for oil

and gas permitting in the County. The EIR indicated that there would be approximately 2,697 new producing wells per year in Kern County for the next 20 years and beyond. These data strongly contradict the general evidence provided by the applicant of decreasing oil and gas production. Moreover, a recent analysis of well stimulation by the California Council on Science and Technology found that well stimulation may result in expanded oil production in California, especially from the Monterey Formation.

In addition, it appears that this facility may have been selling electricity to the grid, which means that oil and gas production is not the sole factor in determining how often the turbines run. Once in the grid, the electricity could have been used by any number of sources in the vicinity. Thus, proof that reduced demand is both enforceable and permanent is practically impossible to provide. This is the exact reason why a simple business decision to reduce production does not constitute the form of emissions reduction that can be converted into bankable credits.

The application review also erroneously assumes that statewide cap-and-trade compliance creates a permanent reduction in state-wide demand, and therefore permanent emission reductions. Although the goal of the state cap-and-trade program is to reduce state GHG emissions to 1990 levels by 2020, this could be achieved in a number of ways that do not require decreased demand for electricity. Furthermore, the prolific use of offsets and the "pay to pollute" approach intrinsic to cap-and-trade systems erodes the certainty of reduced energy demand. Thus, participation in the state cap-and-trade program does not constitute evidence that reduced energy demand is either inevitable or permanent at the state level.

District's Response I. B:

The emission reduction is real and permanent:

The subject gas turbine engines (GTEs) are used to produce electricity for onsite consumption and export to the grid and to produce steam for use thermally enhanced oil recovery in the Kern River oilfield. The facility has provided fuel usage data showing a decrease in fuel usage (and associated reduction in GHG emissions) prior to January 1, 2012. This emission reduction can be seen in the chart presented in response to comment I. A above. The historic GTE usage has declined as discussed in the application review. The records show the turbines GHG potential emissions and actual emissions reduced between 1997 and 2016. As demonstrated by the records, GHG emission reductions are real. In addition, to ensure that the achieved reductions are maintained, the GTEs include enforceable limits on their operation that effectively limit the operation and resulting CO₂e emissions from the GTEs.

Further this facility is subject to CARB's cap-and-trade regulation. GHG emissions addressed by the cap-and-trade regulation are subject to an industry-wide cap on overall GHG emissions. As such, any growth in emissions must be accounted for under that cap, such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions. Actual GHG emission above the allowable cap at Sycamore Cogeneration will require to be mitigated via the CARB cap-and-trade program.

For the reasons stated above, the District has concluded that the GHG emission reductions are real and permanent within California.

Comment I. C: Calculations for Actual Emission Reductions Are Inaccurate

Use of conflicting emission factors undermines the accuracy of predicted future CO₂e emissions, thereby violating Rule 2301's requirement that emissions reductions be both "real" and "quantifiable". Rule 2301 § 4.5.1. The future or "actual" reductions from these turbines are biased high because different emissions factors are applied to historic as opposed to actual emissions. Historic CO₂ emissions were estimated using CO₂ emission factors from stack tests at the turbine, while a district default emission factor was used to calculate "actual emission reductions." The district's default emission factor, however, is lower than actual emission factors measured at the facility. The result is an underestimate in future "actual" emissions and a consequent overestimate of emissions reductions.

Further potential inaccuracies may result from the use of permitted NO_x limits rather than actual fuel consumption to compute CO₂ emissions. Calculation of CO₂ reductions requires information on total fuel consumption, which is then multiplied by an emission factor. Because the facility's operating permit sets an upper limit on total NO_x emissions, rather than fuel consumption, the amount of fuel consumed at each turbine is calculated from a NO_x emission factor that indicates the average pounds of NO_x produced per MMBtu natural gas consumed. This multi-step derivation of fuel use creates an obvious potential for inaccuracy. If the facility is able to reduce the NO_x intensity of its operations in some way other than by reducing operation of the turbines, more fuel- and consequent CO₂ emissions- would be produced than otherwise assumed through the use of a NO_x conversion factor based on historic stack tests. Because a reduction in total NO_x does not necessarily require a one-to-one reduction in fuel use, the lack of a permit condition limiting fuel usage (or directly limiting CO₂ emissions) leads to a lack of enforceability of CO₂ reductions, thereby violating Rule 2301.

District's Response 1. C:

The District has revised the actual emission reduction calculations to use the EPA standard CO₂e emission factor from 40 CFR 98.3 for both actual emission calculations and post project potential to emit calculations.

The post project potential to emit for CO₂ was determined using a combination of limits included in the PTO. The shared annual NO_x limit for the GTEs together with the permitted NO_x emission limit effectively impose a limit on the quantity of fuel consumed in the GTEs. This inherent fuel use limitation along with the widely recognized CO₂ emission factor was then used to calculate post project CO₂ emissions.

Using this emission factor and the fuel usage information, the quantity of CO₂e emission reductions has been adjusted to 257,426 metric ton/year. See revised final decision application review, attached.

Comment I. D: The Application Review Uses an Incorrect Baseline Period for Evaluating Historic Emissions.

The ERC application violates District rules governing selection of a baseline period for calculation of "historic actual emissions." The application for ERCs was not deemed complete until March 10, 2014. By this time, the application review's selected baseline or "historic actual" emissions data for the facility (years 2007 and 2008) were beyond the five-year limit set out under Rule 2301. The ERC application must provide assurance that these outdated emissions data are representative of historic facility CO₂ emissions.

The inconsistent treatment of baselines between SJVAPCD Rules 2201 and 2301 for GHG emissions leads to arbitrary results when applied to this facility. Under Rule 2301 § 3.6, the definition of "baseline period" is the same as in Rule 2201 § 3.9, which states that the baseline is measured from the "submission date of the Complete Application." Rule 2201 § 3.9.1, 3.9.2. Yet, Rule 2301 appears to invoke a different approach in which it estimates historic annual average GHG emissions relative to the "date the emission reduction occurred." Rule 2301 § 4.5.4.

The baseline period is relevant in this instance because the facility's baseline/historical actual emissions were substantially different over consecutive 24-month periods in the five years prior to the date the GHG ERC application was deemed complete (March 2009 to March 2014) compared with the five years prior to the date Sycamore first applied for GHG ERCs (December 2006 to December 2011). Because the highly variable pattern of emissions from this facility alters the calculated emission reductions, it is essential that the baseline be accurately selected. The District has not articulated any legal or evidentiary basis for treating GHGs differently from other pollutants in calculating baseline periods under Rule 2301.

The ERC application review explicitly relies on an erroneous baseline calculation from the facility's prior application for NO_x ERCs. In the prior application, Sycamore appeared to calculate the five-year baseline period from the date the application was submitted (December 11, 2011), even though under the plain text of Rules 2201 and 2301, the baseline period should have been calculated from the date the application was complete (November 14, 2013). The selected baseline period—from January 2007 to December 2008—was thus almost entirely outside the five-year look-back period contemplated by the District's rules (which would have extended back to November 2008 at the very earliest). SJVAPCD Rule 2201 § 3.9; Rule 2301 § 3.6. The GHG ERC application review at issue here expressly relies on this erroneous baseline calculation.

The selection of a baseline period for the GHG ERC application is thus triply erroneous: (1) it relies on a prior error in calculating the baseline for the NO_x ERC application; (2) it uses a baseline period that is even more outdated than the baseline in the NO_x ERC application; and (3) to the extent the District intends to apply section 4.5.4 instead of section 3.6 of Rule 2301, it necessarily reaches an

arbitrary and irrational result that contradicts the record and is unsupported by any evidence.

District's Response I. D:

Rule 2301 section 4.5.4 requires that historic annual average GHG emissions be determined using the consecutive 24 month period immediately prior to the date the emission reduction occurred or another consecutive 24 month period in the 60 months prior to the date the emission reduction occurred if determined by the APCO as being more representative of normal operation.

The GHG emission reduction was related to the imposition of new limits on shared NOx emissions (and inherent reduction in fuel consumption) for the GTEs. The ATC applications that authorized the NOx emission reductions were deemed complete on Dec 29, 2011. This date was used to determine the baseline period for the emission reduction for both NOx (emission reductions banked separately) and GHGs.

The baseline period to determine actual GHG emissions of Jan 2007 through Dec 2008 was selected as being the most representative of normal operation examining fuel usage records from 1997 through 2011, determining average annual usage during that period, and selecting the two year period prior to the date the ATC applications that authorized the emission reductions were deemed complete on Dec 29, 2011.

As this time period was within 60 months from when the ATC application that authorized the emission reduction was deemed complete, it is consistent with the requirements of Rule 2301 section 4.5.4. Further, the baseline periods for the previous NOx ERC banking action (selected pursuant to Rule 2201) and the baseline period selected for GHG emission reductions (pursuant to Rule 2301) are consistent.

As discussed above, the baseline period selected is consistent with the requirements of Rule 2301.

Comment I. E: Any Emission Reduction Credits Should be Limited to the Duration of Each Permit to Operate Renewal

The duration of any future ERCs must be confined to the dates over which there is an enforceable agreement or permit limiting emissions. Although Rule 2301 could theoretically allow ERCs to be granted in perpetuity, there would need to be a binding agreement or permit that was of the same duration to meet the requirement of enforceability under Rule 2301 § 4.5.6. SJVAPCD Title V permits such as for the Sycamore facility are renewed every five years; the specific operating permits that form the basis of this application expired in 2015 with renewals currently being processed. Thus, any ERCs issued would be enforceable only for the duration of a renewal cycle. A new application for ERCs would be required at each renewal cycle to ensure that the emission reductions remain real and enforceable.

District's Response I. E:

The facility has enforceable permit conditions that effectively limit the GHG emissions from the subject GTEs. As such, the emission reductions are enforceable and permanent regardless of the renewal period of the subject Permits to Operate.

It is important to note, that during the permit renewal process the permits are reviewed and revised to add any new federally enforceable requirements. Permit requirements imposed due to Rule 2201 cannot be revised as part of a permit renewal process.

It is important to note, that for emission reductions to qualify for banking, that the emission reductions must be enforceable indefinitely, and not limited to the "term" of a specific permit to operate.

For the reasons stated above, the emission reduction is in fact permanent, and as such need not be limited to the renewal term of the subject permits to operate.

Comment II. A: The Proposed ERCs Violate CAPCOA's "Additionality" Criteria.

In addition to being inconsistent with Rule 2301, these credits would be invalid for listing with CAPCOA's GHG Rx registry because they do not meet CAPCOA's requirements for "additionality." ERCs must meet two requirements under CAPCOA's test for additionality: (1) the emission reduction must "not be due to an action that is required by a law, rule or other requirement" ("regulatory surplus test") and (2) at least one of three additional criteria. The three additional tests are: the action exceeds common practice or business as usual; the project would not be economically attractive based on the fiscal test; or there is an institutional or technological barrier to this type of project. Here, the emission reductions fail all prongs of the additionality test.

As discussed above, any emission reductions occurring after the facility became subject to cap-and-trade compliance obligations would run afoul of CAPCOA's regulatory surplus test. The emission reductions were not actually enforceable, and thus cannot be deemed to have "occurred," until mid-2012 when the current NOx limit was included in Sycamore's Title V permit. By then, the facility was already required to reduce its GHG emissions to meet the state-mandated GHG cap. CAPCOA's protocol states "reductions that occur at facilities covered by California's cap-and-trade reduction after the regulation goes into effect are not eligible as credits."

Furthermore, these emission reductions do not meet any of the three additional criteria required for additionality. First, the GHG reductions did not result from any special project or practice for which there are standard best practices or industry standards and against which the project performs better than required. As such, the first common practice/business-as-usual test does not apply. Second, these emission reductions fail the "fiscal test" because while the test requires that additional reductions be economically unattractive, the reductions at issue here were

pursued precisely because they were affirmatively economically "attractive." The facility was experiencing reduced demand from local oil fields and difficulty marketing power to the grid; it consequently opted to reduce operations. Because this was a business profit decision, it fails the fiscal test for additionality. Finally, the reductions here fail CAPCOA's third additionality test because there are no barriers whatsoever to the action that resulted in the GHG emission reductions, nor did the facility take any financial risk with the action.

District's Response II. A:

The proposed GHG ERC will not be listed in the CAPCOA GHG Rx.

Comment II. B: The Application Does not Comport with Methodological Requirements of CAPCOA's Case-by-Case Protocol

In addition to the fact that the proposed credits are not "additional" and thus ineligible for CAPCOA's GHG registry, the application contents do not meet CAPCOA's methodological requirements. First, the use of inconsistent CO₂ emission factors (discussed supra, in Section I.C) overestimates emissions reductions, and thus contradicts the case-by-case protocol's mandate that "quantification should err on the side of being conservative with GHG reduction estimates. Conservative assumptions, values and procedures should be used to ensure that GHG reductions are not over-estimated." Because the combination of emission factors selected by the proposed method would overestimate emission reductions, the ERCs are not valid for listing on CAPCOA's registry.

Second, the application does not "describe how leakage is accounted for and quantified." This is an important concern. As discussed above, these reductions are the result of scaling back operations at a facility that sells electricity to the grid, which leaves open the very real possibility that the same power demand will be met from another facility. Reduced production in the Kern River oil field, to the extent it is occurring, also could be offset by increased production-and consequent demand for steam and power of the kind Sycamore generated-in another part of California. This unaddressed potential for leakage also fatally undermines the application review's analysis of the permanence of emission reductions. To conclude, the analysis in the current application is incomplete and inadequate to meet the criteria for applications to list ERCs on CAPCOA's GHG registry.

District's Response II. B:

The proposed GHG ERC will not be listed in the CAPCOA GHG Rx.

Comment III: The Emission Reduction Credits will not be Eligible for Use as Mitigation under CEQA

These ERCs would not be eligible for mitigation of GHG emissions under the California Environmental Quality Act ("CEQA") because under the CEQA Guidelines, "emissions reductions that would occur without a project would not normally qualify as mitigation." The application indicates that Rule 2301 does not regulate use of GHG ERCs, but the "likely uses" would be the "future retirement as GHG mitigation in the California Environmental Quality Act (CEQA) process." As detailed below, this anticipated use is entirely contrary to the law.

The GHG reductions in this application result from a permit finalized four years ago, predating any potential CEQA project to which they could be applied as mitigation. Consequently, these past and ongoing reductions are part of the "existing conditions" baseline against which any future CEQA project's effects will be measured. The existing environmental background cannot be considered mitigation for CEQA purposes. CEQA requires actual, effective mitigation of significant environmental impacts. Pub. Res. Code §§ 21002, 21002.1 (b), 21081. In order to mitigate new greenhouse gas emissions from a proposed project, therefore, CEQA lead agencies must identify additional feasible emissions reductions that would not already have occurred in the absence of the mitigation requirement. Because the permit condition has already been changed, ongoing emission reductions are not additional or feasible as mitigation. A project proponent could not "mitigate" the loss of state park land by simply identifying other state parks already in existence at the time the project was proposed. Mitigation under CEQA requires concrete, enforceable action to minimize, avoid, or reduce a project's effects. Background actions that would have occurred anyway cannot satisfy this requirement.

Furthermore, non-additional credits cannot be considered mitigation under CEQA. CEQA Guidelines provisions governing greenhouse gas mitigation state that agencies may consider "off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions." CEQA Guidelines § 15126.4(c)(3) (emphasis added). According to the Resources Agency's Final Statement of Reasons accompanying the revised Guideline, this language was intended to ensure that offsets used for CEQA mitigation are additional. As discussed above, these credits clearly fail all relevant additionality tests; just as a leading example, the reductions became enforceable and thus can be said to have "occurred" only after the facility became subject to cap-and-trade compliance obligations. Accordingly, any ERC issued pursuant to this application should bear a notation that it is not suitable for use as CEQA mitigation.

District's Response III:

CEQA guidelines section 15126.4(c) (3) specifically allows "Off-site measures, including offsets that are not otherwise required, to mitigate a projects emissions" as a feasible means to mitigate GHG emissions. By their very nature, offsets are generated by an activity that reduces emissions and the resulting emission reductions are preserved through banking for future use. As discussed in Response

1 A above, the emission reduction prior to the issuance of the ERCs (and prior to 1/1/12). This emission reduction meets the eligibility requirements of Rule 2301 and has been preserved for future use in the subject ERC.

Both the Office of Planning and Research and the Resources Agency recognized that there may be various methods of mitigating GHG impacts.

CEQA Guidelines Section 15126.4(c) says, "Measures to mitigate the significant effects of greenhouse gas emissions *may include, among others...* offsets that are not otherwise required, to mitigate a project's emissions". It is important to note that the appropriate time to consider whether any particular use of any mitigation is appropriate for a specific project is at the time the impacts of that project are being considered under CEQA, not at the time of creation of the credits which may or may not be used in a CEQA context. A lead agency may determine and demonstrate that "credits" banked by the District under Rule 2301 are valid mitigation for a GHG increase, in the context of its own significance threshold. To examine the appropriateness of any particular mitigation, one must wait until the lead agency performs its role under CEQA in analyzing a project's impacts and the significance of those impacts. Only then can one analyze the appropriateness of any proposed mitigations in the context of the lead agency's GHG CEQA processes and policies.

Therefore it is not appropriate to try to anticipate all the variations in CEQA related mitigation decisions at the time of creation of credits or offsets that may be used as CEQA mitigation. The effort being discussed here is one more step removed: it is an effort to bank GHG reductions that may eventually be used as CEQA mitigation, under circumstances where they are appropriately based on a lead agency's analysis of the significance of the GHG impacts of a particular project.