Docket Number:	85-AFC-05C
Project Title:	Compliance - Application for Certification of the (BAF) American I Cogeneration Project AFC
TN #:	203033
<b>Document Title:</b>	Final Revised Peition for Calpine King City Cogen Amemdment for Air Quality; 3.17.2014
Description:	Calpine KIng City Cogeneration Final Revised Peition to Amend for Air Quality and additional information
Filer:	Eric Veerkamp
Organization:	California Energy Commission / CKC
<b>Submitter Role:</b>	Commission Staff
Submission Date:	9/3/2014 4:06:34 PM
<b>Docketed Date:</b>	9/3/2014

#### CALPINE KING CITY COGEN, LLC



750 METZ ROAD KING CITY, CA 93930 (831) 385-7943 PHONE (831) 385-6683 FAX

March 17, 2014

Joe Douglas Compliance Project Manager California Energy Commission 1516 9th Street, MS 2000 Sacramento, CA 95814

RE: <u>Calpine King City Cogen Project (85-AFC-5C) – Staff Request for</u>
Additional Information Relating to Petition to Amend for Air Quality

Dear Mr. Douglas

This letter is in response to data request of October 22, 2013 requesting additional information relating to the *Petition to Amend Commission Decision Conditions of Certification Docket No. 85-AFC-5* filed by Calpine King City Cogen, LLC ("CKCC") on April 20, 2011 (hereinafter, "Original Petition"). The Original Petition and subsequent submittals by CKCC addressed modification of the California Energy Commission's ("Commission") final decision approving certification ("Final Decision") of the King City Cogen Project ("KCC") to conform with changes made to the conditions set forth in the Title V Operating Permit for the facility. Responses to each request set forth in your October 22, 2013 letter are set forth below.

#### **Data Request**

1. Please provide any technical analyses performed by the Monterey Bay Unified Air Pollution Control District (MBUAPCD) pertaining to any of the proposed modifications.

Please see the enclosed evaluation report pertaining to the analysis performed by the Monterey Bay Unified Air Pollution Control District ("MBUAPCD" or the "District") with respect to the KCC facility.

2. Please provide a letter or statement from the MBUAPCD approving any changes to the Energy Commission approved ambient air quality monitoring requirements as specified in Condition of Certification AQ-44..

CKCC has reached out to the MBUAPCD to obtain further information regarding the District's decision to modify the ambient air quality requirements for the air monitoring station that the District operates in the area near the KCC facility. The District has indicated that it modified the pollutants that it was monitoring in January 1996. According to the District, at

some point prior to January 1996 the original air monitoring station was destroyed in a flood. Subsequently, it was replaced and relocated. At that time, the District stopped monitoring certain pollutants.

Please see the enclosed the current monitoring agreement, reflecting the District's approval of the change in the pollutants that it monitors.

Please let me know if you have any further questions. You can reach me at 408-337-3429 or fparra@calpine.com .

Sincerely,

Fernando Parra General Manager Authorized Signatory

CC: Barbara McBride, Calpine Corp.

Enclosure(s)

#### **EVALUATION REPORT**

# PRELIMINARY DECISION ON PROPOSED PERMIT MODIFICATIONS

**FOR** 

CALPINE KING CITY COGEN, LLC 750 METZ ROAD KING CITY, CALIFORNIA

&

GILROY ENERGY CENTER, LLC FOR KING CITY 51 DON BATES WAY KING CITY, CALIFORNIA

APPLICATION NUMBERS 14716, 14717, 14743, 14744, & TV38-02

PREPARED BY

MIKE SEWELL AIR QUALITY ENGINEER

MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT 24580 SILVER CLOUD COURT MONTEREY, CA 93940 (831) 647-9411

AUTHORIZED FOR RELEASE ON:

September 24, 2010

APPROVED BY: \_\_\_\_\_\_ Lance Ericksen, Engineering Division Manager

DATE: 9/23/10\_\_\_\_

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#### **EVALUATION DATA**

Company:

Calpine King City Cogen, LLC

Appl #s: 14716, 14717, 14743,

14744, & TV38-02

Address:

750 Metz Road

King City, CA 93930

UTM Coordinates: Horizontal: Vertical:

668.8 4010.9

Contact Person: District Engineer:

Maria Barroso Mike Sewell

SIC Code:

Start:

8/27/10

SCC Code:

4911 1-01-006-01

Finish:

9/24/10

Site Location: 750 Metz Road & 51 Don Bates Way

King City, California

#### PROJECT DESCRIPTION I.

Calpine King City Cogeneration, LLC (CKCC) and Gilroy Energy Center, LLC for King City (GEC) have submitted applications to amend their District permits and the combined Title V permit for these facilities.

CKCC and GEC have requested a number of permit amendments to address required federal and state mandated performance testing, along with periodic turbine and boiler tuning activities which conflict with existing permit requirements. These requested amendments are identified and discussed later in this document. However, none of the requested changes will impact cumulative emissions from the facilities.

#### APPLICABLE REQUIREMENTS П.

- 200 Permits Required
- 203 Application
- 205 Provision Of Sampling And Testing Facilities
- 206 Standards For Issuing Authorities to Construct and Permits to Operate
- 207 Review Of New Or Modified Sources
- 213 Continuous Emissions Monitoring
- 214 Breakdown Conditions
- 218 Title V: Federal Operating Permits
- 219 Title IV: Acid Deposition Control
- 300 District Fees
- 301 Permit Fee Schedules
- 302 Source Testing And Analyses: Fees And Requirements
- 305 Fees For Risk Assessments, Risk Notifications, & Risk Reduction Plans & Reports
- 306 Asbestos Investigation Fees
- 308 Title V: Federal Operating Permit Fees
- 400 Visible Emissions
- 402 Nuisances
- 403 Particulate Matter
- 404 Sulfur Compound And Nitrogen Oxides
- 412 Sulfur Content Of Fuels

415 Circumvention

421 Violations And Determination Of Compliance

423 New Source Performance Standards (NSPS)

424 National Emission Standards For Hazardous Air Pollutants (NESHAPS)

426 Architectural Coatings

1000 Permit Guidelines And Requirements For Sources Emitting Toxic Air Contaminants

1003 Air Toxics Emissions Inventory And Risk Assessments

# III. PROPOSED CHANGES & DISTRICT ANALYSIS

The applicant has proposed the following changes:

1. Revise the Title V Permit and the Permit to Operate for the Cogeneration Unit to include a condition that the hourly, daily, and concentration limits do not apply during periods of combustor tunning, balancing, and testing periods, or regulatory mandated performance testing periods. Testing shall not exceed 100 hours per year.

Including this requested change will allow the facility to comply with all regulatory mandated testing and to ensure that the unit is operating as efficiently as possible. This change will have no impact on cumulative emissions from the facility. The District proposes to make this change; however, the condition will read as follows:

The hourly, daily, and concentration limits do not apply during periods of combustor tunning, balancing, or regulatory mandated performance testing periods. These periods shall not exceed 100 hours per year.

2. Revise the Title V Permit and the Permit to Operate for the Cogeneration Unit to clarify the startup and shutdown condition. The facility has requested the condition be updated as follows:

The turbine shall undergo no more than one cold startup and one shutdown per day; provide, however, that if the Frame 7 turbine should experience an unanticipated shutdown event on a given day due to an equipment malfunction, operator error or any other reason, it may startup again and subsequently shutdown on that same day.

After discussing this requested condition change with the facility, the District and the facility agree that it would be appropriate to eliminate this condition. The removal of this condition will have no impact on actual emissions from the facility.

3. Revise the Title V Permit and the Permit to Operate for the Peaker to include a condition that the hourly, daily, and concentration limits do not apply during periods of combustor tunning, balancing, and testing periods, or regulatory

mandated performance testing periods. Testing shall not exceed 100 hours per year.

Including this requested change will allow the facility to comply with all regulatory mandated testing and to ensure that the unit is operating as efficiently as possible. This change will have no impact on cumulative emissions from the facility. The District proposes to make this change; however, the condition will read as follows:

The hourly, daily, and concentration limits do not apply during periods of combustor tunning, balancing, or regulatory mandated performance testing periods. These periods shall not exceed 100 hours per year.

4. Revise the Title V Permit and the Permits to Operate for the Cogneration Unit and the Peaker to allow 45 days (in lieu of 30 days) for the submittal of required reports.

Allowing an additional 15 days for the submittal of reports is an administrative change and will have no impact. The District proposes to make these changes as requested.

5. Revise the Title V Permit and the Permits to Operate for the Boilers to include a condition that the hourly, daily, and concentration limits do not apply during periods of boiler tuning. Boiler tuning shall not exceed 50 hours per year.

Including this requested change will allow the facility to ensure that the boilers are operating as efficiently as possible. This change will have no impact on cumulative emissions from the facility. The District proposes to make this change as requested.

## IV. EQUIPMENT LIST

No change in the listed equipment.

V. AIR QUALITY IMPACT ANALYSIS
Screen was run for each of the sources to determine maximum concentrations to perform an Air Quality Impact Analysis (AQIA). Although the points of maximum concentrations for each of the sources were different locations, each of the maximum concentrations were combined to be conservative.

The first table addresses the Air Quality Increment in Area E (where the facility is located and where maximum impacts occur), the second addresses the Air Quality Increment for Area A (the Pinnacles National Monument and the Ventana Wilderness Area). The third table is a comparison of the project impacts combined with background concentrations versus the ambient air quality standards.

Increment Analysis - Area E

increment randy one and a				
Pollutant	Maximum Modeled Impact Area E (ug/m³)	Designated Area E (ug/m³)	Averaging Period	Below Allowable Increment Consumption
Carbon Monoxide (CO)	144.8	12,000	1-hour	yes
Nitrogen Dioxide (NO <sub>2</sub> )	1.2	25	annual	yes
TSP	0.0 0.0	19 37	annual 24-hour	yes yes
$\mathrm{PM}_{10}$	0.0 0.0	10.8 21.1	annual 24-hour	yes yes
Sulfur Dioxide (SO <sub>2</sub> )	0.0 0.0 0.0	20 91 512	annual 24-hour 3-hour	yes yes yes

# Increment Analysis - Area A

Pollutant	Maximum Modeled Impact Area E <sup>1</sup> (ug/m <sup>3</sup> )	Designated Areas A (ug/m³)	Averaging Period	Below Allowable Increment Consumption
Carbon Monoxide (CO)	144.8	4,000	1-hour	yes
Nitrogen Dioxide (NO <sub>2</sub> )	1.2	2.5	annual	yes
TSP	0.0 0.0	5 10	annual 24-hour	yes yes
PM <sub>10</sub>	0.0	2.8 5.7	annual 24-hour	yes yes
Sulfur Dioxide (SO <sub>2</sub> )	0.0 0.0 0.0	2 5 25	annual 24-hour 3-hour	yes yes yes

Note: <sup>1</sup> - Maximum impact occurred in Area E. This maximum Area E impact was also utilized to determine increment consumption for Area A.

The two tables above indicate that this project does not exceed any air quality increment. Therefore, the project complies with the air quality increment provisions of Rule 207.

# Cumulative Impacts Vs. Ambient Air Quality Standards

Pollutant	Avg. Period	Max. Project Impact (ug/m³)	Bckgnd Conc. (ug/m³)	Total Impact (ug/m³)	State Standard (ug/m³)	Federal Standard (ug/m³)	Below Applicable Standard(s)
Carbon Monoxi de (CO)	1-hour 8-hour	144.8 43.4	4,255 1,265	4,399.8 1,308.4	23,000 10,000	40,000 10,000	yes yes
Nitrogen Dioxide (NO <sub>2</sub> )	1-hour annual	12.0 1.2	112.8 11.28	124.8 12.48	470 	100	yes yes

The table above identifies that the project emission concentrations when combined with background concentrations do not exceed the ambient air quality standards. Therefore, the project as proposed complies with the Ambient Air Quality Standard provisions of Rule 207.

Visibility Impacts

A visibility analysis of the project's gaseous emissions is required under Rule 207. The analysis addresses the contributions of gaseous emissions (primarily NO<sub>x</sub>) and particulate  $(PM_{10})$  emissions to visibility impairment on the nearest Class A areas, which are the Ventana Wilderness Area and the Pinnacles National Monument to the west and north, respectively. Calpine used the EPA approved model VISCREEN to assess the project's visibility impacts. The results from the VISCREEN modeling analysis indicated that the project's visibility impacts would be below the significance criteria for contrast and perception. Therefore the project's visibility impacts on these Class A areas are considered insignificant.

#### **EMISSIONS CALCULATIONS** VI.

Rule 207 Review of New or Modified Sources

Daily emissions could increase from these proposed changes. The following tables list uncontrolled and controlled emissions and worst case emission increases based upon the assumption that each of the units could operate in start-up mode for a continuous 24 hour period.

### Frame 7 Emissions

		ne / Emissions		
EQUIPMENT	POLLUTANT	EMISSION RATE (lb/hr)	DAILY EMISSIONS (lbs)	EMISSIONS INCREASE (lbs)
	$NO_x$	31.0	744.0	
Frame 7 Baseload	$SO_x$	0.2	4.8	
Bascioad	VOC	1.5	36.0	
	СО	22.9	549.6	
	PM <sub>10</sub> /TSP	2.5	60.0	
	NO <sub>x</sub>	155.0	3,720.0	2,976
Frame 7 Start-up	SO <sub>x</sub>	0.2	$SO_x$	0.0
Start-up	VOC	1.5	36.0	0.0
	CO	22.9	549.6	0.0
	$\mathrm{PM}_{10}/\mathrm{TSP}$	2.5	60.0	0.0

# **LM6000 Emissions**

EQUIPMENT	POLLUTANT	EMISSION RATE (lb/hr)	DAILY EMISSIONS (lbs)	EMISSIONS INCREASE (lbs)
	NO <sub>x</sub>	8.65	207.6	
LM6000 Baseload	$SO_x$	0.33	7.92	
Dascioud	VOC	1.20	28.8	
	СО	6.31	151.44	
	PM <sub>10</sub> /TSP	2.50	60.0	
	NO <sub>x</sub>	35.0	840.0	632.4
LM6000 Start-up	SO <sub>x</sub>	0.33	7.92	0.0
Start up	VOC	0.89	21.36	7.44
	СО	27.0	648.0	496.56
- -	PM <sub>10</sub> /TSP	2.50	60.0	0.0

Auxiliary	<b>Boilers</b>
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Human y Bones				
EQUIPMENT	POLLUTANT	EMISSION RATE (lb/hr)	DAILY EMISSIONS (lbs)	EMISSIONS INCREASE (lbs)
	NO <sub>x</sub>	5.59	134.16	
Aux Boilers Baseload	$SO_x$	0.28	6.72	
Baseload	VOC	0.9	21.6	
	СО	5.3	127.2	
	$PM_{10}/TSP$	1.25	30.0	
	NO <sub>x</sub>	5.59	134.16	0.0
Aux Boilers	SO <sub>x</sub>	0.28	6.72	0.0
Start-up	VOC	1.4	33.6	12.0
	СО	52.7	1,264.8	1136.6
	PM <sub>10</sub> /TSP	1.25	30.0	0.0

Worst case daily emissions increases are 3,608.4 lbs of NO<sub>x</sub>, 12.0 lbs of VOC and 1,633.16 lbs of CO. Just to reiterate, cumulative emissions from the facility will not change as the quarterly and annual emission limits remain in force.

#### **CONCLUSIONS** VII.

Compliance Check

200 Permits Required

CKCC and GEC have applied for and will be issued revised Permits to Operate. Therefore, the facility is in compliance with this Rule.

203 Application

CKCC and GEC supplied separate applications for each permit unit and utilized the District's permit application form as required by this Rule.

205 Provision Of Sampling And Testing Facilities

The present permits do and the revised permits will include conditions establishing sampling facilities as required by this Rule.

206 Standards For Issuing Authorities to Construct and Permits to Operate The facility is in compliance with the requirements of this Rule..

207 Review Of New Or Modified Sources

Emissions may increase from these changes. The maximum emissions from this changes has been modeled to perform an air quality impact analysis and to verify compliance with the increments and the cumulative impact requirements of the rule. Operation for limited time periods without hourly, daily, and concentration limits for balancing, tuning, and regulatory mandated testing is a modification of the initial BACT determination for the facilities. As the quarterly and annual emissions caps remain in force, the offset provisions of the Rule are not triggered. This rule requires that the project be public noticed prior to issuance of the permits to ensure oversight of the BACT determinations and federal enforceability of the conditions.

213 Continuous Emissions Monitoring

The requirements of this Rule are applicable to this facility. These permits will be conditioned such that CEMs will be calibrated, maintained, and operated in accordance with District and EPA standards.

214 Breakdown Conditions

This is the implementing regulation in which the District has established the criteria for reporting breakdowns. The requirements imposed by this rule will be included on these permits.

218 Title V: Federal Operating Permits

Relaxation of the BACT requirement by allowing limited operations without hourly, daily, or concentration limits is a relaxation of the permit and is considered a "significant permit modification" and subject to the EPA and Public review prior to issuance. The proposed changes to the Title V permit will public noticed and forwarded to EPA for their review prior to permit issuance.

219 Title IV: Acid Deposition Control

The LM6000 at GEC is subject to these requirements. These requirements are included on the existing facilities permits and will be included on the revised permit.

300 District Fees

Historically, CKCC and GEC have complied with the requirements of this Rule. The District fully expects continued compliance with the provisions of this Rule.

301 Permit Fee Schedules

Prior to District review of these applications, the appropriate fees pursuant to this Rule were received from CKCC and GEC. Therefore, the facility is in compliance with this Rule.

302 Source Testing And Analyses: Fees And Requirements Historically, CKCC and GEC have complied with the requirements of this Rule. The District fully expects continued compliance with the provisions of this Rule.

305 Fees For Risk Assessments, Risk Notifications, & Risk Reduction Plans & Reports Historically, CKCC and GEC have complied with the requirements of this Rule. The District fully expects continued compliance with the provisions of this Rule.

306 Asbestos Investigation Fees
Historically, CKCC and GEC have complied with the requirements of this Rule. The
District fully expects continued compliance with the provisions of this Rule.

308 Title V: Federal Operating Permit Fees
This is the District's fee rule for Title V. Appropriate conditions are included on the existing Title V permit, and will be included on the revised Title V permit to ensure compliance with the fee provisions contained in this rule.

400 Visible Emissions
The equipment is natural gas fired, and therefore should easily comply with the 20% opacity standard from this Rule. Appropriate conditions will be included on the permits to ensure compliance with the requirements of this Rule.

402 Nuisances
With the equipment being fired on natural gas, nuisance type problems are not expected from this operation. However, appropriate conditions will be included on the permits to ensure compliance with the requirements of this Rule.

403 Particulate Matter
No change in emissions from the facility based upon the proposed changes. Prior evaluations have verified compliance with the requirements of this rule.

404 <u>Sulfur Compound And Nitrogen Oxides</u>
No change in emissions from the facility based upon the proposed changes. Prior evaluations have verified compliance with the requirements of this rule.

412 Sulfur Content Of Fuels
This rule which requires that the sulfur content of any gaseous fuel combusted contain 50 grains or less of sulfur per 100 cubic feet is applicable to this equipment. The sulfur content limits proposed in the application are 0.25 grains per 100 cubic feet of natural gas. This sulfur limit will be included on the permits.

415 <u>Circumvention</u>
The facility is in compliance with the provisions of this Rule.

421 Violations And Determination Of Compliance

This Rule provides standards for compliance determinations required by, or derived from federal law. The facility is in compliance with the requirements of this Rule.

423 New Source Performance Standards (NSPS)
Prior evaluations have verified compliance with the requirements of Subpart A and GG of this rule.

424 National Emission Standards For Hazardous Air Pollutants (NESHAPS)
40 CFR Part 61, Subpart M - National Emission Standard For Asbestos
The facility on occasion is subject to the requirements of 61.145 - 61.147 (Standards for Demolition and Renovation). Historically, the facility has been in compliance with these requirements and continued compliance is expected.

<u>426 Architectural Coatings</u>
This rule is applicable to all applications of architectural coatings and limits the VOC content of these coatings. Historically, the facility has been in compliance with this Rule and continued compliance is expected.

# 1000 Permit Guidelines And Requirements For Sources Emitting Toxic Air Contaminants

Allow emissions may increase on a daily basis due to these changes, cumulative emissions do not. Therefore, the existing toxics analysis for the facility is still applicable, which shows that the facility complies with the requirements of this rule.

1003 Air Toxics Emissions Inventory And Risk Assessments
Historically, CKCC and GEC have complied with the requirements of this Rule. The
District fully expects continued compliance with the provisions of this Rule.

<u>Conclusions</u>
These proposed permit revisions will not impact the ability of CKCC and GEC to comply with all applicable rules of the District.

# VIII. RECOMMENDATION Issue a public notice on the preliminary permit decision and release the proposed permits for the required 30 day public comment period. Forward the proposed Title V permit to EPA for their 45-day review. Review and respond to comments prior to issuance of the permits as final documents.

IX. PROPOSED PERMITS
The proposed permits are attached.

#### MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT

# PERMIT TO OPERATE

14717

24580 SILVER CLOUD CT., MONTEREY, CA 93940 TELEPHONE (831) 647-9411 • FAX (831) 647-8501 OPERATION UNDER THIS PERMIT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS INCLUDED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED. THE EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD CONDITION AT ALL TIMES. THIS PERMIT TO OPERATE MUST BE POSTED OR ACCESSIBLE.

LEGAL OWNER OR OPERATOR:

GILROY ENERGY CENTER, LLC FOR KING CITY

DRAFT

EQUIPMENT LOCATED AT:

51 Don Bates Way

King City, California

EQUIPMENT DESCRIPTION AND THIS PERMIT TO OPERATE IS ISSUED AND IS VALID FOR THIS EQUIPMENT ONLY WHILE IT IS IN THE CONFIGURATION

SET FORTH IN THE FOLLOWING DESCRIPTION:

CONDITIONS:

#### GAS TURBINE:

Power Generation Facility Consisting Of:

- 1. Simple Cycle Natural Gas Fired Gas Turbine Generator, General Electric Model LM6000PD, Serial #192159, Rated At 500 MMBtu/Hr Maximum Heat Input And 49.6 MW Nominal Electrical Output, Dry Low-NO $_{\rm x}$  Combustor To Control NO $_{\rm x}$  Formation.
- 2. Selective Catalytic Reduction  $\mathrm{NO}_{\mathrm{x}}$  Control System.
- 3. Oxidation Catalyst For Carbon Monoxide Control.
- 4. CEM System Designed To Continuously Record The Measured Gaseous Concentrations, And Calculate And Continuously Monitor And Record The NOx And CO Concentrations Corrected To Fifteen (15) Percent Oxygen  $(O_2)$  On A Dry Basis.
- 5. Cooling Tower, Marley Model NC8311K2, With A Design Water Recirculation Rate Of 4,160 Gallons Per Minute.

THE EQUIPMENT FOR WHICH THIS PERMIT TO OPERATE IS ISSUED MAY BE OPERATED ONLY WHEN IN COMPLIANCE WITH THE FOLLOWING CONDITIONS:

#### Conditions:

1. Gilroy Energy Center, LLC for King City shall submit annual natural gas fuel consumption, electricity generated, and emissions from this equipment to the District, upon request, at the time of permit renewal.

\*\* Page 1 of 7 \*\*

THIS PERMIT BECOMES VOID UPON ANY CHANGE OF OWNERSHIP OR ADDRESS, OR ANY ALTERATION.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSIONS OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY ARTICLE 1, CHAPTER 3, PART 4, DIVISION 26 OF THE HEALTH & SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES AND REGULATIONS OF THE AIR POLLUTION CONTROL DISTRICT THIS PERMIT CANNOT BE CONSIDERED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATION OR STATUTES OF OTHER GOVERNMENTAL AGENCIES.

AIR POLLUTION CONTROL OFFICER

Gilroy Energy Center, LLC for King City Permit to Operate 14717 Page Two:



- The heat input rate to the LM6000 shall not exceed 500 MMBtu/hr and the unit shall only be fired on natural gas.
- 3. The maximum daily combined mass emissions from the LM6000, including start-ups and shutdowns, shall not exceed the following limits:

Pollutant	Lbs/Day
Oxides of Nitrogen (NO <sub>x</sub> )	233.95
Carbon Monoxide (CO)	172.13
Particulate Matter <10 microns (PM <sub>10</sub> )	60.00
Volatile Organic Compounds (VOC)	28.80
Ammonia (NH <sub>3</sub> )	150.48
Sulfur Dioxide (SO <sub>2</sub> )	7.92
D 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2 2 0.2	

4. The pollutant mass emission rates in the exhaust discharged to the atmosphere from the LM6000 shall not exceed the following limits:

Pollutant	Lbs/Hour	Lbs/Day
Oxides of Nitrogen (NO <sub>x</sub> )	8.65	207.6
Carbon Monoxide (CO)	6.31	151.4
Particulate Matter <10 microns (F	$M_{10}$ ) 2.50	60.0
Volatile Organic Compounds (VOC)	1.20	28.8
Ammonia (NH <sub>3</sub> )	6.27	150.5
Sulfur Dioxide (SO <sub>2</sub> )	0.33	7.9
SULLUI DIOXIGE (502)		

These limits shall not apply during start-up, which is not to exceed one (1) hour, or shutdown which is not to exceed ½ hour. SCR catalytic controls and good engineering practices shall be used to the fullest extent practical during start-up and shutdown to minimize pollutant emissions.

5. The pollutant concentrations discharged to the atmosphere from the LM6000 shall not exceed the following limits, calculated at 15 percent  $O_2$ :

Pollutant	Concentration (ppmvd)	Averaging Period
Oxides of Nitrogen (as NO2)	5.0	1-hour clock hour
Carbon Monoxide (CO)	6.0	3-hour rolling clock hour
Ammonia (NH <sub>3</sub> )	10.0	3-hour rolling clock hour

These limits shall not apply during start-up, which is not to exceed one (1) hour, or shutdown. SCR catalytic controls and good engineering practices shall be used to the fullest extent practical during start-up to minimize pollutant emissions.

6. The pollutant mass emission rates discharged to atmosphere from the LM6000 during a start-up shall not exceed the following limits. These limits apply to any start-up period which shall not exceed one (1) hour.

Gilroy Energy Center, LLC for King City Permit to Operate 14717 Page Three:



Pollutant	Lbs/Start-Up
Oxides of Nitrogen (as NO <sub>2</sub> )	35.00
Oxides of Nicrogen (ab 1102)	27.00
Carbon Monoxide (CO)	
Volatile Organic Compounds (as CH <sub>4</sub> )	1.20

7. The emission limits contained in Conditions 3, 4, 5, and 6 shall not apply during periods of combustor tuning, balancing, or non-Air District regulatory mandated performance testing. These periods shall not exceed 100 hours per year.

Gilroy Energy Center, LLC for King City shall notify the District prior to initiating any of these activities, and shall monitor and record all periods of these activities in a log maintained on-site and shall submit a summary of this data to the District on an annual basis, at the time of permit renewal.

8. CEMs shall be installed and operated on the LM6000. This system shall be designed to continuously record the measured gaseous concentrations, and calculate and continuously monitor and record the CO,  $\rm CO_2$  or  $\rm O_2$ , and  $\rm NO_x$  concentrations corrected to fifteen (15) percent oxygen ( $\rm O_2$ ) on a dry basis.

The equipment installed for the continuous monitoring of CO shall be maintained and operated in accordance with 40 CFR Part 60 Appendix F and the Quality Assurance/Preventative Maintenance (QA/PM) Procedures Manual developed by Gilroy Energy Center, LLC (for King City Energy Center), and the equipment installed for the continuous monitoring of  $\rm CO_2$  or  $\rm O_2$  and  $\rm NO_x$  shall be maintained and operated in accordance with 40 CFR Parts 72 and 75 and the QA/PM Procedures Manual.

For periods of missing CO data, CO hourly values shall be substituted from valid hourly average data from the previous thirty (30) unit operating days, excluding periods of startup and shutdown. The CO data shall be substituted based on equivalent incremental load ranges.

- 9. The LM6000 shall be abated by a properly operated and maintained Selective Catalytic Reduction System and Oxidation Catalyst.
- 10. Gilroy Energy Center, LLC for King City shall demonstrate compliance by using properly operated and maintained continuous emission monitors (during all hours of operation including equipment Start-up and Shutdown periods, except for periods of CEM maintenance performed in accordance with District requirements) for all of the following parameters:

a) Firing hours and Fuel Flow Rates.

b) Oxygen  $(O_2)$  Concentrations, Nitrogen Oxide  $(NO_x)$  Concentrations, and Carbon Monoxide (CO) Concentrations.

c) Ammonia Injection Rates.

Gilroy Energy Center, LLC for King City shall record all of the above parameters every 15 minutes (excluding normal calibration periods) and shall summarize all of the above parameters for

Gilroy Energy Center, LLC for King City Permit to Operate 14717 Page Four:



each clock hour. For each calendar day, Gilroy Energy Center, LLC for King City shall calculate and record the total Firing Hours, the average hourly Fuel Flow Rates, and pollutant emission concentrations.

Gilroy Energy Center, LLC for King City shall use the parameters measured above and District-approved calculation methods to calculate the following parameters:

Heat Input Rate. d)

Corrected NO $_{\rm x}$  concentrations, NO $_{\rm x}$  mass emissions (as NO $_{\rm 2}$ ), corrected CO concentrations, and CO mass emissions.

Gilroy Energy Center, LLC for King City shall record the parameters specified in d. and e. of this Condition every 15 minutes (excluding normal calibration periods). As specified below, Gilroy Energy Center, LLC for King City shall calculate and record the following data:

Total Heat Input Rate for every clock hour. f)

The  $NO_x$  mass emissions (as  $NO_2$ ), and corrected average  $NO_x$  emission concentration for every clock hour. g)

The CO mass emissions for every clock hour, and corrected average CO emission concentration for every rolling threeh)

hour rolling clock hour period. On an hourly basis, the cumulative total  $NO_x$  mass emissions (as  $NO_2$ ) and the cumulative total CO mass emissions.

For each calendar day, the cumulative total  $\rm NO_x$  mass emissions (as  $\rm NO_2)$  and the cumulative total CO mass 

For each calendar quarter, the cumulative total  $\ensuremath{\text{NO}_{\text{x}}}$  mass k) emissions (as  $NO_2$ ) and the cumulative total CO mass

- For each calendar year, the cumulative total  $\rm NO_x$  mass emissions (as  $\rm NO_2)$  and the cumulative total CO mass 1) emissions.
- 11. Instrumentation must be operated to measure the SCR catalyst inlet temperature and pressure differential across the SCR catalyst.
- 12. Gilroy Energy Center, LLC for King City shall cause annual testing to be performed to verify compliance with the Ammonia  $(NH_3)$  slip limit. Gilroy Energy Center, LLC for King City shall conduct this testing in accordance with the collection method specified in BAAQMD Source Test Procedure ST-1B and the analysis specified in EPA method 350.3.
- 13. Performance tests shall be conducted every 4,000 operating hours, but not less frequent that once every three years nor more frequent than once per year, in accordance with the Monterey Bay Unified Air Pollution Control District test procedures, and the written results of the performance tests shall be provided to the District within sixty (60) days after A testing protocol shall be submitted to the District testing. A testing protocol shall be submitted to the Dino later than thirty (30) days prior to the testing, and notification to the District at least ten (10) days prior to

Gilroy Energy Center, LLC for King City Permit to Operate 14717 Page Five:



the actual date of testing shall be provided so that a District observer may be present. Changes to the test date made subsequent to the initial ten day notification may be communicated by telephone or other acceptable means no less than forty-eight (48) hours prior to the new test date.

14.  $PM_{10}$  emissions from the cooling tower shall be calculated as the product of the cooling tower recirculating water flow rate times the total dissolved solids in the cooling tower water times the cooling tower drift loss times the number of hours of operation, as follows:

 $PM_{10}$  lbs/day = 5.0E-4 \* F \* TDS \* DL \* H Where: F = cooling tower recirculating water flow rate in qpm

TDS = total dissolved solids in the cooling water in ppm

DL = drift loss of 0.0047%

H = number of hours of operation

Gilroy Energy Center, LLC for King City shall conduct monthly measurements of the cooling tower water total dissolved solids (TDS). The TDS value from the latest testing shall be used in the above equation.

- 15. Gilroy Energy Center, LLC for King City shall hold Sulfur Dioxide Allowances in the compliance subaccount for the LM6000 not less than the total annual emissions of sulfur dioxide for the previous calendar year from this unit.
- 16. Gilroy Energy Center, LLC for King City shall monitor SO2 emissions from the LM6000 in accordance with 40 CFR Parts 72 and 75.
- 17. Gilroy Energy Center, LLC for King City shall submit quarterly Electronic Data Reports (EDR) to EPA for the LM6000. These reports must be submitted within 30 days following the end of each calendar quarter and shall include all information required in 40 CFR §75.64.
- 18. Daily  $NO_{\rm x}$  mass emissions from all combustion equipment at the facility shall not exceed 1,070 pounds per day.
- 19. Cumulative mass emissions, including emissions generated during Start-ups and Shutdowns, from all equipment at Gilroy Energy Center, LLC for King City and Calpine King City Cogen, LLC shall not exceed the following quarterly and annual limits:

				1									
		Pounds Of Emissions											
Pollutant	First	Second	Third	Fourth	Annual								
POLITICALIC	Quarter	Quarter	Ouarter	Quarter									
NO <sub>x</sub> (as NO <sub>2</sub> )	72,452	73,178	73,905	73,905	293,440								
**	1,748	1,768	1,787	1,787	7,090								
SO <sub>x</sub>	4,762	4,815	4,868	4,868	19,313								
VOC	12,071	12,204	12,339	12,339	48,953								
PM <sub>10</sub>		59,095	59,744	59,744	237,028								
CO	58,445	32,023	337	l									

Gilroy Energy Center, LLC for King City Permit to Operate 14717 Page Six:

Note:

During periods of oil firing as allowed for on the permits for the Frame 7 Turbine and the Boilers, the allowable emissions are increased by the incremental hourly limit for oil firing versus the natural gas hourly limit for all hours the equipment was actually operated on fuel oil.

20. Gilroy Energy Center, LLC for King City shall calculate and record on a daily basis, the Volatile Organic Compound (VOC) mass emissions, fine Particulate Matter  $(PM_{10})$  mass emissions, Sulfur Dioxide (SO2) mass emissions, and Ammonia (NH3) mass emissions from each combustion source and each cooling tower. Gilroy Energy Center, LLC for King City shall use the actual heat input rates, actual Start-up times, actual Shutdown times, and District-approved emission factors to calculate these emissions. The calculated emissions shall be presented as follows:

For each calendar day, VOC,  $PM_{10}$ ,  $SO_2$ , and  $NH_3$  mass emissions shall be summarized for each source.

- On a daily basis, the cumulative total VOC,  $\text{PM}_{10},\ \text{SO}_2$  and b) NH3 mass emissions shall be summarized for each calendar quarter and for the calendar year.
- 21. Within 45 days from the end of each month, Gilroy Energy Center, LLC for King City shall submit to the Air Pollution Control District a written report each month which shall include:
  - time intervals, date, and magnitude of excess emissions; a)

nature and cause of the excess emission, and corrective b)

actions taken;

time and date of each period during which the continuous C) monitoring system was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; and

a negative declaration when no excess emissions occurred; d) and

- a summary of actual monthly, quarterly and annual . e) emissions.
- Gilroy Energy Center, LLC for King City shall report all breakdowns which result in the inability to comply with any emission standard or requirement contained on this permit to the Air Pollution Control Officer (APCO) within 1 hour of the occurrence; however, this one hour period may be extended up to six hours for good cause by the APCO. The APCO may elect to take no enforcement action if Gilroy Energy Center, LLC for King City demonstrates to the APCO's satisfaction that a breakdown condition exists.

The estimated time for repair of the breakdown shall be supplied to the APCO within 24 hours of the occurrence and a written report shall be supplied to the APCO with 5 days after Gilroy Energy Center, LLC for King City Permit to Operate 14717 Page Seven:

# DRAFT

the occurrence has been corrected. This report shall include at a minimum:

 a) a statement that the condition or failure has been corrected and the date of correction; and

b) a description of the reasons for the occurrence; and

- a description of the corrective measures undertaken and/or to be undertaken to avoid such an occurrence in the future; and
- d) an estimate of the emissions caused by the condition or failure.
- 23. Gilroy Energy Center, LLC for King City shall provide adequate stack sampling ports and platforms to enable the performance of source testing. The location and configuration of the stack sampling ports shall be subject to District review and approval.
- 24. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three (3) minutes in any one (1) hour which is as dark or darker than Ringelmann 1, or equivalent 20% opacity.
- 25. No emissions shall constitute a public nuisance.

NOTE: This permit replaces Permit to Operate 14085 issued to the Gilroy Energy Center, LLC (for King City Energy Center) on October 8, 2009. The annual renewal date remains May 10.

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AirData

AirData - County Air Quality Report - Criteria Air Pollutants Generated on Monday, September 20, 2010

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# County Air Quality Report - Criteria Air Pollutants

Geographic Area: Santa Cruz Co, CA

Year: 2008

**EPA Air Quality Standards:** 

Carbon Monoxide: 35 ppm (1-hour average), 9 ppm (8-hour average)

Nitrogen Dioxide: 0.053 ppm (annual mean)

Ozone: 0.12 ppm (1-hour average), 0.075 ppm (8-hour average) Sulfur Dioxide: 0.14 ppm (24-hour average), 0.030 ppm (annual mean)

Particles < 2.5 micrometers diameter: 35 µg/m3 (24-Hour Average), 15.0 µg/m3 (annual mean) Particles < 10 micrometers diameter: 150 µg/m3 (24-hour average), 50 µg/m3 (annual mean)

Lead: 1.5 µg/m3 (quarterly mean)

ppm=parts per million µg/m3 = micrograms per cubic meter

#### 1 Rows See <u>Disclaimer</u>

		<u>C(</u>		<u>NO2</u> (ppm)	1) EO	opm)	<u>S02</u>	(ppm)	<u>PM2.5 (μ</u> ι	<u>1/m3)</u>		<u>M10</u> <u>I/m3)</u>	<u>PB</u> (μg/m3)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Rov #	<u> </u>			Annual Mean	2nd <u>Max</u> 1-hr	4th Max 8-hr	n <u>d</u> <u>Max</u> 24- <u>hr</u>	Annual Mean	98th Percentile	Annual Mean	2nd Max 24- hr	<u>Annual</u> <u>Mean</u>	<u>Quarterly</u> <u>Mean</u>	<u>Population</u>	<u>County</u>	<u>State</u>	EPA Region
SOF	<u>₹</u>	3 3	aa	a a	aa	gg	88	o o	9 7	ga	a a	88	88	82			o o
	1	3.7	1.1	0.004	0.078	0.064	0.005	0.001	12.5	6,56	76	29		255,602	Santa Cruz Co	CA	09

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# County Air Quality Report - Criteria Air Pollutants

Geographic Area: Monterey Co, CA

Year: 2008

**EPA Air Quality Standards:** 

Carbon Monoxide: 35 ppm (1-hour average), 9 ppm (8-hour average)

Nitrogen Dioxide: 0.053 ppm (annual mean)

Ozone: 0.12 ppm (1-hour average), 0.075 ppm (8-hour average)

Sulfur Dioxide: 0.14 ppm (24-hour average), 0.030 ppm (annual mean)

Particles < 2.5 micrometers diameter: 35  $\mu$ g/m3 (24-Hour Average), 15.0  $\mu$ g/m3 (annual mean) Particles < 10 micrometers diameter: 150  $\mu$ g/m3 (24-hour average), 50  $\mu$ g/m3 (annual mean)

Lead: 1.5 µg/m3 (quarterly mean)

ppm=parts per million µg/m3 = micrograms per cubic meter

#### 1 Rows See Disclaimer

	(pp		<u>NO2</u> (ppm)	03 (1	ppm)	<u>502</u>	(ppm)	PM2.5 (μ	g/m3)	<u>ը</u> (µg	<u>M10</u>  /m3)	<u>PB</u> (μg/m3)		, mul-m-100000000000000000000000000000000000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
		2nd <u>Max</u> 8- hr	Annual Mean	2nd Max 1-hr	4th Max 8-hr	2nd Max 24- <u>hr</u>	Annual Mean	<u>98th</u> <u>Percentile</u>		2nd Max 24- hr	Annual Mean	Quarterly Mean	<u>Population</u>	County	<u>State</u>	EPA Region
SORT	a a	0 2	8 2	8 8	9 2	o o	o a	00	88	o o	o o	gi	20		99	82
1	1.6		0.006	0.073	0.060			17.8	7.00	63	31		401,762	Monterey Co	CA	09

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# County Air Quality Report - Criteria Air Pollutants

Geographic Area: San Benito Co, CA

Year: 2008

**EPA Air Quality Standards:** 

Carbon Monoxide: 35 ppm (1-hour average), 9 ppm (8-hour average)

Nitrogen Dioxide: 0.053 ppm (annual mean)

Ozone: 0.12 ppm (1-hour average), 0.075 ppm (8-hour average) Sulfur Dioxide: 0.14 ppm (24-hour average), 0.030 ppm (annual mean)

Particles < 2.5 micrometers diameter:  $35 \mu g/m3$  (24-Hour Average),  $15.0 \mu g/m3$  (annual mean) Particles < 10 micrometers diameter:  $150\,\mu\text{g/m}3$  (24-hour average),  $50\,\mu\text{g/m}3$  (annual mean)

Lead: 1.5 μg/m3 (quarterly mean)

ppm=parts per million µg/m3 = micrograms per cubic meter

#### 1 Rows

See <u>Disclaimer</u>

	<u>C(</u>		NO2 (ppm)	<u>03 (</u> 1	ppm)	<u>502</u>	(ppm)	<u>РМ2.5 (µ</u> с	<u>g/m3)</u>		M10 <sub>I</sub> /m3)	<u>PB</u> (μg/m3)				
Row #	2nd Max 1-hr	2nd Max	Annual	<u>2nd</u> <u>Max</u> <u>1-hr</u>	4th Max 8-hr	2nd Max 24- hr	Annual Mean	<u>98th</u> Percentile	<u>Annual</u> <u>Mean</u>	2nd Max 24- hr	Annual Mean	<u>Quarterly</u> <u>Mean</u>	<u>Population</u>	County	·····	
0007	o a	na	n a	a a	ga	۵a	88	aa	88	ga	a a		88	90	99	90
SORT 1	and 322	2008 2.63			0.086			15.6	6.43	38	21		53,234	San Benito Co	CA	09

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TABLE 1 BASIC AMERICAN I COGENERATION PROJECT PROJECT EMISSIONS, GAS FIRING (a) (b)

	•		
MAXIMUM PROJECT (1bs./hr.) TOTAL CONTROLLED (1)	0.48 36.6 28.2 3.75 <19.7 1.9 0.013	t of natural gas assumed to be 0.6 lbs/106 ft.3 as S02. echnology to 9 ppmdv NO2. estimated at 20 ppmdv hr. rs and FGR to 40 ppmdv. catalyst, 90% control. scarbons. NMHC = 0.1 (UHC). catalyst, 50% efficient. occur only for 6 hours/day	
AUXILIARY BOILER (1bs./hr) UNCONTROLLED CONTROLLED	0.28 5.59 (d) 5.3 (c) 1.25 <4.4 (h) 0.4 0.003 Neg.	Sulfur content of natural gas assumed to approximately 0.6 lbs/106 ft.3 as S02. SCR control technology to 9 ppmdv N02. Ammonia slip estimated at 20 ppmdv or 13.9 lbs./hr. Low NOX burners and FGR to 40 ppmdv. CO oxidation catalyst, 90% control. Unburnt hydrocarbons. NMHC = 0.1 (U Non-methane hydrocarbons, NMHC = 0.1 (U CO oxidation catalyst, 50% efficient. These maxima occur only for 6 hours/day	
AUXILIARY BO UNCONTROLLED	0.28 5.59 52.7 1.25 <8.8 0.9 0.003	(b) (c) (d) (e) (f) (h)	air) TX.
(1bs./hr.) CONTROLLED	0.2 31 (c) 22.9 2.5 15.3 1.5 0.01	for Salinas % by Volume 89.4 7.06 1.44 0.98 0.12 0.09 0.02 0.03 0.03	1,079 Btu/lb. 0.621 (relative to air) El Paso, TX.
GAS TURBINE UNCONTROLLED	0.2 155 22.9 2.5 15.3 1.5 0.01	Typical gas analysis Methane Ethane CO2 N2 Butane Iso Butane Pentane Iso Pentane Compounds)	Higher Heating Valve Specific Gravity Source of Supply Source: PG&E
POLLUTANT	S02 (b) N02 C0 TSP UHC (f) NMHC (g) Hg	(a) Typical Methane Ethane CO2 N2 Butane Iso But Pentane Iso Pen COMPOU	Higher Heating V Specific Gravity Source of Supply Source: PG&E

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*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***
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Application 14716 - Cogen

#### SIMPLE TERRAIN INPUTS: POINT SOURCE TYPE 0.126000 EMISSION RATE (G/S) STACK HEIGHT (M) 18.2880 4.5720 STK INSIDE DIAM (M) STK EXIT VELOCITY (M/S)= STK GAS EXIT TEMP (K) = AMBIENT AIR TEMP (K) = 12.9052 377.0389 293.1500 0.0000 RECEPTOR HEIGHT (M) = RURAL URBAN/RURAL OPTION = 0.0000 BUILDING HEIGHT (M) MIN HORIZ BLDG DIM (M) = MAX HORIZ BLDG DIM (M) = 0.0000 0.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED. THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 147.141 M\*\*4/S\*\*3; MOM. FLUX = 676.684 M\*\*4/S\*\*2.

\*\*\* FULL METEOROLOGY \*\*\*

\*\*\* TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES \*\*\*

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	0.000	1	1.0	1.0	760.8	759.79	6.34	6.33	NO
100.	0.8322E-02	5	1.0	1.2	10000.0	164.56	42.24	41.94	NO
200.	0.9014E-02	5 5 4	1.0		10000.0	164.56	43.38	42.25	NO
300.	0.1487E-01	4	20.0	21.9	6400.0	45.29	23.14	13.06	NO
400.	0.8206E-01	4	20.0	21.9	6400.0	45.29	30.06	16.40	NO
500.	0.1748	4	20.0	21.9	6400.0	45.29	36.81	19.57	NO
600.	0.2511	4	20.0	21.9	6400.0	45.29	43.43	22.61	NO
700.	0.2985	4	20.0	21.9	6400.0	45.29	49.95	25.56	NO
800.	0.3211	4	20.0	21.9	6400.0	45.29	56.38	28.42	NO
900.	0.3259	4	20.0	21.9	6400.0	45.29	62.70	31.15	NO
1000.	0.3195	4	20.0	21.9	6400.0	45.29	68.87	33.64	NO
1100.	0.3054	4	20.0	21.9	6400.0	45.29	74.99	35.59	NO
1200	0.2905	4	20.0	21.9	6400.0	45.29	81.07	37.48	NO
1300.	0.2755	4	20.0	21.9	6400.0	45.29	87.11	39.32	NO
1400.	0.2609	4	20.0	21.9	6400.0	45.29	93.10	41.12	NO
1500.	0.2469	4	20.0	21.9	6400.0	45.29	99.06	42.87	NO
1600.	0.2336	4	20.0	21.9	6400.0	45.29	104.98	44.60	NO
1700.	0.2212	4	20.0	21.9	6400.0	45.29	110.87	46.28 47.94	NO NO
1800.	0.2095	4	20.0	21.9	6400.0	45.29	116.72	50.35	NO
1900.	0.1993	4	15.0	16.4	4800.0	58.86	122.87 128.65	51.93	NO
2000.	0.1923	4	15.0	16.4	4800.0	58.86	134.40	53.47	NO
2100.	0.1854	4	15.0	16.4	4800.0	58.86	140.13	55.00	NO
2200.	0.1787	4	15.0	16.4	4800.0	58.86	145.83	56.50	NO
2300.	0.1723	4	15.0	16.4	4800.0	58.86 58.86	151.51	57.98	NO
2400.	0.1661	4	15.0	16.4	4800.0	30.00	エンエ・ノエ	57.50	110
				Pa	age 1	1			

```
14716.OUT
                                                                      59.45
                                                                               NO
                                                     58.86
                                                            157.17
                                     16.4
                                           4800.0
                             15.0
         0.1601
 2500.
                                                                      60.89
                                                                               NO
                                                     58.86
                                                            162.80
                                           4800.0
                             15.0
                                     16.4
                        4
 2600.
         0.1544
                                                                               NO
                                           4800.0
                                                                      62.32
                                                     58.86
                                                            168.41
                                     16.4
                        4
                             15.0
         0.1490
 2700.
                                                                      63.72
                                                                               NO
                                                            174.00
                                           4800.0
                                                     58.86
                             15.0
                                     16.4
         0.1438
                        4
 2800.
                                                                                NO
                                                     58.86
                                                            179.58
                                                                      65.12
                             15.0
                                     16.4
                                           4800.0
         0.1388
                        4
 2900.
                                                            185.13
                                                                      66.49
                                                                                NO
                                                     58.86
                                           4800.0
                        4
                             15.0
                                     16.4
 3000.
         0.1341
                                                    512.62
                                                                                NO
                                            513.6
                                                            489.64
                                                                     454.53
                        2
                              1.5
                                      1.6
         0.1224
 3500.
                                                                      58.52
                                                                                NO
                                                            181.69
                                      3.1 10000.0
                                                    126.06
                              2.5
         0.1200
 4000.
                                      2.5 10000.0
                                                            201.83
                                                                      62.37
                                                                                NO
                                                    134.38
                        5
         0.1266
                              2.0
 4500.
                                                                      66.60
                                                                                NO
                                                    146.07
                                                            221.88
                        5
                                      1.9
                                          10000.0
                               1.5
 5000.
         0.1323
                                                                                NO
                                                                      68.92
                                                            241.20
                                                    146.07
                        5
                                      1.9 10000.0
                               1.5
         0.1378
  5500.
                                                                      71.16
                                                             260.34
                                                                                NO
                                                    146.07
                                      1.9 10000.0
                              1.5
         0.1421
 6000.
                                                                                NO
                                      1.2 10000.0
                                                             280.07
                                                                      76.11
                                                    164.56
                        5
5
5
5
                              1.0
  6500.
         0.1471
                                                             298.87
317.54
                                                                      78.15
                                                                                NO
                                                    164.56
                                      1.2 10000.0
                               1.0
  7000.
         0.1514
                                                    164.56
164.56
164.56
                                                                      80.13
                                                                                NO
                                      1.2 10000.0
         0.1549
                               1.0
  7500.
                                                                      82.08
                                                                                NO
                                                             336.08
                                      1.2 10000.0
         0.1577
                               1.0
  8000.
                                                                      83.98
                                                                                NO
                                                             354.49
                        5
                                      1.2 10000.0
                               1.0
         0.1599
  8500.
                                      1.2
                                                    164.56
                                                             372.79
                                                                      85.83
                                                                                NO
                                          10000.0
                               1.0
  9000.
         0.1615
                                                    164.56
                                                             390.98
                                                                      87.65
                                                                                NO
                        5
5
                                      1.2
                                          10000.0
                               1.0
  9500.
         0.1626
                                                                      89.44
                                                                                NO
                                                    164,56
                                                             409.06
                                      1.2
                                          10000.0
                               1.0
         0.1633
 10000.
                                                             584.88
                                                                     104.30
                                                                                NO
                                                    164.56
                        5
                                      1.2 10000.0
                               1.0
 15000.
         0.1533
                                                             753.48
                                                                     117.02
                                                                                NO
                                      1.2 10000.0
                                                    164.56
                        5
                               1.0
 20000.
         0.1370
                                                    164.56
                                                             916.61
                                                                     126.01
                                                                                NO
                                      1.2 10000.0
                        5
                               1.0
         0.1198
 25000.
                                      1.4 10000.0
                                                    134.88
                                                             716.36
                                                                       76.47
                                                                                NO
                        6
                               1.0
         0.1109
 30000.
                                                                       81.60
                                                                                NO
                                      1.4 10000.0
                                                             920.83
                                                    134.88
                               1.0
         0.9770E-01
                        6
 40000.
                                                    134.88 1117.92
                                                                       85.91
                                                                                NO
                                      1.4 10000.0
         0.8737E-01
                        6
                               1.0
 50000.
MAXIMUM 1-HR CONCENTRATION AT OR BEYOND
                                               1. M:
                                                     45.29
                                                                       30.57
                                                                                NO
                                     21.9 6400.0
                                                              61.28
                              20.0
         0.3263
   876.
          MEANS NO CALC MADE (CONC = 0.0)
 DWASH=
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB
 *** INVERSION BREAK-UP FUMIGATION CALC. ***
  CONC (UG/M**3)
                   = 0.3526
                       8945.51
  DIST TO MAX (M)
                    =
     *************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     *************
                                  DIST TO
                                             TERRAIN
                     MAX CONC
 CALCULATION
                                              HT (M)
                     (UG/M**3)
                                  MAX(M)
  PROCEDURE
                                                   0.
                                      876.
                     0.3263
SIMPLE TERRAIN
                                     8946.
                    0.3526
INV BREAKUP FUMI
```

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*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***
```

Application 14717 - Peaker

```
SIMPLE TERRAIN INPUTS:
                                             POINT
   SOURCE TYPE
                                 =
                                         0.126000
   EMISSION RATE (G/S)
                                         12.1920
   STACK HEIGHT (M)
                                           2.3470
   STK INSIDE DIAM (M)
                                 =
   STK EXIT VELOCITY (M/S)=
STK GAS EXIT TEMP (K) =
AMBIENT AIR TEMP (K) =
                                          33.3432
                                         422.0389
                                         293.1500
                                           0.0000
   RECEPTOR HEIGHT (M)
                                            RURAL
   URBAN/RURAL OPTION
                                 ==
                                           0.0000
    BUILDING HEIGHT (M)
                                 =
   MIN HORIZ BLDG DIM (M) = MAX HORIZ BLDG DIM (M) =
                                           0.0000
                                           0.0000
```

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED. THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 137.510 M\*\*4/S\*\*3; MOM. FLUX = 1063.453 M\*\*4/S\*\*2.

\*\*\* FULL METEOROLOGY \*\*\*

\*\*\* TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES \*\*\*

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
(M) 1. 100. 200. 300. 400. 500. 600. 700. 800. 1000. 1100. 1200. 1300. 1400. 1500. 1600. 1700. 1800. 2000. 2100. 2200. 2300. 2400.	(UG/M**3) 0.000 0.1826E-01 0.1910E-01 0.2019E-01 0.5425E-01 0.1326 0.2069 0.2595 0.2897 0.3011 0.3010 0.2913 0.2800 0.2679 0.2556 0.2434 0.2316 0.2204 0.2120 0.2051 0.1982 0.1914 0.1848 0.1784 0.1722	STAB 1 6 6 6 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	(M/S) 1.0 1.0 20.0 20.0 20.0 20.0 20.0 20.0 2	1.0 1.1 1.1 20.6 20.6 20.6 20.6 20.6 20.6 20.6 20.6	745.7 10000.0 10000.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0 6400.0	744.68 134.98 134.98 134.98 48.24 48.24 48.24 48.24 48.24 48.24 48.24 48.24 48.24 48.24 48.24 60.26 60.26 60.26 60.26 60.26 60.26	8.19 35.32 35.32 35.92 36.84 30.10 36.86 43.49 50.01 56.44 62.73 68.90 75.02 81.10 87.13 93.12 99.08 105.00 110.89 117.09 122.90 128.68 134.43 140.16 145.86 151.54	8.18 35.16 35.32 35.53 16.49 19.67 22.72 25.67 28.54 31.21 33.71 35.65 37.53 39.37 41.17 42.92 44.64 46.33 48.83 50.43 52.00 53.54 55.07 56.57 58.05	NO N
				, ,	age 1				

```
59.51
                                                                                 NO
                                                      60.26
                                                             157.19
                                     15.5
                                            4800.0
                              15.0
 2500.
         0.1662
                        4
                                                             162.82
                                     15.5
                                                      60.26
                                                                       60.95
                                                                                 NO
                                            4800.0
                              15.0
                        4
 2600.
         0.1604
                                                                                 NO
                                                                       62.38
                                     15.5
                                            4800.0
                                                      60.26
                                                             168.44
                        4
                              15.0
         0.1549
 2700.
                                                                                 NO
                                     15.5
                                                             174.03
                                                                       63.78
                                            4800.0
                                                      60.26
                              15.0
         0.1497
                        4
  2800.
                                                      84.29
                                                             180.25
                                                                       66.96
                                                                                 NO
                              10.0
                                     10.3
                                            3200.0
                        4
  2900.
         0.1461
                                                             185.78
                                                                       68.30
                                                                                 NO
                                                      84.29
                                            3200.0
                        4
                              10.0
                                     10.3
  3000.
         0.1433
                                       3.2 10000.0
                                                     116.15
                                                             161.51
                                                                       54.85
                                                                                 NO
         0.1496
                         5
                               3.0
  3500.
                                       2.7 10000.0
                                                                       58.93
                                                                                 NO
                                                     122.66
                                                             181.82
                               2.5
  4000.
         0.1601
                                                                       62.82
                                                             201.97
                                                                                 NO
                                                     131.19
                         5
                               2.0
                                       2.1
                                           10000.0
         0.1666
  4500.
                                                             222.04
                                                                       67.11
                                                                                 NO
                                                     143.17
                         5
                               1.5
                                       1.6
                                           10000.0
  5000.
         0.1720
                                                                       69.41
                                                                                 NO
                                       1.6 10000.0
                                                              241.34
                                                     143.17
                         5
                               1.5
         0.1774
  5500.
                                       1.6 10000.0
                                                              260.47
                                                                       71.64
                                                                                 NO
                                                     143.17
                               1.5
         0.1814
  6000.
                                                              280.23
                                                                       76.69
                                                                                 NO
                         5
                                       1.1 10000.0
                                                     162.12
         0.1863
                               1.0
  6500.
                                                     162.12
                                                                       78.71
                                                                                 NO
                                                              299.02
                                       1.1 10000.0
                               1.0
  7000.
         0.1906
                                                     162.12
                                                              317.68
                                                                       80.69
                                                                                 NO
                                       1.1 10000.0
         0.1939
                         5
5
5
                               1.0
  7500.
                                                                       82.61
                                                                                 NO
                                                     162.12
162.12
                                       1.1 10000.0
                                                              336.21
  8000.
         0.1964
                               1.0
                                                              354.62
                                                                       84.50
                                                                                 NO
                                       1.1 10000.0
                               1.0
         0.1982
  8500.
                                                     162.12
                                                              372.91
                                                                       86.35
                                                                                 NO
                                       1.1 10000.0
                         5
                               1.0
  9000.
         0.1994
                                                                                 NO
                                                              391.09
                                                                        88.16
                                       1.1 10000.0
                                                     162.12
                         5
                               1.0
         0.2001
  9500.
                                                              409.17
                                                                       89.93
                                                                                 NO
                         5
                                       1.1 10000.0
                                                     162.12
                               1.0
         0.2002
 10000.
                                                              584.96
                                                                      104.72
                                                                                 NO
                                       1.1 10000.0
                               1.0
                                                     162.12
         0.1843
                         5
 15000.
                                                                      117.40
73.74
                                                              753.54
                                                                                 NO
                                                     162.12
                         5
                                       1.1 10000.0
                               1.0
 20000.
         0.1630
                                                              610.76
                                                     134.98
                                                                                 NO
                                       1.1 10000.0
                         6
                               1.0
         0.1495
 25000.
                                                     134.98
134.98
                                                                        77.26
                                                              716.45
                                                                                 NO
                                       1.1 10000.0
                         6
                               1.0
         0.1412
 30000.
                                       1.1 10000.0
                                                                        82.34
                                                              920.89
                                                                                 NO
                               1.0
         0.1237
                         6
 40000.
                                                     134.98 1117.97
                                                                        86.61
                                                                                 NO
                               1.0
                                       1.1 10000.0
 50000.
         0.1103
MAXIMUM 1-HR CONCENTRATION AT OR BEYOND
                                                1. M:
                                                                        32.39
                                                                                 NO
                                      20.6 6400.0
                                                               65.64
                                                      48.24
                              20.0
         0.3020
   946.
          MEANS NO CALC MADE (CONC = 0.0)
 DWASH=
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB
 *** INVERSION BREAK-UP FUMIGATION CALC. *** CONC (UG/M**3) = 0.4121
                    = 7994.06
  DIST TO MAX (M)
      **********
      *** SUMMARY OF SCREEN MODEL RESULTS ***
      *************
                                   DIST TO
                                              TERRAIN
                      MAX CONC
 CALCULATION
                                   MAX (M)
                                              HT (M)
                     (UG/M**3)
  PROCEDURE
                                                   0.
                                      946.
                     0.3020
SIMPLE TERRAIN
                                     7994.
                     0.4121
INV BREAKUP FUMI
```

14717.OUT

```
*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***
```

Application 14743 - Boilers

```
SIMPLE TERRAIN INPUTS:
                                          POINT
   SOURCE TYPE
                                      0.126000
   EMISSION RATE (G/S)
                                       18.2880
   STACK HEIGHT (M)
                                         1.8288
   STK INSIDE DIAM (M)
                               ==
   STK EXIT VELOCITY (M/S)=
STK GAS EXIT TEMP (K) =
                                         2.7849
                                      471.0944
   AMBIENT AIR TEMP (K)
                                      293.1500
                               _
   RECEPTOR HEIGHT (M)
                                         0.0000
                               =
                                          RURAL
   URBAN/RURAL OPTION
                               ==
                                         0.0000
   BUILDING HEIGHT (M)
                                         0.0000
   MIN HORIZ BLDG DIM (M) = MAX HORIZ BLDG DIM (M) =
                                         0.0000
```

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED. THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX =  $8.625 \text{ M}^{**}4/\text{S}^{**}3$ ; MOM. FLUX =  $4.035 \text{ M}^{**}4/\text{S}^{**}2$ .

\*\*\* FULL METEOROLOGY \*\*\*

\*\*\* TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES \*\*\*

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1. 100.	0.000 0.3065	1 3	$\frac{1.0}{10.0}$	1.0 10.6	320.0 3200.0	121.66 23.91	$0.99 \\ 12.61$	0.92 7.68	NO NO
200.	2.750	3 3 3	10.0	10.6	3200.0	23.91	23.80	14.33	NO
300.	2.875	3	8.0	8.5	2560.0	26.69	34.48 45.02	20.65 27.07	NO NO
400.	2.683	3	5.0	5.3	1600.0 2560.0	35.02 26.28	36.32	18.63	NO
500.	2.504	4 4	8.0 8.0	8.8 8.8	2560.0	26.28	42.86	21.50	NO
600. 700.	2.355 2.275	4	5.0	5.5	1600.0	34.36	49.51	24.68	NO
800.	2.179	4	5.0	5.5	1600.0	34.36	55.86	27.37	NO
900.	2.064	4	4.5	4.9	1440.0	36.76	62.20	30.12	NO
1000.	1.958	4	4.0	4.4	1280.0	39.75 43.60	68.49 74.74	32.86 35.06	NO NO
1100.	1.843	4	3.5	3.8 3.8	$1120.0 \\ 1120.0$	43.60	80.84	36.98	NO
1200.	1.747	4 4	3.5 3.5	3.8	1120.0	43.60	86.89	38.84	NO
1300. 1400.	1.652 1.579	4	3.0	3.3	960.0	48.73	93.03	40.95	NO
1500.	1.506	4	3.0	3.3	960.0	48.73	98.99	42.71	NO
1600.	1.436	4	3.0	3.3	960.0	48.73	104.91	44.44	NO
1700.	1.379	4	2.5	2.7	800.0	55.92 55.92	110.98 116.83	46.55 48.19	NO NO
1800.	1.328	4	2.5 2.5	2.7 2.7	800.0 800.0	55.92	122.65	49.81	NO
1900.	1.277 1.228	4	2.5	2.7		55.92	128.44	51.40	NO
2000. 2100.	1.202	4 5 5	1.0		10000.0	75.11	101.34	38.07	NO
2200.	1.227	5	$\bar{1.0}$	1.2	10000.0	75.11	105.59	38.91	NO
2300.	1.247	5	1.0		10000.0	75.11	109.83 114.05	39.74 40.56	NO NO
2400.	1.264	5	1.0		10000.0	75.11	114.03	40.00	NO
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 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB
 *** INVERSION BREAK-UP FUMIGATION CALC. *** CONC (UG/M**3) = 0.000
                         1844.65
  DIST TO MAX (M)
DIST TO MAX IS < 2000. M. CONC SET = 0.0
      **************
      *** SUMMARY OF SCREEN MODEL RESULTS ***
      ************
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                      MAX CONC
                                    DIST TO
 CALCULATION
                                                HT (M)
                      (UG/M**3)
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269.

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SIMPLE TERRAIN

#### AIR MONITORING STATION COOPERATION AGREEMENT

This Air Monitoring Station Cooperation Agreement ("Agreement") is effective as of July 1, 2010 ("Effective Date"), by and between Calpine King City Cogen, LLC ("CKCC"), Aera Energy, LLC ("AERA"), Chevron U.S.A., Inc. ("CVX"), Salinas River Cogeneration Company and Sargent Canyon Cogeneration Company ("Salinas/Sargent"), and the Monterey Bay Unified Air Pollution Control District ("MBUAPCD") Each a "Party," and combined, the "Parties").

#### **RECITALS**

WHEREAS, due to the limited number of air monitoring stations in the region, the Parties desire to participate in the usage of an air monitoring station ("Station"), and share the costs associated with MBUAPCD's operation and maintenance thereof as further described herein; and

WHEREAS, a Station is currently located at the San Lorenzo Middle School, 415 Pearl Street, King City, CA 93930

WHEREAS, from time to time MBUAPCD will agree to (i) operate and maintain the Station, (ii) provide separate data reports for each of the Parties, and (iii) submit such data reports to the appropriate governmental agencies on behalf of each of the respective Parties (except for MBUAPCD); and

WHEREAS, MBUAPCD wishes to maintain the Station at its current location at, to meet the Parties monitoring requirements and the Parties have agreed to share the cost thereof.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which the Parties acknowledge, the parties intending to be legally bound agree as follows:

- 1) Replacement of Outdated Equipment. MBUAPCD will replace any outdated equipment, as described on Exhibit B, on the Station. The Parties named above shall reimburse MBUAPCD as defined in Cost Sharing Section 3 below for the invoiced replacement of outdated equipment costs incurred by MBUAPCD including, but not limited to invoiced labor and administrative costs incurred by MBUAPCD.
- 2) <u>Shared Services.</u> MBUAPCD will perform the services set forth in Exhibit C, attached hereto and made a part hereof (the "Services"), on behalf of all the Parties. Exhibit C may be modified from time to time in writing by the Parties.
- 3) <u>Cost Sharing.</u> The costs and expenses for replacement of outdated equipment and invoiced Services shall be shared among the Parties as follows:
  - i) CKCC shall pay sixteen and three-quarters percent (16.75%);
  - ii) AERA shall pay sixteen and three-quarters percent (16.75%);

- iii) CVX shall pay sixteen and three-quarters percent (16.75%);
- iv) Salinas/Sargent shall pay sixteen and three-quarters percent (16.75%); and
- v) MBUAPCD shall pay thirty-three percent (33.00%)
- 4) Additional Costs. AERA, CVX, Salinas/Sargent and CKCC shall each pay to MBUAPCD one fifth (1/5<sup>th</sup>) the cost of monthly invoiced lease and utility charges for the Station (collectively, the "Monthly Reimbursement Amount"). For convenience, MBUAPCD will invoice each of AERA, CVX, Salinas/Sargent and CKCC for such Party's share of the Monthly Reimbursement Amount. All invoices shall be supported with copies of lease and utility receipts and sent to the addresses set forth in Section 6 below.
- 5) <u>Billing.</u> MBUAPCD will separately invoice CKCC, AERA, CVX, and Salinas/Sargent quarterly, on a net thirty (30) day basis for their respective share of the costs, as set forth in Section 3 above, for the invoiced Services performed by MBUAPCD. All invoices shall be supported with receipts and a description of the work performed and sent to the following:
  - a) Calpine King City Cogen, LLC
     750 Metz Road
     King city, CA 93930
     Attn: Accounts Payable
  - b) Aera Energy, LLC Star Route Box 50 66893 Sargent Canyon Road San Ardo, CA 93450 Attn: Environmental Advisor
  - c) Chevron U.S.A., Inc. P. O. Box 1392 Bakersfield, CA 93302 Attn: San Ardo Air Specialist
  - d) Salinas River Cogeneration Company P. O. Box 80778 Bakersfield, CA 93380 Attn: Accounts Payable
  - e) Sargent Canyon Cogeneration Company PO Box 81018 Bakersfield, CA 93380 Attn: Accounts Payable

They may also be sent to such other address as any Party may designate by notice complying with the terms of this Section 8. Each such notice shall be deemed delivered (i) on the date actually delivered if by messenger or courier service; (ii) on the date of confirmed receipt of

by facsimile; and (iii) on the date upon which the return receipt is signed or delivery is refused or the notice is designated by the postal authorities as not deliverable, as the case may be, if mailed.

- 6) Choice of Law. This Agreement shall be governed by the laws of the State of California.
- 7) <u>Termination</u>. This Agreement may be terminated by any of the Parties hereto upon sixty (60) days prior written notice to each of the other Parties.
- 8) <u>Counterparts.</u> This Agreement may be executed in counterparts. Each signed counterpart shall be deemed original and all signed counterparts taken together shall constitute one and the same Agreement, which shall be binding and effective as to all the Parties.

\* \* \*

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IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the dates written below.

CALPINE KING CITY COGEN, LLC	10 JUN 21 P2:58 MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT
By: Willia Frager WM Title: View Prosinont	
Title: View Presison	Ву:
Date: 6/17/10	Title:
·	Date:
AERA ENGERGY, LLC	
	*
Ву:	
Title:	
Date:	
CHEVRON U.S.A.	
By:	•
Title:	
Date:	
SALINAS RIVER COGENERATION COMPANY	
By:	
Title:	
Date:	
SARGENT CANYON COGENERATION COMPANY	
Ву:	
Title:	9,
Date:	

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the dates written below.

CALPINE KING CITY COGEN, LLC	MONTEREY BAY UND POLLUTION CONTRO	
By:		
Title:	By:	
Date:	Title:	
	Date:	
AERA ENGERGY, LLC		
By: Teff Watson		
Title: Sr. Buyer  Date: 4-15-2010		
CHEVRON U.S.A.		
		Ö
By:		<b>a</b> = -
Title:		22
Date:		20
SALINAS RIVER COGENERATION COMPANY		ii H
By:		
Title:		
Date:		
SARGENT CANYON COGENERATION COMPANY		
By:		
Title		

Date: \_\_\_\_\_

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the dates written below. MONTEREY BAY UNIFIED AIR CALPINE KING CITY COGEN, LLC POLLUTION CONTROL DISTRICT By: \_\_\_\_\_ Title: By: \_\_\_\_\_ Date: Title: Date: \_\_\_\_\_ **AERA ENGERGY, LLC** By: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_ CHEVRON U.S.A. VAN BRATCHER By: Van Bratcher Title: AGSISTANT SECRETARY Date: 5/18/2010 SALINAS RIVER COGENERATION **COMPANY** By: Title: Date: SARGENT CANYON COGENERATION **COMPANY** By: \_\_\_\_\_

Title: \_\_\_\_\_
Date: \_\_\_\_

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the dates written below.

CALPINE KING CITY COGEN, LLC	MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT		
By:			
Title:	Ву:		
Date:	Title:		
	Date:		
AERA ENGERGY, LLC			
By:			
Title:			
Date:			
CHEVRON U.S.A.			
By:			
Title:			
Date:	±.		
SALINAS RIVER COGENERATION COMPANY			
By: Kerry Lucas  Title: Execurive Dinscrin  Date: April 20, 2010			
SARGENT CANYON COGENERATION	1		
COMPANY  KElly Faccas  By: KEZLY Lucas  Title: Exteriors Director  Date: April 20, 2010			

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the dates written below.

CALPINE KING CITY COGEN, LLC		MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT
By:		
Title:		By: Alas La
Date:		Title: APCO
		Date: 4/4/10
AERA ENGERGY, LLC		
By:		
Title:		*
Date:		
CHEVRON U.S.A.		
By:		
Title:		
Date:		
SALINAS RIVER COGENERATION COMPANY		
By:		
Title:		
Date:		
SARGENT CANYON COGENERATION COMPANY	N	
By:		
Title:		
Date:		

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# EXHIBIT A

# **AIR MONITORING STATION EQUIPMENT**

a)	TECO 49C Ozone Analyzer
b)	Station temperature monitor XTI LM35
c)	Met System; RM Young or Met One
d)	PM10 Tisch instrument – new purchase reconditioned monitor
e)	Dell Optiplex 320 Data logger
f)	Building 8 by 10 foot with decking on roof
g)	Met tower
h)	2-instrument racks

# EXHIBIT B

# **OUTDATED EQUIPMENT**

a)	Ozone analyzer	
b)	Ozone calibrator for station auto calibrations	
c)	Ozone transfer standard calibrator	
d)	Data logger system with strip chart printing	A

#### **EXHIBIT C**

#### MBUAPCD'S SCOPE OF SERVICES

MBUAPCD shall operate and maintain the Station and produce data reports for each of the Parties in accordance with the provisions of this Agreement and the scope of services outlined below. Services to be performed shall include, but not be limited to, the following:

### 1. Air Monitoring Parameters

MBUAPCD shall measure and record the air monitoring parameters as follows:

- (a) Ozone (O3)
- (b) Inhalable Particulates (PM10)
- (c) Wind Speed (WSA)
- (d) Wind Direction (WDA)
- (e) Station Temperature (STM)
- (f) Ambient Temperature (ATM)

#### 2. Data processing

MBUAPCD shall perform all data processing activities and complete automated operation of the calibration systems procedures at the Station.

### 3. Operation and Maintenance

MBUAPCD shall perform all the required operation and maintenance work as follows:

- (a) Total responsibility for all monitoring;
- (b) All routine maintenance;
- (c) All routine quality assurance activities;
- (d) All emergency maintenance and field repairs;
- (e) All site visits and site checks;
- (f) Preventative maintenance;
- (g) All calibration activities;
- (h) Traceability to NIST standards;
- (i) Weekly precision checks minimum;
- (j) Week Level 1 calibrations;
- (k) Performance audits (completed by CARB);
- (l) Data processing and quality assurance reviews of data;
- (m) Daily remote telemetry access to data;
- (n) Daily quality assurance review of data;
- (o) Semi-annual multipoint calibrations on all gaseous analyzers;
- (p) Semi-annual calibration on PM10 sampler;
- (q) Semi-annual meteorological sensor calibration; and
- (r) Building structure service and safety updates.

#### 4. Equipment Malfunction

If an event occurs which causes the station to become non-operational, the Parties shall be notified as soon as possible to follow their respective permit conditions and internal reporting procedures.

#### 5. Report and Data Outputs

MBUAPCD shall perform all the required report and data output work as follows:

- (a) Submit a detailed monthly report summarizing the entire operation of the Station;
- (b) Submit monthly data summaries and reports to the Parties in hard copy and electronic forms within thirty (30) days after the end of each month of monitoring;
- (c) Submit an annual data summary report to the Parties in hard copy and electronic forms within thirty (30) days after the end of the calendar year; and
- (d) Modify these procedures, as requested by the Parties in writing.