EVALUATION REPORT

PRELIMINARY DECISION ON PROPOSED PERMIT MODIFICATIONS

FOR

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

&

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

APPLICATION NUMBERS 12303, 12304 & TV24-04

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: March 14, 2005

APPROVED BY: _____ Lance Ericksen, Engineering Division Manager

DATE: 3/8/05

TABLE OF CONTENTS

I. PROJECT DESCRIPTION 3

II. APPLICABLE REQUIREMENTS 3

III. PROPOSED CHANGES & DISTRICT ANALYSIS 4

IV. EQUIPMENT LIST 6

V. AIR QUALITY IMPACT ANALYSIS 6

VI. EMISSIONS CALCULATIONS 6
Review of New or Modified Sources 6

VII. CONCLUSIONS 7

VIII. RECOMMENDATION 10

IX. PROPOSED PERMITS 10

EVALUATION DATA

Company: Calpine King City Cogen, LLC
Address: 750 Metz Road
King City, CA 93930

Contact Person: Maria Barroso
District Engineer: Mike Sewell
Start: 12/1/04
Finish: 3/8/05

Site Location: 750 Metz Road & 51 Don Bates Way
King City, California

Appl #s: 12303, 12304, & TV24-04
UTM Coordinates:
Horizontal: 668.8
Vertical: 4010.9

SIC Code: 4911
SCC Code: 1-01-006-01

I. PROJECT DESCRIPTION

Calpine King City Cogeneration, LLC (CKCC) and Gilroy Energy Center, LLC (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 conflicts in the permits, for clarity, and to allow for reduced testing frequency. These requested amendments are identified and discussed later in this document. However, none of the requested changes will impact emissions from the facilities.

II. APPLICABLE REQUIREMENTS

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 Title V Permit and Permit to Operate No. 11609 to include the name of the facility, i.e. Gilroy Energy Center, LLC (for the King City Energy Center).*

   Updating the name on the Permits to Operate for the facility is an administrative change. The District proposes to make this change as requested.

2. *Correct Equipment Description for the KCEC gas turbine in Permit to Operate 11609 and Unit 2 in Title V permit to show the maximum heat input for the LM6000PD Gas Turbine as 500 MMBtu/hr instead of 467.6 MMBtu/hr. The heat input limits in Condition 2 in Permit to Operate and Condition 7 in the Title V permit should also be revised to 500 MMBtu/hr.*

   Updating the heat input rating for the LM6000 Gas Turbine will have no impact on emissions, as the unit is conditioned with concentration and mass emission limits. The District proposes to make this change as requested.

3. *Revise Conditions 3, 5, and 6 of the Title V Permit, and Conditions 5, 6, and 7 of PTO 11530 to clarify that the emission limits given are based on hourly averages, and not instantaneous readings. Condition 3 of the Title V and 5 of the PTO should show the NO_x limit as 9 ppmvd (clock-hour average), calculated at 15% O_2. Condition 5 of the Title V and 6 of the PTO should show the ammonia limit as 10 ppmvd (3-hour rolling clock hour average), calculated at 15% O_2. Condition 6 of the Title V and 7 of the PTO should show the CO limit as 10 ppmvd (3-hour rolling clock hour average), calculated at 15% O_2.*

   Including the averaging period in the conditions will have no impact on emissions and will eliminate confusion as to the requirements. The District proposes to make these changes as requested.

4. *Revise Condition 10 of the Title V Permit to show the ammonia limit as 10 ppmvd based on a 3-hour rolling clock hour average period instead of 3-60 minute periods to be consistent with the averaging periods for the other limits.*

   Revising the averaging period will have no impact on emissions and will eliminate confusion as to the requirement. The District proposes to make this change as requested.

5. *Revise Condition 17 in Permit to Operate for the Cogen and Condition 46 in the Title V Permit to allow for the use of a District approved ammonia slip calculation instead of recording the mole ratio to verify ammonia emissions.*

The facility is proposing to utilize the following ammonia slip calculation:

NH_3 slip (ppmvd @ 15% O_2) = ((NH_3 fed ppm - (NO_x in ppm - NO_x out ppm))*(20.9-15)/(20.9-O2)))*b

Where:

NH_3 fed in ppm = ((NH_3 injection rate, lb/hr*a)/(Q*Fd*4.4096E-8))((20.9 - O_2%)/20.9)
4.4096E-8 = (K-factor constant) corrects for the molecular weight of ammonia
a = Ammonia Concentration (in % by weight/100)
b = Correction Factor based on source test data
Q = Fuel Flow mmbtu/hr
Fd = 8710 scf/mmbtu

The District proposes to make this change as requested, as it more accurately represents the ammonia slip. This change will have no impact on emissions from the facility.

6. *CKCC and GEC requested a reduction in the frequency of ammonia mass emissions testing required by Condition 21 of PTO 11530, Condition 11 of PTO 11609, and Condition 34 of Title V Permit TV24-03 from semi-annual to annual, based on the history of results which consistently show the ammonia emissions to be less than 5.00 ppm. CKCC and GEC also requested a period of sixty days after the completion of the test to submit the results, as experience has shown that it has been difficult for source test vendors.*

Based upon the historical ammonia mass emissions test data, the District will agree to reduce the testing frequency to an annual test, and will allow additional time to submit the test results - 60 days from the testing date. This change will have no impact on emissions from the facilities.

7. *CKCC and GEC requested ammendments to Condition 33 of the Title V, Condition 20 of PTO 11530, and Condition 12 of PTO 11609. CKCC and GEC requested to reduce the required frequency of performance testing to reflect the infrequent operation of the gas turbines to every 8,000 operating hours, or approximately one year of operating time, instead of annually. CKCC and GEC would also like a period of sixty days after completion of the test to submit these results, as well.*

The District proposes to establish a less frequent testing schedule for the LM6000 of every 4,000 operating hours but not less than once every three years. However, the annual testing requirement will remain in place on the Frame 7. The District will allow additional time to submit the test results - 60 days from the testing date. This change will have no impact on emissions from the facilities.

8. *Delete Condition 55 of the Title V Permit since it requests maintenance of the same*

record as Condition 51 and, therefore, it is redundant and unnecessary.

The District proposes to combine the two conditions into one. This is an administrative change and will have no impact on emissions from the facility.

9. *CKCC and GEC requested further clarification of Condition 58D of the Title V Permit, to better define the information pertaining to any monitoring that is required to be submitted in the monthly reports.*

The District proposed to clarify the requirement in Condition 58D by identifying the specific monitoring requirements of the Title V which are required to be submitted with the monthly report. This is an administrative change and will not have an impact on emissions.

10. *CKCC and GEC requested that GEC be removed from the Title V Condition outlining the RMP requirements, as GEC is not subject to the requirements.*

The District will remove the reference to GEC in the condition. However, as permitted under the District's NSR and Title V permitting programs, CKCC and GEC are a single stationary source; subject to the RMP requirement. This is an administrative change, and will not have an impact on emissions.

IV. EQUIPMENT LIST

No change in the listed equipment. However, in the applications GEC has requested that the LM6000 be identified as having a nominal heat input rating of 500 MMBtu/Hr in lieu of the 467.6 MMBtu/Hr presently contained on Permit to Operate 11609 and Title V Permit TV24-03.

V. AIR QUALITY IMPACT ANALYSIS

No emission changes will result from the proposed permit revisions, Therefore, the Air Quality Impact Analysis (AQIA) and Visibility prepared during the permitting process for the installation of the LM6000 verifies compliance with AQIA requirement of Rule 207.

VI. EMISSIONS CALCULATIONS

Rule 207 Review of New or Modified Sources

No change in emissions from these proposed permit revisions.

VII. CONCLUSIONS

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
No change in emissions from the facility. Therefore, the BACT and offset provisions of this Rule are not triggered. This rule requires that the project be public noticed prior to issuance of the permit to ensure federal enforceability.

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
Most of the requested changes are "minor permit modifications". However, relaxation of testing requirements 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 Sulfur Compound And Nitrogen Oxides
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 Circumvention
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.

426 Architectural Coatings
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
No change in emissions from these proposed revisions. Therefore, this rule is not applicable to these permitting actions.

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.

Conclusions
This 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 following proposed permits are in a redline (additions) and strikeout (~~deletion~~) format to enable comparisons with the prior versions of the permits.