

Bay Area Air Quality Management District

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**Permit Evaluation
and
Statement of Basis
for
Renewal of the
MAJOR FACILITY REVIEW PERMIT
for
Gilroy Energy Center, LLC at Wolfskill Energy Center
Facility #B4511**

Facility Address:
2425 Cordelia Road
Fairfield, CA 94534

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Application: 17174

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Title V Statement of Basis

A. Background:

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Title 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a Phase II Acid Rain facility as defined by BAAQMD Regulation 2-6-217 and because it is a “major source” as defined by 40 CFR 70.2. It is an Acid Rain facility because it burns fossil fuel, serves a generator that is over 25 MW that is used to generate electricity for sale, and was built after November 15, 1990. It is a “major facility” because it has the “potential to emit,” as defined by BAAQMD Regulation 2-6-218, of more than 100,000 tons per year of a regulated air pollutant, CO₂e (carbon dioxide equivalents), based on the limits in its permit conditions. CO₂e became a regulated pollutant for the purposes of the Title V program on January 1, 2011.

Major Facility Operating permits (Title V permits) must meet specifications contained in 40 CFR Part 70 as contained in BAAQMD Regulation 2, Rule 6. The permits must contain all applicable requirements (as defined in BAAQMD Regulation 2-6-202), monitoring requirements, recordkeeping requirements, and reporting requirements. The permit holders must submit reports of all monitoring at least every six months and compliance certifications at least every year.

In the Bay Area, state and District requirements are also applicable requirements and are included in the permit. These requirements can be federally enforceable or non-federally enforceable. All applicable requirements are contained in Sections I through VI of the permit.

Each facility in the Bay Area is assigned a facility identifier that consists of a letter and a 4-digit number. This identifier is also considered to be the identifier for the permit. The identifier for this facility is B4511.

This facility received its initial Title V permit on July 18, 2003. This application is for a permit renewal. Although the current permit expired on June 30, 2008, it continues in force until the District takes final action on the permit renewal. The standard sections of the permit have been upgraded to include new standard language used in all Title V permits. The proposed permit shows all changes to the permit in strikeout/underline format.

Pursuant to Regulation 2, Rule 6, Section 416, the District has reviewed the terms and conditions of this Major Facility Review permit and determined that they are still valid and correct. This review included an analysis of applicability determinations for all sources, including those that have been modified or permitted since the issuance of the initial Major Facility Review Permit. The review also included an assessment of all monitoring in the permit for sufficiency to determine compliance. The statement of basis documents for permit revisions that have occurred since the initial Major Facility Review permit was issued are hereby incorporated by reference and are available upon request.

B. Facility Description:

Gilroy Energy Center LLC (Wolfskill Energy Center), an affiliate of Calpine Corporation, is a 49.6-megawatt “peaking” power plant to provide power and distribution support to the electric grid during periods of high electricity demand. The facility consists of one simple-cycle, gas-fired combustion turbine and is located at 2425 Cordelia Road, Fairfield, California.

This facility applied for a significant permit revision to change permit conditions that were revised under NSR application 10472 issued on 1/25/05. The revision included the following changes:

1. The daily mass emissions limits for NO_x and CO were increased to include emissions from 4 hours of engine startup. The daily limits for NO_x and CO were increased from 109 lb/day and 159 lb/day to 121 lb/day and 163 lb/day, respectively.
2. The turbine usage was increased to 8,790 hrs/yr from 6500 hrs/yr, but maintained the NO_x limit of 14.7 tpy. However, CO, POC, and PM₁₀ emission limits were increased from 21.5 tpy, 4.1 tpy, and 9.8 tpy to 29.2 tpy, 5.5 tpy, and 12.8 tpy, respectively
3. The annual heat input limit in Condition 22 was increased from 3,250,000 MM Btu/hr to 4,380,000 MM Btu/hr to reflect the increase in turbine usage hours to 8,760 hrs/yr.
4. Condition 18.2 was amended as follows:
Ammonia emissions from S-1 Gas Turbine into the atmosphere shall not exceed 10.0 ppmvd @ 15% O₂ (1-hour rolling average), except during periods of startup and shutdown as defined in this permit. The owner/operator shall verify the ammonia concentration by District approved correct ammonia slip calculation. The owner/operator shall establish the correction factor during a District approved source test
5. The clock hour definition was amended as follows:
Clock Hour: Any consecutive 60-minute period beginning on the hour
6. Condition 24 was amended to reflect the infrequent operation of the peak Gas Turbine as follows:
Source Testing/RATA: Within sixty days after first fire of the gas turbines, and at a minimum on an annual basis thereafter, a relative accuracy test audit (RATA) shall be conducted on the CEMS in accordance with 40 CFR Part 60 Appendix B Performance Specifications. A source test shall be conducted at least every 8,000 hours of turbine operation. The owner/operator shall provide written test results of the source tests to the District within 60 days after testing. The owner/operator shall submit a complete test protocol to the District no later than 30 days prior to testing, and notification to the District at least ten days prior to the actual date of testing.

There has been no significant change in emissions since the issuance of the initial Title V permit. The Table below shows the annual emissions since the plant commenced operation in 2003.

Operating Year	Particulate (ton/yr)	POC (ton/yr)	NOx (ton/yr)	CO (ton/yr)
2003	1	3	3	2
2004	1	3	3	2
2005	1	2	3	2
2006	1	2	3	2
2007	1	2	4	2
2008	Not Available			
2009	1	2	4	2
2010	1	1	2	1

C. Permit Content:

The legal and factual basis for the permit follows. The permit sections are described in the order presented in the permit.

I. Standard Conditions:

This section contains administrative requirements and conditions that apply to all facilities. If the Title IV (Acid Rain) requirements for fossil-fuel fired electrical generating facilities or the accidental release (40 CFR § 68) program apply, the section will contain a standard condition pertaining to these programs. Many of these conditions derive from 40 CFR § 70.6, Permit Content, which dictates certain standard conditions that must be placed in the permit. The language that the District has developed for many of these requirements has been adopted into the BAAQMD Manual of Procedures, Volume II, Part 3, Section 4, and therefore must appear in the permit.

The standard conditions also contain references to BAAQMD Regulation 1 and Regulation 2. These are the District’s General Provisions and Permitting rules.

Standard conditions will be updated to reflect current regulation adoption dates and new regulations that have been adopted since the original Title V permit was issued.

Changes to permit:

- The amendment/adoption dates for the Administrative Requirements in Section I.A will be updated.
- BAAQMD Regulation 2, Rule 5 - New Source Review of Toxic Air Contaminants will be added to Standard Condition 1.A.
- SIP Regulation 2, Rule 6 – Permits, Major Facility Review will be added to Standard Condition 1.A.
- The dates in Section I.B.1 will be updated.

- Regulation 2-6-409.20 will be added to the reference in Standard Condition I.B.11.
- Regulation 3 will be deleted from the reference in Section I.E.
- The first reporting period requirements in Section I.F will be deleted.
- Regulation 3 will be deleted from the reference in Section I.F.
- The third sentence of Standard Condition G will be changed from “The certification period will be December 1st to November 30th.” to “The certification period will be December 1st through November 30th.”
- Standard Condition L was updated to allow permit holder to hold one sulfur dioxide allowance on March 1 (February 29th during a leap year) instead of on January 30th for each ton of sulfur dioxide emitted during the preceding year from January 1 through December 31.

II. Equipment:

This section of the permit lists all permitted or significant sources. Each source is identified by an S and a number (e.g., S24).

Permitted sources are those sources that require a BAAQMD operating permit pursuant to BAAQMD Rule 2-1-302.

Significant sources are those sources that have a potential to emit of more than 2 tons per year of a “regulated air pollutant” (as defined in BAAQMD Rule 2-6-222) or 400 pounds per year of a “hazardous air pollutant” (as defined in BAAQMD Rule 2-6-210).

All abatement (control) devices that control permitted or significant sources are listed. Each abatement device whose primary function is to reduce emissions is identified by an A and a number (e.g., A-24). If a source is also an abatement device, such as when an engine controls VOC emissions, it will be listed in the abatement device table but will have an “S” number. An abatement device may also be a source (such as a thermal oxidizer that burns fuel) of secondary emissions. If the primary function of a device is to control emissions, it is considered an abatement (or “A”) device. If the primary function of a device is a non-control function, the device is considered to be a source (or “S”).

The equipment section is considered to be part of the facility description. It contains information that is necessary for applicability determinations, such as fuel types, contents or sizes of tanks, etc. This information is part of the factual basis of the permit.

Each of the permitted sources has previously been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. These permits are issued in accordance with state law and the District’s regulations. The capacities in the permitted sources table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-403.

Changes to permit:

”Nominal 49.9 MW” will be added to the description of S-1 Gas Turbine in Table IIA, and “49.9 MW” will be deleted from the capacity column. This is a change requested by the facility.

III. Generally Applicable Requirements:

This section of the permit lists requirements that generally apply to all sources at a facility including insignificant sources and portable equipment that may not require a District permit. If a generally applicable requirement applies specifically to a source that is permitted or significant, the standard will also appear in Section IV and the monitoring for that requirement will appear in Sections IV and VII of the permit. Parts of this section apply to all facilities (e.g., particulate, architectural coating, odorous substance, and sandblasting standards). In addition, standards that apply to insignificant or unpermitted sources at a facility (e.g., refrigeration units that use more than 50 pounds of an ozone-depleting compound) are placed in this section.

Unpermitted sources are exempt from normal District permits pursuant to an exemption in BAAQMD Regulation 2, Rule 1. They may, however, be specifically described in a Title V permit if they are considered “significant sources” as defined in BAAQMD Rule 2-6-239. This table will be updated to reflect current regulation adoption dates and new regulations that have been adopted since the original Title V permit was issued.

Changes to Permit:

Language will be added regarding unpermitted sources and for portable equipment that are considered significant pursuant to BAAQMD Rule 2-6-239.

Table III will be updated to reflect current regulation adoption dates and new regulations that have been adopted since the original Title V permit was issued.

- SIP Regulation 2, Rule 1, General Requirements
- SIP Regulation 2-1-429, Federal Emissions Statement
- BAAQMD Regulation 2, Rule 2, Permits, New Source Review
- SIP Regulation 2, Rule 2, Permits, New Source Review
- BAAQMD Regulation 2, Rule 4, Permits, Emissions Banking
- SIP Regulation 2, Rule 4, Permits, Emissions Banking
- BAAQMD Regulation 2, Rule 6, Permits, Major Facility Review
- SIP Regulation 2, Rule 6, Permits, Major Facility Review
- District Regulation 6 has been renumbered and renamed as Regulation 6, Rule 1, Particulate Matter, General Requirements
- SIP Regulation 6, Particulate Matter and Visible Emissions
- BAAQMD Regulation 8, Rule 3, Organic Compounds –Architectural Coatings
- BAAQMD Regulation 8, Rule 15, Organic Compounds Emulsified and Liquid Asphalt
- SIP Regulation 8, Rule 47, Organic Compounds – Aeration of Contaminated Soil and Removal of Underground Storage Tanks
- SIP Regulation 8, Rule 51, Organic Compounds –Adhesive and Sealant Products
- BAAQMD Regulation 9, Rule 1, Inorganic Gaseous Pollutants - Sulfur Dioxide
- SIP Regulation 9, Rule 1, Inorganic Gaseous Pollutants - Sulfur Dioxide
- California Health and Safety Code Title 17, Subchapter 10, Article 2, Sections 95100 through 95109, Mandatory Greenhouse Gas Emissions Reporting
- EPA Regulation 40 CFR 82, Protection of Stratospheric Ozone
- Subpart F, 40 CFR 82.156, Recycling and Emissions Reductions – Required Practices

- Subpart F, 40 CFR 82.161, Certification of Technicians
- Subpart F, 40 CFR 82.166, Records of Refrigerant

The dates of adoption or approval of the rules and their "federal enforceability" status in Table III will be updated.

This site does not have stationary compression ignition engines on site. Therefore, "California Health and Safety Code Title 17, Sections 93115 and 93116" will be removed from this section.

IV. Source-Specific Applicable Requirements:

This section of the permit lists the applicable requirements that apply to permitted or significant sources. These applicable requirements are contained in tables that pertain to one or more sources that have the same requirements. The order of the requirements is:

- District Rules
- SIP Rules (if any) are listed following the corresponding District rules. SIP rules are District rules that have been approved by EPA for inclusion in the California State Implementation Plan. SIP rules are "federally enforceable" and a "Y" (yes) indication will appear in the "Federally Enforceable" column. If the SIP rule is the current District rule, separate citation of the SIP rule is not necessary and the "Federally Enforceable" column will have a "Y" for "yes". If the SIP rule is not the current District rule, the SIP rule or the necessary portion of the SIP rule is cited separately after the District rule. The SIP portion will be federally enforceable; the non-SIP version will not be federally enforceable, unless EPA has approved it through another program.
- Other District requirements, such as the Manual of Procedures, as appropriate.
- Federal requirements (other than SIP provisions)
- BAAQMD permit conditions. The text of BAAQMD permit conditions is found in Section VI of the permit.
- Federal permit conditions. The text of Federal permit conditions, if any, is found in Section VI of the permit.

Section IV of the permit contains citations to all of the applicable requirements. The text of the requirements is found in the regulations, which are readily available on the District's or EPA's websites, or in the permit conditions, which are found in Section VI of the permit. All monitoring requirements are cited in Section IV. Section VII is a cross-reference between the limits and monitoring requirements. A discussion of monitoring is included in Section C.VII of this permit evaluation/statement of basis.

Complex Applicability Determinations

40 CFR Part 64, Compliance Assurance Monitoring (CAM)

The gas turbine is exempt from CAM requirements for NO_x per 40 CFR Part 64.2(b)(iii) since the facility is subject to the acid rain permit program. The facility is subject to the Acid Rain program because it is a utility unit that serves a generator with a capacity greater than 25 MW in accordance with 40 CFR Part 72.6.

The gas turbine is exempt from CAM requirements for CO per 40 CFR Part 64.2(b)(vi) because the turbine has a continuous compliance method, the CO CEMs, that is specified by a part 70 permit.

40 CFR Part 72, Acid Rain Program

Part 72, Subpart A, establishes general provisions and operating permit program requirements for sources and affected units under the Acid Rain program, pursuant to Title IV of the Clean Air Act. The gas turbine is an affected unit subject to the program in accordance with 40 CFR Part 72, Subpart A, Section 72.6(a)(3)(i). The facility continues to meet 72.9 Standard Requirements which requires the submission of a complete acid rain permit application, the possession of a valid acid rain permit, meeting the monitoring requirements of part 75, and holding sufficient allowances, and comply with the acid rain SO₂ limit. The facility must hold sufficient SO₂ allowances by March 1 (February 29 of a leap year) of every year to offset each ton of SO₂ emitted for the previous calendar year. The facility is expected to comply with the excess emissions, recordkeeping and reporting requirements in 72.9(e) and 72.9(f).

Part 72, Subpart C, contains requirements for acid rain permit applications and compliance plans. The facility is expected to continue to meet these requirements.

Part 72, Subpart E, contains the requirements for the acid rain permit which must include all elements of a complete acid rain application.

40 CFR Part 75, Continuous Emission Monitoring

Part 75, Subpart A, contains the applicability criteria, compliance dates, and prohibitions. The emissions unit at the facility is subject to Part 72 and is therefore subject to Part 75. The NO_x monitoring is subject to part 75 per 75.2(c). The facility is expected to continue to meet the compliance dates and prohibitions contained in part 75 Subpart A.

Part 75, Subpart B, contains specific monitoring provisions for each pollutant subject to part 75. The turbine at this facility is required to meet the SO₂, NO_x, and CO₂ monitoring requirements contained in 75.10(a)(1), 75.10(a)(2), 75.10(a)(3) Opacity monitoring under 75.10(a)(4) is not required for gas fired units in accordance with 75.14(c). 75.10(b) requires each CEM to meet equipment, installation, and performance specification in part 75, Appendix A, and quality assurance/quality control in Appendix B. 75.10(c) requires heat input rate monitoring to meet requirements contained in part 75 Appendix F. The facility is expected to continue to comply with the requirements contained in 75.10(b) and (c).

75.10(d) contains primary equipment hourly operating requirements that require the CEM to monitor emissions when the emissions unit combusts fuel except as specified in 75.11(e) and during periods of calibration, quality assurance, or preventive maintenance, performed pursuant to §75.21 and appendix B of this part, periods of repair, periods of backups of data from the data acquisition and handling system, or recertification performed pursuant to §75.20. This section also contains requirements for calculating hourly averages from four 15-minute periods and validity of data and data substitution. Emission concentrations for a given hour are not

considered valid unless it is based on four valid measurements. The data substitution requirements are contained in Subpart D. The facility is expected to continue to comply with the requirements contained in 75.10(d). 75.10(f) specifies minimum measurement capability requirement for CEMs and 75.10(g) contains the minimum recordkeeping and reporting requirements. The facility is expected to continue to meet 75.10(f) and (g).

75.11 contains specific provisions for SO₂ monitoring. 75.11(d)(2) allows the use of Appendix D to monitor SO₂ emissions from gas fired units. The facility monitors sulfur content of the natural gas to meet Part 75 SO₂ monitoring requirements.

75.12 contains specific provisions for NO_x emission rates. The facility uses a NO_x CEM and an O₂ monitor to meet this requirement.

75.13 contains CO₂ monitoring requirements. The facility monitors CO₂ in accordance with this section using the procedures in part 75, Appendix G.

75.14 contains opacity monitoring requirements. The facility is exempt from opacity monitoring under part 75 per 75.14(c).

Part 75, Subpart C, contains operation and maintenance requirements including certification and recertification of the CEM, quality assurance/quality control requirements, reference test methods, and out-of-control periods and adjustment for system bias. The facility is expected to continue to meet these requirements.

Part 75, Subpart D (75.30 through 75.36), contains Missing Data Substitution Procedures for SO₂, NO_x, flow rate, CO₂, and heat input procedures. The facility is expected to continue to meet these requirements.

Part 75, Subpart F, contains the recordkeeping requirements including the contents of a part 75 monitoring plan. This subpart requires the facility to record the operating time, heat input rate, and load for each emissions unit. Additionally, the facility must record emissions data for SO₂, NO_x, CO₂, and O₂ along with quality assurance/quality control information

Part 75, Subpart G, contains the reporting requirements for affected facilities subject to part 75. The facility is expected to continue to meet these requirements.

Changes to Permit:

Table IV-A for S-1, Combustion Turbine, will be updated to reflect new regulation adoption dates and by adding and/or updating the following rules and standards:

- District Regulation 6 has been renumbered and renamed as Regulation 6, Rule 1, Particulate Matter, General Requirements
- SIP Regulation 6, Particulate Matter and Visible Emissions: 6-301, Ringelmann Number 1 Limitation
- SIP Regulation 6, Particulate Matter and Visible Emissions: 6-305, Visible Particles

- SIP Regulation 6, Particulate Matter and Visible Emissions: 6-310, Particulate Weight Limitation
- SIP Regulation 6, Particulate Matter and Visible Emissions: 6-401, Appearance of Emissions
- BAAQMD Regulation 9, Rule 9, Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines: 9-9-301.2 Emission Limits - Turbine heat input rated > 250 – 500 MMBtu/hr
- Renumber BAAQMD Regulation 9, Rule 9, Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines: 9-9-301.1.3 Emission Limits- Turbines Rated \geq 10 MW w/SCR
- SIP Regulation 9, Rule 9, Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines: 9-9-113, Exemption – Inspection/Maintenance
- SIP Regulation 9, Rule 9, Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines: 9-9-114, Exemption – Start-Up/Shutdown
- SIP Regulation 9, Rule 9, Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines: 9-9-301, Emission Limits, General
- SIP Regulation 9, Rule 9, Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines: 9-9-301.3, Emission Limits - Turbine heat input rated > 10 MW with SCR
- SIP Regulation 9, Rule 9, Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines: 9-9-501 Monitoring and recordkeeping requirements
- EPA 40 CFR 60, Standards of Performance for New Stationary Sources, Subparts A and GG citations will be updated
- EPA 40 CFR 72, Permits Regulation (Title IV – Acid Rain Program) citations will be added
- EPA 40 CFR 75, Continuous Emissions Monitoring citations will be added
- BAAQMD Condition #19684, definitions: parts #1 through 10, part 15, part 26 and part 33 will be deleted since they pertain only to initial startup.

Table IV-B for S-2 Cooling Tower will be updated by adding the following rules and standards:

- District Regulation 6 has been renumbered and renamed as Regulation 6, Rule 1, Particulate Matter, General Requirements
- SIP Regulation 6, Particulate Matter and Visible Emissions: 6-301, Ringelmann Number 1 Limitation
- SIP Regulation 6, Particulate Matter and Visible Emissions: 6-305, Visible Particles
- SIP Regulation 6, Particulate Matter and Visible Emissions: 6-310, Particulate Weight Limitation
- BAAQMD Regulation 6, Particulate Matter and Visible Emissions: 6-311, General Operations
- SIP Regulation 6, Particulate Matter and Visible Emissions: 6-401, Appearance of Emissions

V. Schedule of Compliance

A schedule of compliance is required in all Title V permits pursuant to BAAQMD Regulation 2-6-409.10 which provides that a major facility review permit shall contain the following information and provisions:

“409.10 A schedule of compliance containing the following elements:

- 10.1 A statement that the facility shall continue to comply with all applicable requirements with which it is currently in compliance;
- 10.2 A statement that the facility shall meet all applicable requirements on a timely basis as requirements become effective during the permit term; and
- 10.3 If the facility is out of compliance with an applicable requirement at the time of issuance, revision, or reopening, the schedule of compliance shall contain a plan by which the facility will achieve compliance. The plan shall contain deadlines for each item in the plan. The schedule of compliance shall also contain a requirement for submission of progress reports by the facility at least every six months. The progress reports shall contain the dates by which each item in the plan was achieved and an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.”

Since the District has not determined that the facility is out of compliance with an applicable requirement, the schedule of compliance for this permit contains only sections 2-6-409.10.1 and 2-6-409.10.2.

VI. Permit Conditions

During the Title V permit development, the District has reviewed the existing permit conditions, deleted the obsolete conditions, and, as appropriate, revised the conditions for clarity and enforceability. Each permit condition is identified with a unique numerical identifier, up to five digits.

When necessary to meet Title V requirements, additional monitoring, recordkeeping, or reporting requirements have been added to the permit.

All changes to existing permit conditions are clearly shown in “strike-out/underline” format in the proposed permit. When the permit is issued, all “strike-out” language will be deleted and all “underline” language will be retained, subject to consideration of comments received.

The existing permit conditions are derived from previously issued District Authorities to Construct (A/C) or Permits to Operate (P/O). Permit conditions may also be imposed or revised as part of the annual review of the facility by the District pursuant to California Health and Safety Code (H&SC) § 42301(e), through a variance pursuant to H&SC § 42350 *et seq.*, an order of abatement pursuant to H&SC § 42450 *et seq.*, or as an administrative revision initiated by District staff. After issuance of the Title V permit, permit conditions will be revised using the procedures in Regulation 2, Rule 6, Major Facility Review.

Conditions that are obsolete or that have no regulatory basis have been deleted from the permit.

Conditions have also been deleted because the event has already occurred (i.e. initial or start-up source tests).

The regulatory basis is listed following each condition. The regulatory basis may be a rule or regulation. The District is also using the following terms for regulatory basis:

- BACT: This term is used for a condition imposed by the Air Pollution Control Officer (APCO) to ensure compliance with the Best Available Control Technology requirement in Regulation 2-2-301.
- Cumulative Increase: This term is used for a condition imposed by the APCO which limits a source's operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- Offsets: This term is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to Regulation 2, Rules 2 and 4.
- PSD: This term is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit issued pursuant to Regulation 2, Rule 2.
- TRMP: This term is used for a condition imposed by the APCO to ensure compliance with limits based on Regulation 2, Rule 5 New Source review of Toxic Air Contaminants.

Changes to permit:

All changes to existing permit conditions are clearly shown in "strike-out/underline" format in the proposed permit. When the permit is issued, all 'strike-out' language will be deleted and all "underline" language will be retained, subject to consideration of comments received.

- The definition of "Gas Turbine Shutdown Mode" will be amended as requested by the applicant. This change provides a clear definition of shutdown, while still limiting shutdowns to no more than 30 minutes.
- Part 20 of condition #19684 in the existing permit will be amended to be consistent with the new definition of "Gas Turbine Shutdown Mode."
- Part 23b of condition #19684 will be amended to remove the accuracy and calibration requirements for ammonia injection pressure indicator. These requirements for the pressure indicator are not necessary to assure proper operation of the ammonia injection system.
- Parts 1 through 10, 15 and 33 of condition #19684 in the existing permit will be deleted since they pertain only to initial startup. Parts 1 through 10 pertain to the commissioning period that has elapsed. Part 15 pertains to the notification of turbine's commencement of operation. Part 33 pertains to certification of acid rain monitors within a period after first fire.
- Part 26 of condition #19684 in the existing permit will be deleted because it is based on a federal requirement (40 CFR Part 60 Subpart GG) that has been revised since the Title V permit was originally issued and is no longer applicable. Part 26 described a custom schedule used for the monitoring of fuel sulfur content. The gas turbine now complies directly with Subpart GG and the custom schedule is obsolete.
- The basis for each reporting requirement (a) through (g) will be added for Part 31 of condition #19684.
- References to TRMP have been changed to Regulation 2, Rule 5.

VII. Applicable Limits and Compliance Monitoring Requirements

This section of the permit is a summary of numerical limits and related monitoring requirements for each source. The summary includes a citation for each monitoring requirement, frequency of monitoring, and type of monitoring. The applicable requirements for monitoring are completely contained in Sections IV, Source-Specific Applicable Requirements, and VI, Permit Conditions, of the permit.

The District has reviewed all applicable requirements for monitoring and has determined the existing monitoring is adequate.

The District also examined the limits for which there is no monitoring or potentially inadequate monitoring in the applicable requirements. These limits are contained in the tables below. The District has determined that no further monitoring is needed to provide a reasonable assurance of compliance. The District's reasoning and supporting calculations are provided below. Calculations for potential to emit will be provided in the discussion when no monitoring is proposed due to the size of a source.

Monitoring decisions are typically the result of a balancing of several different factors including: 1) the likelihood of a violation given the characteristics of normal operation, 2) degree of variability in the operation and in the control device, if there is one, 3) the potential severity of impact of an undetected violation, 4) the technical feasibility and probative value of indicator monitoring, 5) the economic feasibility of indicator monitoring, and 6) whether there is some other factor, such as a different regulatory restriction applicable to the same operation, that also provides some assurance of compliance with the limit in question.

These factors are the same as those historically applied by the District in developing monitoring for applicable requirements. It follows that, although Title V calls for a re-examination of all monitoring, there is a presumption that these factors have been appropriately balanced and incorporated in the District's prior rule development and/or permit issuance. It is possible that, where a rule or permit requirement has historically had no monitoring associated with it, no monitoring may still be appropriate in the Title V permit if, for instance, there is little likelihood of a violation. Compliance behavior and associated costs of compliance are determined in part by the frequency and nature of associated monitoring requirements. As a result, the District will generally revise the nature or frequency of monitoring only when it can support a conclusion that existing monitoring is inadequate.

<u>PM Sources</u>			
S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1, Combustion Gas Turbine & S-2, Cooling Tower	BAAQMD Regulation 6-1-310	0.15 grain/dscf	None

<u>PM Sources</u>			
S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1 Combustion Gas Turbine & S-2 Cooling Tower	SIP Regulation 6-310	0.15 grain/dscf	None
S-1 Combustion Gas Turbine & S-2 Cooling Tower	BAAQMD Regulation 6-1-301	Ringelmann 1.0 for more than 3 min/hr	None
S-1 Combustion Gas Turbine & S-2 Cooling Tower	SIP Regulation 6-301	Ringelmann 1.0 for more than 3 min/hr	None
S-1, Combustion Gas Turbine	BAAQMD condition #19684, part 18.5	3 lb/ hr	Source test every 8,000 hrs or every 3 yrs, whichever comes first
S-1, Combustion Gas Turbine	BAAQMD condition #19684, part 21	72 lb/day	Source Test every 8,000 hrs or every 3 yrs, whichever comes first
S-1, Combustion Gas Turbine	BAAQMD condition #19684, part 21	13.1 tons/year	Source Test every 8,000 hrs or every 3 yrs, whichever comes first
S-2 Cooling Tower	BAAQMD Regulation 6-1-311	40 lb/hr	None
S-2 Cooling Tower	SIP Regulation 6-311	40 lb/hr	None

PM Discussion:

BAAQMD Regulation 6, Rule 1: “Particulate Matter General Requirements”

Visible Emissions:

BAAQMD Regulation 6-1-301 limits visible emissions to no darker than 1.0 on the Ringelmann Chart (except for periods or aggregate periods less than 3 minutes in any hour). Visible emissions are normally not associated with combustion of gaseous fuels, such as natural gas. Source S-1 burns natural gas exclusively therefore, per the EPA's June 24, 1999 agreement with CAPCOA and ARB titled "Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", no monitoring is required to assure compliance with this limit for this source.

S-2 Cooling Tower is not expected to emit visible particulate emissions. Therefore, monitoring is not required to ensure compliance with Regulation 6-1-301 for this source.

Particulate Weight Limitation Discussion:

BAAQMD Regulation 6-1-310 limits filterable particulate (FP) emissions from any source to 0.15 grains per dry standard cubic foot (gr/dscf) of exhaust volume. Section 310.3 limits filterable particulate emissions from “heat transfer operations” to 0.15 gr/dscf @ 6% O₂. These are the “grain loading” standards.

Exceedances of the grain loading standards are normally not associated with combustion of gaseous fuels, such as natural gas. Source S-1 burns natural gas exclusively, therefore, per the EPA's July 2001 agreement with CAPCOA and ARB entitled "CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources: Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", no monitoring is required to assure compliance with this limit for this source.

As shown in the following calculation, the worst-case grain loading from the S-2 Cooling Tower is much less than 0.15 grains per dscf. Therefore, no monitoring is required to ensure compliance with this limit for this source.

Density of water = 8.34 lbs per gallon
Cooling water circulation rate = 4,160 gals/pmmin
Drift rate 0.005%
Maximum total dissolved solids 10,000 ppm
Exhaust gas flow rate: 372,330 dscfm

Process Weight Rate = (4160 gal/min)/(8.34lbs/gal
= (34694.4 lbs/min)(60 min/hr)
= 2,081,664 lbs/hr

Cooling tower drift:
(4,160 gal/min)(60 min/hr)(8.34 lb/gal)(0.00005) = 104 lb/hr

PM10 emission rate = (104 lb/hr)(10,000 ppm)/10⁶
= **1.04 lb/hr**

Grain loading= (0.3955 lb/hr)(hr/60 min)(7000 gr/lb)/(372,330 dscfm)
= **0.00012 gr/dscf**

For the processes with a process weight over 57320 lb/hr, the limit is 40 lb particulate per hour (Regulation 6-1-311). The above cooling tower S-2 process more than 57320 lb of water/hr and emits 1.04 lb/hr. Therefore, S-2 will comply easily with Regulation 6-1-311.

Maximum Hourly, Daily, and Annual Mass Emissions

Condition #18.5 limits the emissions of particulate matter less than 10 microns (PM10) from S-1 gas turbine. The emissions to the atmosphere shall not exceed 3.0 pounds per hour, from S-1 gas turbine except during startup and shutdown. The verification of PM10 mass emission rate from

the stack of S-1 is monitored by source test every 8,000 hrs or every 3 yrs, whichever comes first.

Condition #21 limits the mass emissions from S-1 gas turbine that are based on daily and annual emissions. The daily limits are based on an average one hour readings and annual limits are based on 12-months rolling average one-hour reading from the CEM and source test results. Source S-1 is monitored by source testing every 8,000 hrs or every 3 yrs, whichever comes first.

Source test results for PM10 emissions for the Wolfskill plant are shown the table below.

Source	Date	PM ₁₀ (lbs/hr)
1	6/2/2004	2.15
1	7/5/2006	1.901
1	2/6/2006	1.55
1	5/4/2009	0.81
Average		1.60

Source test results for PM₁₀ indicate that the average hourly emissions rate is 1.60 pounds, which is well within the limit of 3 lbs/hr. In addition, the actual daily and annual PM₁₀ emissions are much less than the limit of 13.1 tons¹. Thus, no additional monitoring will be required.

<u>SO₂ Sources</u>			
S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1 Combustion Gas Turbine	BAAQMD 9-1-301	Ground level concentrations of SO ₂ shall not exceed: 0.5 ppm for 3 consecutive minutes AND 0.25 ppm averaged over 60 consecutive minutes AND 0.05 ppm averaged over 24 hours	None
S-1 Combustion Gas Turbine	BAAQMD 9-1-302	300 ppm (dry)	Fuel Gas Total sulfur content analysis
S-1 Combustion Gas Turbine	BAAQMD condition #19684, part 18.6	1.38 lb/hr	Fuel gas Total sulfur content analysis and Source test every 8,000 hrs or every 3 yrs, whichever comes first

¹ The actual PM₁₀ annual emissions are much less than 13.1 tons/year because the actual hourly emissions rate is less than 3 lb/hr, and turbines operate less than 8760 hours per year. The actual PM₁₀ daily emissions rates are also less than the limits for the same reasons.

<u>SO₂ Sources</u>			
S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1 Combustion Gas Turbine	BAAQMD condition #19684, part 21	32 lb/ day	Fuel gas Total sulfur content analysis
S-1 Combustion Gas Turbine	BAAQMD condition #19684, part 21	4.5 tons/year	Fuel gas Total sulfur content analysis
S-1 Combustion Gas Turbine	NSPS Subpart GG 40 CFR 60.333(a)	0.015% (vol.) @ 15% O ₂ (dry) Or total sulfur content of fuel less than or equal to 0.8% sulfur by weight (8,000 ppmw)	None

SO₂ Discussion:

BAAQMD Regulation 9-1-301

Area monitoring to demonstrate compliance with the ground level SO₂ concentration requirements of Regulation 9-1-301 is at the discretion of the APCO (per BAAQMD Regulation 9-1-501). This facility does not have equipment that emits large amounts of SO₂ and therefore is not required by the APCO to have ground level monitoring.

All facility combustion sources are subject to the SO₂ emission limitations in District Regulation 9, Rule 1 (ground-level concentration and emission point concentration). In EPA's June 24, 1999 agreement with CAPCOA and ARB, "Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", EPA has agreed that natural-gas-fired combustion sources do not need additional monitoring to verify compliance with Regulation 9, Rule 1, since violations of the regulation are unlikely. Therefore, no monitoring is necessary for this requirement.

NSPS 40 CFR 60.333

This federal regulation requires that the total sulfur content of fuel used at the gas turbines be less than or equal to 0.8% sulfur by weight (8,000 ppmw). The natural gas used at S-1 is pipeline quality. PG&E Gas Rule 21, Section C specifies a maximum total sulfur content of less than 1.0 grains of sulfur per 100 scf, which is equivalent to 17 ppmw². The maximum grain loading in pipeline natural gas is orders of magnitude less than 8,000 ppmw. Therefore, no monitoring is required to ensure compliance with this limit.

Maximum Hourly, Daily, and Annual Mass Emissions

Condition #18.6 limits the emissions of oxides of sulfur from S-1 gas turbine. The emissions to the atmosphere shall not exceed 1.38 pounds per hour, from S-1 gas turbine except during startup and shutdown. The SO_x emission rate from S-1 is monitored by fuel gas total sulfur content analysis and by source test every 8,000 hrs or every 3 yrs, whichever comes first.

Mass emission limits:

² See PG&E Natural Gas Rule 21, Section C at: http://www.pge.com/pipeline/operations/sulfur/sulfur_info.shtml.

Condition #21 limits the mass emissions from S-1 gas turbine that are based on daily and annual emissions. The daily limits are based on an average one hour readings and annual limits are based on 12-months rolling average one-hour reading from the process monitor. The source S-1 will be monitored by fuel gas total sulfur content analysis. The SO₂ emission factor is based upon annual average natural gas sulfur content of 0.25 grains per 100 scf and a higher heating value of 1020 Btu/scf. Source test results are shown below.

Source	Date	SO ₂ (lbs/hr)
1	6/2/2004	0.015
1	12/28/2005	Non Detect
1	5/8/2006	0.172
1	5/4/2009	0.317
Average		0.168

Source test results for SO₂ indicate that the average hourly emissions rate is 0.168 pounds, which is well within the limit of 1.38 lbs/hr. In addition, the actual annual SO₂ emissions are much less than the limit of 4.5 tons³. Thus, there is no basis for requiring additional monitoring beyond the annual SO₂ source test requirement currently in place.

<u>NO_x Sources</u>			
S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1 Combustion Gas Turbine	BAAQMD 9-9-301.1.3	9 ppmv @ 15% O ₂ , dry	CEM and Source test every 8,000 hrs. or every 3 yrs., whichever comes first
S-1 Combustion Gas Turbine	SIP 9-9-301.3	9 ppmv @ 15% O ₂ , dry	CEM and Source test every 8,000 hrs. or every 3 yrs., whichever comes first
S-1 Combustion Gas Turbine	BAAQMD 9-9-301.2	0.43 lbs/MW hr or 9 ppmv @ 15% O ₂ , dry	CEM
S-1 Combustion Gas Turbine	NSPS, 40 Subpart GG, 40 CFR 60.332 (a)(1)	75 ppmv @ 15% O ₂ , dry	CEM

³ The actual SO₂ annual emissions are much less than 4.5 tons/year because the actual hourly emissions rate is less than 1.38 lb/hr, and turbines operate less than 8760 hours per year. The actual SO₂ daily emissions rates are also less than the limits for the same reasons.

S-1 Combustion Gas Turbine	BAAQMD condition #19684, part 18.1	2.5 ppmv @ 15% O ₂ , dry, 3-hr average except during turbine startup or shutdown	CEM and Source test every 8,000 hrs. or every 3 yrs., whichever comes first
S-1 Combustion Gas Turbine	BAAQMD condition #19684, part 21	121 lb/ day (as NO ₂)	CEM
S-1 Combustion Gas Turbine	BAAQMD condition #19684, part 21	14.7 tons per year (as NO ₂)	CEM

NO_x Discussion:

BAAQMD Regulation 9 Rule 9

The turbine is subject to the NO_x emission limitations in District Regulation 9, Rule 9 (Monitoring and Recordkeeping Requirements). This facility has a stationary gas turbine with a heat input rate greater than 150 MMBtu/hr and operates more than 4000 hours in a 36-month period. Therefore it is required to have Continuous Emission Monitoring (CEM) and to complete a source test every 8000 hours or every 3 years, whichever comes first (BAAQMD Regulation 9-9-301).

Maximum Hourly, Daily, and Annual Mass Emissions

The CEM is used to demonstrate compliance with the NO_x concentration permit limits on a continuous basis. An annual relative accuracy test audit (RATA) is required (Permit Condition #24) on the NO_x CEM to ensure accuracy. NO_x mass emissions are calculated using NO_x and O₂ CEM data, and the fuel heat input rate (from fuel flow meter). The District has determined that no additional monitoring is required.

<u>CO Sources</u>			
S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1 Combustion Gas Turbine	BAAQMD Condition #19684 Part 18.3	6 ppmv @ 15% O ₂ , dry 3-hr average except during turbine startup or shutdown	CEM and Source test every 8,000 hrs. or every 3 yrs., whichever comes first
S-1 Combustion Gas Turbine	BAAQMD Condition #19684 Part 21	163 lbs/calendar day	CEM
S-1 Combustion Gas Turbine	BAAQMD condition #19684, part 21	29.2 tons per year	CEM

CO Discussion:

BAAQMD Regulation 9 Rule 7

The turbine is subject to the CO emission limitations in District Regulation 9, Rule 7 (Monitoring and Recordkeeping Requirements). The CO limit prescribed in condition #19684 Part 18.3 is 6 ppmv @ 15% O₂. The gas turbine has the potential to emit large amounts of CO.

Therefore, the gas turbine is required to have a CO CEM and to complete a source test every 8000 hours or every 3 years whichever comes first.

Maximum Hourly, Daily, and Annual Mass Emissions

The CEM is used to demonstrate compliance with the CO concentration permit limits on a continuous basis. An annual relative accuracy test audit (RATA) is required (Permit Condition #24) on the CO CEM to ensure accuracy. CO mass emissions are calculated using CO and O₂ CEM data, and the fuel heat input rate (from fuel flow meter). The District has determined that no additional monitoring is required.

<u>POC Sources</u>			
S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1 Combustion Gas Turbine	BAAQMD Condition #19684 Part 18.4	2 ppmv @ 15% O ₂ , dry except during turbine startup or shutdown	Source test every 8,000 hrs. or every 3 yrs., whichever comes first
S-1 Combustion Gas Turbine	BAAQMD Condition #19684 Part 21	31 lbs/calendar day	Source test every 8,000 hrs. or every 3 yrs., whichever comes first
S-1 Combustion Gas Turbine	BAAQMD condition #19684, part 21	5.5 ton/year	Source test every 8,000 hrs or every 3 yrs, whichever comes first

POC Discussion:

BAAQMD Regulation 9-1-301.1.3

Precursor organic compound (POC) emissions from the gas turbine shall not exceed 2 ppmvd @ 15% O₂, except during periods of startup and shutdown as defined in this permit. The POC emission concentration is verified by a source test every 8000 hours or every 3 years, whichever comes first. Test results are shown below.

Source	Date	POC (ppm)
1	6/2/2004	0.2
1	5/8/2006	0.53
1	5/4/2009	0.459
Average		0.40

Maximum Hourly, Daily, and Annual Mass Emissions

Source test results for POC indicate that the average concentration is 0.40 ppm which is much less than the limit of 2 ppm. The actual annual POC emissions are much less than the limit of 5.5

tons⁴. In addition, Continuous Emission Monitoring (CEM) is not available for POC. Thus, there is no basis for requiring additional monitoring beyond the annual POC source test requirement currently in place.

<u>NH₃ Sources</u>			
S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1 Combustion Gas Turbine	BAAQMD Condition #19684 Part 18.2	10 ppmv @ 15% O ₂ , dry except during turbine startup or shutdown	Calculation based on source test and NH ₃ to NO _x ratio at inlet to SCR
S-1 Combustion Gas Turbine	BAAQMD Condition #19684 Part 18.2	10 ppmv @ 15% O ₂ , dry except during turbine startup or shutdown	Source test every 8,000 hrs. or every 3 yrs., whichever comes first

NH₃ Discussion:

Maximum Concentration

Ammonia (NH₃) emissions the gas turbine shall not exceed 10 ppmvd @ 15% O₂, except during periods of startup and shutdown as defined in this permit. The NH₃ monitoring is based on the source test and NH₃ to NO_x ratio at the inlet to SCR. The slip calculation and correction factor is determined by an annual source test. Test results from annual source tests are summarized below.

Source	Date	NH ₃ (ppm)
1	6/2/2004	0.99
1	12/28/2005	4.99
1	5/9/2007	5.31
1	5/4/2009	1.52
Average		3.20

Source test results for NH₃ indicate that the average concentration is 3.20 ppm, which is much less than the limit of 10 ppm. The District is not aware of Continuous Emission Monitoring (CEM) that is available for NH₃. Thus, there is no basis for requiring additional monitoring beyond the existing monitoring.

Changes to permit:

⁴ The actual POC annual emissions are much less than 5.5 tons/year because the actual concentration is less than 2 ppm, and turbines operate less than 8760 hours per year. The actual POC daily emissions rates are also less than the limits for the same reasons.

A note will be added at the beginning of Section VII to clarify that this section is a summary of the applicable limits that have associated monitoring requirements, and that in the case of a conflict between Sections I-VI and Section VII, the preceding sections take precedence.

Tables in Section VII will be updated to reflect current regulation adoption dates and new regulations that have been adopted since the original Title V permit was issued.

Table VII-A will be updated by adding and/or updating the following rules and standards:

- BAAQMD Regulation 9, Rule 9 Nitrogen Oxides from Stationary Gas Turbine: 9-9-301.1.3 Emission Limits, General reference will be updated
- BAAQMD Regulation 9, Rule 9 Nitrogen Oxides from Stationary Gas Turbine: 9-9-301.3 Emission Limits, General reference will be added
- SIP Regulation 9, Rule 9 Nitrogen Oxides from Stationary Gas Turbine: 9-9-301.3 Emission Limits, General reference will be added
- BAAQMD Regulation 6, Rule 1 Particulate Matter: 6-1-310, Particulate Weight Limitation
- SIP Regulation 6, Rule 1 Particulate Matter: 6-1-301, Ringelmann No. 1 Limitation
- Under NO_x limits, Monitoring Requirement Citation for NO_x, will be updated for NSPS requirements.
- Under SO₂ limits, Monitoring Requirement Citation for SO₂, will be updated for NSPS requirements.
- The unabated NO_x emissions limit during commissioning will be deleted.
- NSPS for fuel sulfur content will be added.

Table VII-B is updated by adding and/or updating the following rules and standards:

- SIP Regulation 6 Particulate Matter and Visible Emissions: 6-1-301 Ringelmann No. 1 Limitation citation will be updated
- SIP Regulation 6 Particulate Matter and Visible Emissions: 6-301 Ringelmann No.1 Limitation will be added
- BAAQMD Regulation 6 Particulate Matter and Visible Emissions: 6-1-310 Particulate Weight Limitation citation will be updated
- SIP Regulation 6 Particulate Matter and Visible Emissions: 6-310 Particulate Weight Limitation citation will be added
- BAAQMD Regulation 6 Particulate Matter and Visible Emissions: 6-1-311 Particulate Weight Limitation will be added
- SIP Regulation 6 Particulate Matter and Visible Emissions: 6-311 Particulate Weight Limitation will be added

VIII. Test Methods

This section of the permit lists test methods that are associated with standards in District or other rules. It is included only for reference. In most cases, the test methods in the rules are source test methods that can be used to determine compliance but are not required on an ongoing basis. They are not applicable requirements.

Permit Evaluation and Statement of Basis: Site #B4511, Gilroy Energy Center, LLC at Wolfskill Energy Center, 2425 Cordelia Road, Fairfield, CA 94534

If a rule or permit condition requires ongoing testing, the requirement will also appear in Section IV of the permit

Changes to permit:

Table VIII will be updated to reflect new regulations that have been adopted since the original Title V permit was issued.

- BAAQMD Regulation 6, Rule 2: 6-311, General Operation will be added
- BAAQMD Regulation 9, Rule 9: 9-1-301.2, Emission Limits will be added

IX. TITLE IV ACID RAIN PERMIT

1) SO2 ALLOWANCE ALLOCATIONS

	Year	2011	2012	2013	2014	2015
	SO₂ allowances under Table 2 of 40 CFR Part 73	None	None	None	None	None
Combustion Turbine	NOx Limit	This unit is not subject to the NOx requirements from 40 CFR Part 76 as this unit is not capable of firing on coal.				

2) ADDITION TO COMMENTS, NOTES AND JUSTIFICATIONS

Pursuant to 40 CFR Part 72.6(a)(3)(i), S-1 is considered a new utility unit and is subject to the acid rain permit requirements of 72.9(a).

S-1 Gas Turbine is not listed in table-2 of 40 CFR Part 73; therefore, the operator did not receive initial SO2 allowances under the Acid Rain program.

S-1 Gas Turbine does not qualify for a new unit exemption pursuant to 40 CFR 72.7 (b)(1) since it serves a generator with a nameplate capacity greater than 25 MW.

X. Permit Shield:

The District rules allow two types of permit shields. The permit shield types are defined as follows: (1) A provision in a major facility review permit explaining that specific federally enforceable regulations and standards do not apply to a source or group of sources, or (2) A provision in a major facility review permit explaining that specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting are subsumed because other applicable requirements for monitoring, recordkeeping, and reporting in the permit will assure compliance with all emission limits.

The second type of permit shield is allowed by EPA’s White Paper 2 for Improved Implementation of the Part 70 Operating Permits Program. The District uses the second type of permit shield for all streamlining of monitoring, recordkeeping, and reporting requirements in Title V permits. The District’s program does not allow other types of streamlining in Title V permits.

This facility has the first type of permit shield.

Changes to permit:

In the initial Title V permit, the Wolfskill Energy Center applied for and received a permit shield for subsumed requirements as shown below.

Table IX B - 1
Permit Shield for Subsumed Requirements
S 1 – COMBUSTION GAS TURBINE

Subsumed Requirement Citation	Title or Description	Streamlined Requirements	Title or Description
40 CFR 60.334 (a)	Fuel-to-water monitoring	BAAQMD Condition 19684, part 23	Continuous emission monitoring for 2.5 ppmv NOx limit @ 15% oxygen
40 CFR 60.334(c)(1)	Periods of excess emissions, NOx	BAAQMD Condition 19684, Part 23	Requirement for continuous emission monitor for NOx

These shields no longer apply and will be deleted from the permit because 40 CFR 60 Subpart GG was amended on 2/24/06. As a result of this amendment, gas turbines equipped with NOx CEMs are not required to monitor fuel to water ratio under 40 CFR 60.334(a) pursuant to 40 CFR 60.334(d). Therefore this shield is not necessary.

40 CFR 60.334(c)(1) was deleted from the regulation and therefore does not apply to the S-1 Combustion Turbine. This provision was replaced by 60.334(c) that specifies that a CEM is optional.

XI. Revision History

This section contains the details of issuance and revisions for each permit.

Title-V permit renewal Application 17174 will be added to this Section.

XII. Glossary

This section contains terms that may be unfamiliar to the general public or EPA.

The term TRMP (Toxic Risk Management Plan) will be deleted from this section.

Changes in this action

There are no changes proposed for this section.

D. Alternate Operating Scenarios:

No alternate operating scenarios have been requested for this facility.

E. Compliance Status:

An office memorandum from the Director of Compliance and Enforcement, to the Director of Permit Services, presents a review of the compliance record of the Wolfskill Energy Center, LLC (Site #: B4511). The Compliance and Enforcement Division staff has reviewed the records for the period between July 18, 2003, through January 5, 2012. This review was initiated as part of the District evaluation of an application for a Title V permit. During the period subject to review, activities known to the District include:

- Two Notices of Violation issued during this review period.
- The District did not receive any complaints.
- The facility is not operating under a Variance or an Order of Abatement from the District Board.
- There were six notifications of inoperative monitors, one notification of equipment breakdown, and one notification of excess emissions reported or documented by District staff. The detail is in the Compliance Report, attached in Appendix A of this Statement of Basis.

The owner certified that all equipment was operating in compliance on December 27, 2007. In addition, a certification of compliance is submitted every year by December 31st. No ongoing non-compliance issues have been identified to date.

F. Differences between the Application and the Proposed Permit:

The Title V permit application was originally submitted on December 28, 2007. This version is the basis for constructing the proposed Title V permit. There are no differences between this renewal application and the proposed renewal permit.

APPENDIX A
BAAQMD COMPLIANCE REPORT

COMPLIANCE & ENFORCEMENT DIVISION

Inter-Office Memorandum

January 25, 2012

TO: JIM KARAS – ACTING DIRECTOR OF ENGINEERING
FROM: BRIAN BATEMAN – DIRECTOR OF ENFORCEMENT
SUBJECT: REVIEW OF COMPLIANCE RECORD OF:

JK 1/30/12
BB 1/26/12

GILROY ENERGY CENTER, LLC FOR THE WOLFskill ENERGY CENTER
SITE #B4511

Background

This review was initiated as part of the District evaluation of an application by Gilroy Energy Center for a Title V Permit Renewal. It is standard practice of the Compliance and Enforcement Division to undertake a compliance record review in advance of a renewal of a Title V Permit. The purpose of this review is to assure that any non-compliance problems identified during the prior eight years have been adequately addressed, or, if non-compliance persists, that a schedule of compliance is properly incorporated into the Title V permit compliance schedule. In addition, the review checks for patterns of recurring violation that may be addressed by additional permit terms. Finally, the review is intended to recommend, if necessary, any additional permit conditions and limitations to improve compliance.

Gilroy Energy Center is a power generation facility using natural-gas to power a combustion gas Turbine. Continuous Emission Monitors are in place to measure applicable pollutants.

Compliance Review

Compliance records were reviewed for the time period from July 18, 2003 through January 5, 2012. The results of this review are summarized as follows.

1. Violation History

Staff reviewed Gilroy Energy Center Annual Compliance Certifications and found no ongoing non-compliance and no recurring pattern of violations.

Staff also reviewed the District compliance records for the review period. During this period Gilroy Energy Center activities known to the District include:

REVIEW OF COMPLIANCE RECORD OF:
Gilroy Energy Center, LLC Site #4511
 January 25, 2012
 Page 2 of 3

District-issued 2 Notice of Violation(s):

NOV#	Regulation	Date Occur	# of Days	Comments	Disposition
A46147A	2-1-307	4/27/04	1	CEM excess of NOx	No further action
A48155A	2-6-307	12/28/05	1	Failed source test	Resolution, attorney

2. Complaint History

The District received 0 (zero) air pollution complaints alleging Gilroy Energy Center as the source.

3. Reportable Compliance Activity

Reportable Compliance Activity (RCA), also known as "Episode" reporting, is the reporting of compliance activities involving a facility as outlined in District Regulations and State Law. Reporting covers breakdown requests, indicated monitor excesses, pressure relief device releases, inoperative monitor reports and flare monitoring.

Within the review period, the District received 8 notifications for RCA's. 1 NOV was issued as a result of these RCA's.

The District received 8 notifications for Reportable Compliance Activities (RCA).

Episode	Date Occur	# of Days	Comments	Disposition
03Y10	7/26/03	1	Inoperative Monitor	No further action
03Y85	8/24/03	1	Inoperative Monitor	No further action
04D48	4/27/04	1	Excess Emission	Violation
04D62	5/4/04	1	Breakdown	Relief granted
04K14	1/11/05	1	Inoperative Monitor	No further action
04V46	6/16/06	1	Inoperative Monitor	No further action
04Y16	12/18/06	1	Inoperative Monitor	No further action
05A20	5/4/07	7	Inoperative Monitor	No further action

4. Enforcement Agreements, Variances, or Abatement Orders

There were no enforcement agreements, variances, or abatement orders for Gilroy Energy Center over review period.

REVIEW OF COMPLIANCE RECORD OF:
Gilroy Energy Center, LLC Site #4511
January 25, 2012
Page 3 of 3

Conclusion

Following its review of all available facility and District compliance records from July 18, 2003 through January 5, 2012, the District's Compliance and Enforcement Division has determined that Gilroy Energy Center was in intermittent compliance from the initial permit period through the present. However, Gilroy Energy Center has demonstrated no evidence of ongoing noncompliance and no recurring pattern of violations that would warrant consideration of a Title V permit compliance schedule for this facility.

Based on this review and analysis of all the violations for the review period, the District has concluded that no schedule of compliance or change in permit terms is necessary beyond what is already contained in the facility's current Title V permit.

APPENDIX B

GLOSSARY

ACT

Federal Clean Air Act

APCO

Air Pollution Control Officer

ARB

Air Resources Board

BAAQMD

Bay Area Air Quality Management District

BACT

Best Available Control Technology

Basis

The underlying authority which allows the District to impose requirements

CAA

The federal Clean Air Act

CAAQS

California Ambient Air Quality Standards

CAPCOA

California Air Pollution Control Officers Association

CEM

Continuous Emission Monitor

CEQA

California Environmental Quality Act

CFR

The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs

CO

Carbon Monoxide

Cumulative Increase

The sum of permitted emissions from each new or modified source since a specified date pursuant to BAAQMD Rule 2-1-403, Permit Conditions (as amended by the District Board on 7/17/91) and SIP Rule 2-1-403, Permit Conditions (as approved by EPA on 6/23/95). Cumulative increase is used to determine whether threshold-based requirements are triggered

District

The Bay Area Air Quality Management District

dscf

Dry Standard Cubic Feet

EPA

The federal Environmental Protection Agency

Excluded

Not subject to any District regulations

FDOC

Final Determination of Compliance (FDOC), prepared pursuant to District Regulation 2, Rule 3, Power Plants

Federally Enforceable, FE

All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60 (NSPS), Part 61 (NESHAPs),

Part 63 (MACT), and Part 72 (Permits Regulation, Acid Rain), including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP

FP

Filterable Particulate as measured by BAAQMD Method ST-15, Particulate

HAP

Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by 40 CFR Part 63

HRSG

Heat Recovery Steam Generator

Major Facility

A facility with potential emissions of: (1) at least 100 tons per year of regulated air pollutants, (2) at least 10 tons per year of any single hazardous air pollutant, and/or (3) at least 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity of hazardous air pollutants as determined by the EPA administrator

MFR

Major Facility Review. The District's term for the federal operating permit program mandated by Title V of the Federal Clean Air Act and implemented by District Regulation 2, Rule 6

MOP

The District's Manual of Procedures

NAAQS

National Ambient Air Quality Standards

NESHAPS

National Emission Standards for Hazardous Air Pollutants. See in 40 CFR Parts 61 and 63

NMHC

Non-methane Hydrocarbons (Same as NMOC)

NMOC

Non-methane Organic Compounds (Same as NMHC)

NO_x

Oxides of nitrogen

NSPS

Standards of Performance for New Stationary Sources. Federal standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the Federal Clean Air Act, and implemented by 40 CFR Part 60 and District Regulation 10

NSR

New Source Review. A federal program for pre-construction review and permitting of new and modified sources of pollutants for which criteria have been established in accordance with Section 108 of the Federal Clean Air Act. Mandated by Title I of the Federal Clean Air Act and implemented by 40 CFR Parts 51 and 52 and District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

Offset Requirement

A New Source Review requirement to provide federally enforceable emission offsets for the emissions from a new or modified source. Applies to emissions of POC, NO_x, PM₁₀, and SO₂

Phase II Acid Rain Facility

A facility that generates electricity for sale through fossil-fuel combustion and is not exempted by 40 CFR 72 from Titles IV and V of the Clean Air Act

POC

Precursor Organic Compounds

PM

Particulate Matter

PM10

Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns

PSD

Prevention of Significant Deterioration. A federal program for permitting new and modified sources of those air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2

PUC

Public Utilities Commission (California)

SIP

State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the Act

SO2

Sulfur dioxide

THC

Total Hydrocarbons (NMHC + Methane)

Title V

Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities

TOC

Total Organic Compounds (NMOC + Methane, Same as THC)

TPH

Total Petroleum Hydrocarbons

TRMP

Toxic Risk Management Plan

TSP

Total Suspended Particulate

VOC

Volatile Organic Compounds

Units of Measure:

bhp	=	brake-horsepower
btu	=	British Thermal Unit
cfm	=	cubic feet per minute
g	=	grams
gal	=	gallon
gpm	=	gallons per minute
hp	=	horsepower
hr	=	hour
lb	=	pound
in	=	inches
max	=	maximum
m ²	=	square meter
min	=	minute
mm	=	million
MMbtu	=	million btu
MMcf	=	million cubic feet
ppmv	=	parts per million, by volume
ppmw	=	parts per million, by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
scfm	=	standard cubic feet per minute
yr	=	year