Bay Area Air Quality Management District

939 Ellis Street
San Francisco, CA 94109
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Permit Evaluation
and
Statement of Basis
for
RENEWAL of

MAJOR FACILITY REVIEW PERMIT

for

Crockett Cogeneration, A California Limited Partnership
Facility #A8664

Facility Address:
550 Loring Avenue
Crockett, CA 94525

Mailing Address:
550 Loring Avenue
Crockett, CA 94525

Application Engineer: Kathleen Truesdell
Site Engineer: Doug Hall

Application(s): 13143

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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 "major facility" as defined by BAAQMD Regulation 2-6-212. It is a major facility because it has the "potential to emit" (as defined by BAAQMD Regulation 2-6-218) more than 100 tons per year of a regulated air pollutant.

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 not 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 A8664.

This facility received its initial Title V permit on March 7, 2001. This application (Application # 13143) is for a permit renewal. Although the current permit expired on February 28, 2006, it continues in force until the District takes final action on the permit renewal. The standard sections of the permit have been updated to include new standard language used in all Title V permits. The proposed permit shows all changes to the permit in strikeout/underline format.

The Responsible Official has changed to Mark D. Segel, Partner, Pacific Crockett Energy, LLC at 781-292-7005 and the Facility Contact has changed to Patrick Morris, Environmental Coordinator, or Chris Sargent, Environmental Coordinator at 510-787-4101.

The facility has submitted one application (Application # 6436) since the original Major Facility Review permit was issued on March 7, 2001. Application # 6436 was submitted for replacement of the duct burner on the Heat Recovery Steam Generator (S-202). There were no changes made to permit condition # 14970 as a result of the duct burner replacement.

B. Facility Description

This facility is a privately owned power plant located adjacent to the C&H Sugar refinery. The power generation configuration for the 240 MW net capacity facility consists of a single power block containing a gas-fired combustion turbine (S-201) in a single shaft arrangement with a single automatic extraction condensing steam turbine driving a single generator. The power block includes one heat recovery steam generator (HRSG) with duct burners (S-202) that can be supplementally fired with natural gas. The steam turbine exhausts into a roof mounted

air-cooler condenser. The power plant is designed to accommodate the dispatch requirements of the power sales agreement with Pacific Gas & Electric (PG&E). Crockett Cogeneration is a Qualifying Facility and is therefore not covered under Title IV of the Federal Clean Air Act (Acid Rain). The cogeneration facility also contains three 249,000 lb/hr auxiliary boilers (S-203, S-204, and S-205) to provide steam to the sugar refinery when the cogeneration plant is off-line. Since the gas turbine is operated to supply electric power under the contract to PG&E and steam is supplied under contract to C&H Sugar refinery, Crockett Cogeneration is dependent on these other external operations.

The operation of Crockett Cogeneration replaced the operation of older boilers at C&H Sugar refinery. At the time of construction and initial operation in 1996, Crockett Cogeneration met all Best Available Control Technology (BACT) requirements and was fully offset. The air pollution control system involves several components. The first is General Electric's dry, low-NOx 2.6 combustors on the combustion turbine (CT) and Coen low-NOx burners on the HRSG. Second, the facility incorporates post-combustion SCR and oxidizing catalysts to reduce NOx, CO, and organic compounds. Crockett Cogeneration uses utility grade natural gas exclusively. There is no open water cooling tower at the facility.

There are no significant changes in the process or regulation since the last Title V permit was issued.

The 2001 plant inventory emissions are as follows:

	Heat Input (therms/yr)	PM TPY	Organics TPY	NOx TPY	SO2 TPY	CO TPY	NH3 TPY	Benzene TPY	Formaldehyde TPY	Toluene TPY
S201	1.16E+08	27.47	10.42	102.13	4.67	42.69	148.0075	0.0140	1.6425	0.0056
S202	5.54E+06	1.57	7.70	4.85	0.22	2.03	7.0445	0.0030	0.0031	0.0498
S203	7.51E+06	2.14	0.88	3.56	0.29	2.87	3.1573	0.0005	0.0042	0.0084
S204	1.46E+06	0.42	0.16	0.69	0.05	5.55	0.6132	0.0001	0.0008	0.0016
S205	2.14E+06	0.60	0.26	1.02	0.09	0.82	0.9016	0.0002	0.0012	0.0024
Total	1.33E+08	32.19	19.42	112.26	5.33	53.95	159.72	0.02	1.65	0.07

There has been a decrease in emissions due to a decrease in the amount of natural gas burned at this facility.

The 2007 plant inventory emissions are as follows:

	Heat Input (therms/yr)	PM TPY	Organics TPY	NOx TPY	SO2 TPY	CO TPY	NH3 TPY	Benzene TPY	Formaldehyde TPY	Toluene TPY
S201	5.05E+07	11.92	4.53	44.31	2.03	18.52	64.22	0.0061	0.7129	0.0024
S202	2.27E+05	0.07	0.31	0.20	0.00	0.09	0.29	0.0001	0.0001	0.0020
S203	7.38E+06	2.10	0.86	3.50	0.29	2.81	3.11	0.0005	0.0042	0.0083
S204	7.52E+06	2.14	0.88	3.56	0.31	5.73	3.16	0.0005	0.0042	0.0084
S205	5.94E+06	1.70	0.69	2.81	0.24	2.26	2.50	0.0004	0.0033	0.0067
Total	7.16E+07	17.90	7.26	54.39	2.87	29.40	73.28	0.01	0.72	0.03

The change in plant emissions between 2001 and 2007 are:

Pollutant	Change in Plant Emissions (tons/yr)
PM	-14.29
Organics	-12.15
NOx	-57.87
SO2	-2.46
CO	-24.55
NH3	-86.44
Benzene	-0.01
Formaldehyde	-0.93
Toluene	-0.04

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 certain fossil-fuel fired electrical generating facilities or the accidental release (40 CFR § 68) programs 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.

Changes to permit:

- The dates of adoption and approval of rules in Standard Condition I.A have been updated.
- The word "Basis" has been added to each citation for clarity.
- The dates of each regulation's most recent version have been changed to the M/DD/YYYY format.
- SIP Regulation 2, Rule 6 - Permits, Major Facility Review has been added to Standard Condition I.A. because BAAQMD Regulation 2, Rule 6 (4/16/2003) is not federally enforceable.
- The following language was added to Standard Condition I.B.1: "If the permit renewal has not been issued by [APPLICABLE DATE], but a complete application for renewal has been submitted in accordance with the above deadlines, the existing permit will continue in force until the District takes final action on the renewal application." This is the "application shield" pursuant to BAAQMD Regulation 2-6-407.
- The following language was added to Standard Condition I.B.2: "reopening the permit for cause prior to the end of the term and terminating, revoking and reissuing, or modifying the permit" to satisfy Regulation 2-6-409.8, which requires the District to specify the conditions under which the permit may be reopened for cause and modified, revoked, reissued, or terminated, prior to the end of the term.
- Standard Condition I.B.11, which requires the responsible official to certify all documents submitted, was added to satisfy BAAQMD Regulation 2-6-409.20.
- The following language was added as Standard Condition I.B.12: "The permit holder is responsible for compliance, and certification of compliance, with all conditions of the permit, regardless whether it acts through employees, agents, contractors, or subcontractors. (Regulation 2-6-307)." The purpose is to reiterate that the Permit Holder is responsible for ensuring that all activities at the facility comply with all applicable requirements.
- Standard Condition I.E.1 requiring the permit holder to provide any information, records, and reports requested or specified by the APCO, was added because it originally was omitted in error. Regulation 3 was removed as a basis from Standard Condition I.E.2.
- The dates of the reporting periods and reporting deadlines have been added to Standard Conditions I.F and I.G for additional clarity.

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., S-24).

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:

- Table II-A has been updated because S-202 Heat Recovery Steam Generator Duct Burner from Forney, 349 MMBTU/hr was replaced with Coen burner, 288.9 MMBTU/hr through application #6436 in 2002.
- References to TRMP have been replaced with BAAQMD Regulation 2, Rule 5 [Toxics], which was adopted 6/17/2005 and became effective 7/1/2005.

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*** pursuant to the definition in BAAQMD Rule 2-6-239.

Changes to permit:

- Language has been added to Section III to clarify that this section contains requirements that may apply to temporary sources. This provision allows contractors that have "portable" equipment permits that require them to comply with all applicable requirements to work at the facility on a temporary basis, even if the permit does not specifically list the temporary source. Examples are temporary sand-blasting or soil-vapor extraction equipment.
- Language has been added to Section III to say that SIP standards are now found on EPA's website and are not included as part of the permit.
- The note regarding SIP information from the Rule Development Section has been deleted since the SIP standards are now found on EPA's website.
- Table III has been updated by adding the following rules and standards to conform to current practice:
  - BAAQMD Regulation 2, Rule 1, General Requirements

- SIP Regulation 2, Rule 1, General Requirements
- BAAQMD Regulation 2, Rule 2, Permits, New Source Review
- SIP Regulation 2, Rule 2 Permits, New Source Review
- BAAQMD Regulation 2, Rule 3, Permits, Power Plants
- BAAQMD Regulation 2, Rule 4, Permits, Emissions Banking
- SIP Regulation 2, Rule 4, Permits, Emissions Banking
- BAAQMD Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- BAAQMD Regulation 2, Rule 6, Permits, Major Facility Review
- SIP Regulation 2, Rule 6, Permits, Major Facility Review
- BAAQMD Regulation 2, Rule 9, Permits, Interchangeable Emission Reduction Credits
- BAAQMD Regulation 3, Fees
- SIP Regulation 3, Fees
- SIP Regulation 5, Open Burning
- BAAQMD Regulation 6, Rule 1, Particulate Matter
- SIP Regulation 6, Particulate Matter and Visible Emissions
- BAAQMD Regulation 8, Rule 2, Miscellaneous Operations
- SIP Regulation 8, Rule 2, Miscellaneous Operations
- BAAQMD Regulation 8, Rule 40 Organic Compounds - Aeration of Contaminated Soil and Removal of Underground Storage Tanks
- BAAQMD Regulation 8, Rule 47, Organic Compounds -Air Stripping and Soil Vapor Extraction Operations
- SIP Regulation 8, Rule 47, Organic Compounds -Air Stripping and Soil Vapor Extraction Operations
- SIP Regulation 8, Rule 51, Adhesive and Sealant Products
- BAAQMD Regulation 9, Rule 1, Sulfur Dioxide
- SIP Regulation 9, Rule 1, Sulfur Dioxide
- SIP Regulation 12, Rule 4, Miscellaneous Standards of Performance - Sandblasting
- California Health and Safety Code Section 41750 et seq., Portable Equipment
- California Health and Safety Code Section 44300 et seq., Air Toxics "Hot Spots" Information and Assessment Act of 1987
- California Health and Safety Code Section 93115 et seq., Airborne Toxic Control Measure for Stationary Compression Ignition Engines
- 40 CFR Part 61, Subpart M, National Emission Standards for Hazardous Air Pollutants – National Emission Standard for Asbestos
- 40 CFR Part 82.161 and 86.166 Recycling and Emissions Reductions - Technician Certification and - Reporting and Recordkeeping Provisions - descriptions have been updated
- 40 CFR 82, Subpart H Protection of Stratospheric Ozone; Halon Emissions Reduction
- Title 40 Part 82 Subpart H 82.270(b) Prohibitions, Halon

- The dates of adoption or approval of the rules and their "federal enforceability" status in Table III have also been updated.

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

The facility is not subject to Title IV of the Clean Air Act (Acid Rain) because it is a Qualifying Facility.

The facility is not subject to 112(j) of the Clean Air Act because it is not a major source of hazardous air pollutants.

Changes to permit:

- Section IV has been modified to say that SIP standards are now found on EPA's website and are not included as part of the permit.
- The dates of adoption or approval of the rules and their "federal enforceability" status have been updated.
- References to TRMP have been replaced with BAAQMD Regulation 2 Rule 5 [Toxics], which was adopted 6/17/2005 and became effective 7/1/2005.
- The word "Basis" has been added for clarity to all parts of the permit conditions that cite a rule or regulation.
- The dates of each regulation's most recent version have been changed to the M/DD/YYYY format.

Table IV-A, S-201, Gas Turbine

- BAAQMD Regulations 1-520 and 1-520.8 have been added to specify the continuous emission monitoring requirements.

- BAAQMD Regulation 1-602 has been added to state that all procedures involved in the installation of a continuous air pollutant monitor are detailed in the BAAQMD Manual of Procedures.
- SIP Regulation 1, sections 1-522, 1-522.7, 1-523, and 1-523.3 have been added.
- BAAQMD Regulation 6, Rule 1 has been added since the District modified the labeling from Regulation 6 to Regulation 6, Rule 1.
- SIP Regulation 6 has been added since BAAQMD Regulation 6, Rule 1 is not yet federally enforceable.
- BAAQMD Regulation 6-1-310.3 has been added to specify that in heat transfer operations the actual concentration of particulate matter in the exhaust shall be corrected to the concentration of particulate matter in the absence of water vapor, at standard conditions and containing 6% oxygen by volume.
- The applicable requirement name BAAQMD Regulation 9-9-301.3 has been replaced with the name BAAQMD Regulation 9-9-301.1.3 to correct the citation and the description has been expanded.
- BAAQMD Regulation 9-9-401 has been added to state that the owner/operator of a gas turbine subject to BAAQMD Regulation 9-9-301.1.2 or 9-9-301.1.3 may be able to adjust the emissions limit if a thermal efficiency of 25% can be demonstrated, according to the subsections of Regulation 9-9-401.
- BAAQMD Regulations 9-9-601, 9-9-602, and 9-9-604 have been added to state the location of procedures for determining emissions, stack gas oxygen, and HHV and LHV, respectively.
- SIP Regulation 9, Rule 9 and the applicable sections have been added for federally enforceable requirements.
- BAAQMD Regulation 10-40, part of Regulation 10, subpart GG, has been added to state the applicable NSPS standards of performance for stationary gas turbines.
- 40 CFR 60 (NSPS) Subpart A, 60.4(a) and 60.4(b) have been added to clarify reports must be sent to EPA and to the District.
- 40 CFR 60 (NSPS) Regulations 60.330(a) and 60.330(b) have been added to clarify the applicability of the facility to 40 CFR 60 Subpart GG.
- 40 CFR 60 (NSPS) Regulation 60.333(b) has been added to require the use of fuels that contain no more than 0.8 percent by weight of sulfur.
- The description of 40 CFR 60 (NSPS) Regulation 60.334(b)(2) has been removed because the source is not subject to that section since it does not use water or steam injection to control NOx emissions.
- 40 CFR 60 (NSPS) Regulation 60.334(h)(3) has been added to clarify the facility is exempt from monitoring sulfur content of its fuel because they use PUC quality natural gas.

S-202, Heat Recovery Steam Generator

- BAAQMD Regulation 1-520.8 has been added to specify the continuous emission monitoring requirements.
- SIP Regulations 1-522, 1-522.7, 1-523, and 1-523.3 have been added as federally enforceable requirements.
- BAAQMD Regulation 6, Rule 1 has been added since the District modified the labeling from Regulation 6 to Regulation 6, Rule 1.

- SIP Regulation 6 has been added since BAAQMD Regulation 6, Rule 1 is not yet federally enforceable.
- BAAQMD Regulation 9-3-601 has been added to state that the methods for determining NOx concentrations can be found in the BAAQMD Manual of Procedures Volume IV.
- BAAQMD Regulation 9-11-114 has been added to state that duct burners and heat recovery steam generators used to recover sensible heat from combustion turbine exhaust are exempt from Rule 9-11.
- BAAQMD Regulation 10-40, part of Regulation 10, Subpart Da, has been added to state the applicable NSPS standards of performance for Electric Utility Steam Generating Units. The District regulation states the maximum averaging period for emissions from this source is 24 hours.
- 40 CFR 60 (NSPS) Subpart A, 60.4(a) has been added to clarify reports must be sent to EPA and to the District.
- 40 CFR 60 (NSPS) Subpart Da citations have been corrected to reflect "Da."
- 40 CFR 60 (NSPS) Regulation 60.40 Da(a) has been added to clarify the applicability of this regulation to the source.
- 40 CFR 60 (NSPS) Regulation 60.40 Da(g) description has been changed to clarify that the 30-day rolling average basis for emissions is the federally enforceable requirement, whereas the 24-hour averaging time for emissions is for the District and is listed under BAAQMD Regulation 10-40, part of Regulation 10, Subpart Da.
- Citations for 40 CFR 60.48Da(a), 60.48Da(b), and 60.48Da(c) have been updated to reflect the change in the regulation.
- 40 CFR 60 (NSPS) Regulation 60.47 a(f) has been removed because the source is exempt from opacity, SO2, and NOx continuous monitoring requirements.
- 40 CFR 60 (NSPS) Regulation 60.49Da(b) has been added to clarify the source is exempt from SO2 continuous emissions monitoring.
- 40 CFR 60 (NSPS) Regulation 60.49Da(o) has been added to clarify the source is exempt from NOx continuous emissions monitoring.
- 40 CFR 60 (NSPS) Regulation 60.49Da(u)(2) has been added to clarify the source is exempt from opacity monitoring.
- Citations for 40 CFR 60.50Da and 60.51Da(a) have been updated to reflect the change in the regulation.
- 40 CFR 60.49a(b) through (i) have been removed because the source is not subject to these requirements because it is exempt from opacity, SO2, and NOx continuous monitoring requirements.

S203, S204, and S205, Auxiliary Steam Boilers

- SIP Regulations 1-522, 1-522.7, 1-523, and 1-523.3 have been added as federally enforceable requirements.
- BAAQMD Regulation 6, Rule 1 has been added since the District modified the labeling from Regulation 6 to Regulation 6, Rule 1.
- SIP Regulation 6 has been added since BAAQMD Regulation 6, Rule 1 is not yet federally enforceable.
- BAAQMD Regulation 10-40, part of Regulation 10, Subpart Db, has been added to state the applicable NSPS standards of performance for Industrial-Commercial-Institutional Steam Generating Units. The District regulation states the maximum averaging period for emissions from this source is 24 hours.

- BAAQMD Regulations 11-1-301 and 11-1-302 have been added to specify limits on the discharge of lead.
- 40 CFR 60 (NSPS) Subpart A, 60.4(a) has been added to clarify reports must be sent to EPA and to the District.
- 40 CFR 60 (NSPS) Subpart A, 60.4(a) has been added to clarify reports must be sent to EPA and to the District.
- 40 CFR 60 (NSPS) Subpart D has been removed because the sources are not subject to Subpart D per 60.40b(j) since they are subject to Subpart Db.
- 40 CFR 60 (NSPS) Regulation 60.40b(a) has been added to clarify the applicability of this regulation to the sources.
- 40 CFR 60 (NSPS) Regulation 60.44b(j) has been updated with 60.44b(i) to reflect the change in the regulation. The description has been changed to clarify that the 30-day rolling average basis for emissions is the federally enforceable requirement, whereas the 24-hour averaging time for emissions is for the District and is listed under BAAQMD Regulation 10-40, part of Regulation 10, Subpart Db.
- 40 CFR 60 (NSPS) Regulation 60.48b(1) requirement for NOx continuous emissions monitoring has been added.
- 40 CFR 60 (NSPS) Regulation 60.49b(i) requirement for records to be submitted has been added.

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.

The BAAQMD Compliance and Enforcement Division has conducted a review of compliance over the past year and has no records of compliance problems at this facility during the past year.

The compliance report is provided in Appendix A of this permit evaluation and statement of basis.

Changes to permit:
None.

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 has 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.

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 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 was used for a condition imposed by the APCO to ensure compliance with limits that arise from the District's Toxic Risk Management Policy, but has been replaced by BAAQMD Regulation 2, Rule 5, New Source Review for Toxic Air Contaminants.

Changes to permit:

- The language of the permit conditions has been changed to "The owner/operator shall…" and the sentence structure has been changed accordingly.

- The word "Basis" has been added for clarity to all parts of the permit conditions that cite a rule or regulation.
- References to TRMP have been replaced with BAAQMD Regulation 2 Rule 5 [Toxics], which was adopted 6/17/2005 and became effective 7/1/2005.
- The heat input rate to the HRSG has changed from 349 to 288.9 million BTU/hr to reflect the replacement of the duct burner in section 3.
- The word "methane" had been added to part 20(c) for clarity.
- The words "BAAQMD Regulation" have been added to parts 30, 31, and 32 for clarity.
- Language in part 32 was changed to conform to the language in Regulation 1-522.7 ("no more than 96 hours from the first occurrence of the violation" was changed to "no more than 96 hours after the first occurrence of the violation").

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 monitoring and has determined the existing monitoring is adequate.

Changes to permit:

- A note has been added at the beginning of the section to clarify that this section is a summary of the limits and monitoring, and that in the case of a conflict between Sections I-VI and Section VII, the preceding sections take precedence.
- The headings at the top of the tables have been updated. "Emission Limit Citation" has been changed to "Citation of Limit" since not every limit is an emission limit. "Emission Limit" has been changed to "Limit" since not every limit is an emission limit.
- The description of the BAAQMD 6-1-301 limit in Section VII has been corrected to say "for < 3 min/hr."
- The "Type of limit" has been changed from TSP to "Opacity" for BAAQMD Regulation 6-1-301, and BAAQMD 6-1-304 since these are opacity standards.
- The "type of limit" has been updated to "FP" for BAAQMD Regulation 6-1-310 and 6-1-311, since it is a filterable particulate standard.
- The description of the limit for BAAQMD 6-1-301 has been expanded from "Ringelmann No. 1" to "Ringelmann No. 1 for no more than 3 min/hr" to be more specific.

Table VII-B S-202, Heat Recovery Steam Generator

- NSPS Subpart Da citations have been updated from "a" to "Da" to reflect the change in the regulation. Emission limit description was changed from TSP to Filterable Particulate.
- Monitoring Requirement Citation for NOx NSPS limit has been corrected to state that S-202 is exempt from NOx monitoring requirements per 40 CFR 60.334(j)(1)(iii). The monitoring requirement no longer needs to be subsumed since the source is exempt from that requirement.
- The heat input limit to the HRSG has changed from 349 to 288.9 million BTU/hr to reflect the replacement of the duct burner.

Table VII-C S203, S-204, S-205, Auxiliary Steam Boilers

- NSPS 40 CFR 60.42(a)(1) and 60.42(a)(2) were removed because Subpart D does not apply to these sources per NSPS 40 CFR 60.40b(j).

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.

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

Changes to permit:

- BAAQMD Regulation 6 was updated to BAAQMD Regulation 6-1
- NSPS 40 CFR 60.42(a)(1) and 60.42(a)(2) were removed because Subpart D does not apply to these sources per NSPS 40 CFR 60.40b(j).
- NSPS Subpart Da citations have been updated from "a" to "Da" to reflect the change in the regulation.
- Citation for NOx limit in NSPS Subpart Db has been updated to 60.44b(a)(1)(i).

IX. 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 second type of permit shield.

Changes to permit:

- Table IX-A, S201 Gas Turbine, has been removed.
    - The subsumed requirement of Fuel Sulfur and Nitrogen Content monitoring previously in 40 CFR 60.334(b)(2) are not applicable requirements and therefore do not need to be subsumed. The facility is exempt from fuel nitrogen monitoring requirement in 40 CFR 60.334(h)(2) because it does not claim an allowance for fuel bound nitrogen. The facility is exempt from the fuel sulfur monitoring requirement under 40 CFR 60.334(h)(3) because it has a contract in place with the fuel supplier

specifying that the supplied gas meets the definition of natural gas in 40 CFR 60.331(u).
  - The subsumed requirement of reporting Periods of Excess NOx Emissions previously in 40 CFR 60.334(c)(1), are now in 40 CFR 60.334(j)(1)(iii), are applicable to this source and are not subsumed.
- Table IX-B, S-202 Heat Recovery Steam Generator, has been removed because Continuous Monitoring of Nitrogen Oxides previously in 40 CFR 60.47a(c) is not an applicable requirement because 40 CFR 60.49Da(o) exempts Duct Burners on HRSG from NOx CEM requirements. Therefore the requirement does not need to be subsumed.

X. Glossary

Changes to permit:

The glossary was updated with the following terms:

APCO, Air Pollution Control Officer

CEC, California Energy Commission

PUC, Public Utilities Commission

TRMP, Toxics Risk Management Plan was removed because the regulatory basis is now BAAQMD Regulation 2, Rule 5.

TBACT, Best Available Control Technology for Toxics

XI. Appendix A - State Implementation Plan

Changes to permit:

The address for EPA's website is now found in Appendix A of the proposed permit.

D. Alternate Operating Scenarios

The facility has not requested any alternate operating scenario. Therefore, BAAQMD Regulation 2-6-409.7(d) does not apply. *See* BAAQMD Regulation 2-6-409.7(d) (requiring the permit to state that "the facility must keep a record in a contemporaneous log when the facility changes any aspect of its operations from one permitted scenario to another").

E. Compliance Status

The District has reviewed Crockett Cogeneration's compliance history as part of its evaluation of the Application for permit renewal. Based on this review, the District finds that Crockett Cogeneration is in compliance with all permit requirements, and that there is no need to impose a compliance schedule.

As noted in the memorandum attached as Appendix A to this permit evaluation and statement of basis, District Compliance and Enforcement Division staff reviewed the annual compliance certifications submitted by Crockett Cogeneration for the period January 1, 2003, through December 31, 2007, as well as District compliance records for the period January 1, 2007, through December 31, 2007.

In addition, District staff has reviewed District compliance records for the period January 1, 2008, through June 30, 2008.

The review revealed no instances of non-compliance with any applicable requirement.

Based on this compliance record, the District has determined that there is no reason to impose a compliance schedule in the renewed Title V permit

F. Differences between the Application and the Proposed Permit

There are no significant differences between the Application for permit renewal (Application # 13143, submitted by Crockett Cogeneration on August 4, 2005) and the proposed permit.

The Application is the basis for the proposed permit. The changes that were made at the facility after the initial Title V permit was issued, including the replacement of the duct burner on HRSG from Fortney, 349 MMBTU/hr to Coen, 288.9 MMBTU/hr pursuant to Permit Application # 6436, have been addressed in the Application and proposed permit. Appendix B contains a copy of the Engineering Evaluation from NSR Application # 6436.

APPENDIX A

BAAQMD COMPLIANCE REPORT

COMPLIANCE & ENFORCEMENT DIVISION

Inter-Office Memorandum

January 8, 2008

TO: BRIAN BATEMAN – DIRECTOR OF ENGINEERING

FROM: KELLY WEE – DIRECTOR OF ENFORCEMENT

SUBJECT: REVIEW OF COMPLIANCE RECORD OF:

CROCKETT COGENERATION, (SITE # B3937)

Background

This review was initiated as part of the District evaluation of an application by Crockett Cogeneration 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 to Operate. The purpose of this review is to assure that any non-compliance problems identified during the prior five-year permit term 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.

Compliance Review

Staff reviewed Crockett Cogeneration Annual Compliance Certifications for January 1 2003 to December 31, 2007 and found no ongoing non-compliance and no recurring pattern of violations.

Staff also reviewed the District compliance records for Crockett Cogeneration for January 1, 2007 through December 31, 2007. During this period Crockett Cogeneration activities known to the District include:

The District did not issue any Notices of Violation.

The District did not receive any air pollution complaints alleging Crockett Cogeneration as the source.

The District did not receive any notifications for Reportable Compliance Activities (RCA)

There are no enforcement agreements, open variances, or open abatement orders for Crockett Cogeneration.

Conclusion

The Compliance and Enforcement Division has made a determination that for the five year period Crockett Cogeneration was in continuous compliance. There is no evidence of on-going non-compliance and no recurring pattern of violations that would warrant consideration of a Title V permit compliance schedule.

APPENDIX B

ENGINEERING EVALUATION
NSR APPLICATION No. 6436

Esoco Crockett, Inc.; Plant #8664
550 Loring Avenue, Crockett CA 94525

BACKGROUND

Esoco Crockett (Crockett Cogeneration) is applying for an Authority to Construct for the following equipment:

S-202 Heat Recovery Steam Generator; replacement of duct burners

As part of normal maintenance procedures, Crockett Cogeneration is planning to replace the existing HRSG duct burners (Forney, rated at 349 MM BTU/hr) with Coen duct burners with a maximum rated heat input of 288.9 MM BTU/hr (HHV).

Because the gas turbine and HRSG duct burner exhaust flows through a common stack and are abated by the same oxidation catalyst and SCR system, this burner replacement will not result in any increase in daily maximum or annual emissions. The gas turbine/HRSG power train will still comply with the existing emission limitations. Although this burner replacement is not considered a modification since there will be no increase in design capacity, it is considered an alteration per Regulation 2-1-233.1. Therefore, it is subject to filing and initial fees and was billed accordingly.

CRITERIA-POLLUTANT EMISSION SUMMARY

Annual Average Project Emissions Increase:

Pollutant	lb/day	ton/yr
POC	0	0
NO_x	0	0
SO_2	0	0
CO	0	0
PM_{10}	0	0
NPOC	0	0

Daily Maximum Emissions by Source (lb/day):

There will no change in daily maximum emissions.

EMISSION CALCULATIONS

S-202 HRSG Duct Burners

As stated above, there will no increase in daily or annual NOx, CO, POC, PM10, or SOx emissions.

FACILITY CUMULATIVE INCREASE
(since April 5, 1991)

Not applicable

TOXIC RISK SCREENING ANALYSIS

Compound	Project Annual Emission Rate (lb/yr)	Risk Screening Trigger Level (lb/yr)
None	N/A	N/A

No further toxic risk assessment is required since none of the compounds listed above are emitted at rates in excess of their respective risk screening trigger levels.

BACT ANALYSIS

Because there will be no increase in daily NOx, CO, POC, PM10, or SOx emissions, the BACT requirement of NSR does not apply.

OFFSET ANALYSIS

Because there will be no increase in annual NOx, CO, POC, PM10, or SOx emissions, the BACT requirement of NSR does not apply.

FEE SUMMARY

Source	Fee Schedule	Filing Fee	Initial Fee	Late Fee	Permit to Operate Fee	Source Sub-Total
S-202 HRSG Duct Burner	B	$250.00	$9,524.00	$0.00	$0.00	$9,774.00
					Grand Total	$9,774.00
					Amount Paid	$9,744.00
					Log Number	H757W H757X

STATEMENT OF COMPLIANCE

S-202 HRSG Duct Burners are expected to continue to comply with all applicable permit conditions and District, State, and Federal Regulations, since the combined exhaust from the S-201 Gas Turbine and the HRSG will continue to be abated by the A-201 Oxidation Catalyst and A-202 SCR System.

This project is **categorically exempt** from District CEQA Regulation 2-1-311 pursuant to Regulation 2-1-312.11 (Permit applications for a new/modified source(s) or for process changes which will satisfy the "No Net Emission Increase" provisions of Regulation 2, Rule 2, and for which there is no possibility that the project may have any significant environmental effect in

connection with any environmental media or resources other than air quality) and therefore is not subject to CEQA review.

The Crockett Cogeneration facility is **not** located within 1000 feet of the outer boundary of a K-12 school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

A Toxics Risk Screening Analysis is not required since there will be no increase in TAC emissions as a result of the duct burner replacement. TBACT does not apply to this project.

BACT, Offsets, PSD, NSPS, and NESHAPS do not apply to this project.

PERMIT CONDITIONS

There will be no changes to condition #14970 as a result of the duct burner replacement.

RECOMMENDATION

Issue a **conditional Authority to Construct** for the following source:

S-202 Heat Recovery Steam Generator; installation of replacement duct burner, Coen, 288.9 MM BTU/hr (HHV)

Air Quality Engineer II

11/21/02

Date

APPENDIX C

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

CEC
California Energy Commission

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.

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.

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)

NOx
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, NOx, 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

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

TBACT
Best Available Control Technology for Toxics

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