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

Los Esteros Critical Energy Facility, LLC
Facility #B3289

Facility Address:
800 Thomas Foon Chew Way
San Jose, CA 95134

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March 2018

Application Engineer: Brenda Cabral
Site Engineer: Brenda Cabral

Applications: 28412

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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, Title 70 of Volume 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 and a Phase II Acid Rain facility as defined by BAAQMD Regulation 2-6-217. 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, more than 100 tons per year of ammonia.

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 B3289.

This facility received its initial Title V permit on June 10, 2004. The permit was renewed on June 6, 2012. A significant revision was also issued on June 6, 2012. A minor revision was issued on May 19, 2015.

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.

B. Facility Description

The LECEF is an electric generating facility. It is located in the northern edge of the city of San Jose in Santa Clara County. The facility was online and selling electricity to the grid in March of 2003 as a simple-cycle facility consisting of four natural gas-fired turbines and rated at 180 MW.

In January 2012, LECEF ceased operation in simple-cycle mode as part of its conversion to a 320 MW combined-cycle power plant. In a combined-cycle operation, the waste heat in the turbine exhaust is recovered to make steam to turn a steam turbine and generate additional electric power, which increases the plant's overall efficiency. The conversion to combined-cycle operation entailed the addition of four heat recovery steam generators (HRSGs), one steam turbine generator and one six-cell cooling tower. The old simple-cycle operation is referred to as "Phase I", and the new combined-cycle operation is referred to as "Phase II".

The Phase II combined-cycle facility is subject to the following annual emission limits.

Maximum Annual Criteria Pollutant Emission Limits

Pollutant:	NO_x	POC	PM_{10}	CO	SO_2
Annual Emission Limit	95.21	12.31	44.24	53.44	6.45

The Phase II combined-cycle facility is subject to the following limits on Toxic Air Contaminants (TACs).

Maximum Annual TAC Emissions

HAP:	Ammonia	Formaldehyde	Acetaldehyde	Acrolein	PAHs
Emission Limit	56.9 tpy	3.2 tpy	1.5 tpy	65.3 lb/yr	3.2 lb/yr

There has been no significant change in emissions since the permit was renewed in 2012. In some years, the facility operates infrequently due to market forces.

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. The section will contain a standard condition pertaining to Title IV (Acid Rain) requirements for fossil-fuel fired electrical generating facilities and the accidental release (40 CFR § 68) since these programs apply. 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 amendment/adoption dates for the Administrative Requirements in I.A will be updated.

The dates in Section I.B. will be updated.

The reporting addresses in Sections I.F and I.G have been updated. Email addresses for reporting have also been added.

The District no longer prepares compliance certification materials for the facilities, so mention of these has been deleted from Section I.G.

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 an authority to construct or 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
Source S13, Fire Water Diesel Pump, was not installed and will be removed from Table II-A.

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.

Changes to Permit:
Table III will be updated to reflect current regulation adoption dates and additional applicable regulations, and to add new regulations that have been adopted since the original Title V permit was issued.

SIP Regulation 2, Rules 1 and 2, will be deleted since the current BAAQMD Regulations are now also the SIP Regulations.

BAAQMD Regulation 14, Rule 1, Bay Area Commuter Benefits Program, has been added.

California Health and Safety Code Section 41750 et seq., Portable Equipment, has been added.

California Health and Safety Code Title 17, Section 93116, Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater, has been added.

COMPLEX APPLICABILITY DETERMINATIONS:

BAAQMD Regulation 4, Air Pollution Episode Plan

This facility is not subject to District Regulation 4 and SIP Regulation 4 because the potential to emit is limited by permit conditions to less than 100 tons per year or more of air contaminants for which a California or federal ambient air quality standard is established pursuant to Regulation 4-301.

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 turbines are 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 SO_2 limit. The facility must hold sufficient SO_2 allowances by March 1 (February 29 of a leap year) of every year to offset each ton of SO_2 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 SO_2, NO_x, and CO_2 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 contain specific provisions for SO_2 monitoring. 75.11(d)(2) allows the use of Appendix D to monitor SO_2 emissions from gas fired units. The facility monitors sulfur content of the natural gas to meet Part 75 SO_2 monitoring requirements.

75.12 contain specific provisions for NO_x emission rates. The facility uses a NO_x CEM and an O_2 monitor to meet this requirement.

75.13 contain CO_2 monitoring requirements. The facility monitors CO_2 in accordance with this section using the procedures in part 75, Appendix G.

75.14 contain 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 SO_2, NO_x, flow rate, CO_2, 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 SO_2, NO_x, CO_2, and O_2 along with quality assurance/quality control information

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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.

CARB ATCM for Stationary Compression Ignition Engines

S5, Fire Water Pump Diesel Engine, is entitled to run for up to 50 hours per year for reliability and maintenance, because its particulate emissions are 0.15 g/bhp-hr, as documented in Application 3213, submitted in 2001.

CHANGES TO PERMIT

Table IV-A for S1, S2, S3, S4, and S14, Combustion Turbines, and S7, S8, S9, and S10, HRSGs, will be updated to reflect a new regulation adoption date for Regulation 2, Rule 1.

The phrase "HRSGs only" will be deleted from the citation of SIP Regulation 6-310.3 and BAAQMD Regulation 6-1-310.3 because the limit applies to both the turbines and the HRSGs based on BAAQMD Regulation 1-107, Combination of Emissions.

Table IV-B for S5 diesel fire pump will be updated as follows:

- Mention of S13 will be deleted since S13 was never installed.
- A citation of BAAQMD Regulation 9-8-110, Exemptions, was added because the table contained 9-8-110.5.
- The citation for 40 CFR Part 63, Subpart ZZZZ, NESHAPs for Stationary Reciprocating Internal Combustions Engines (RICE), Section 6655(d) was clarified. The engine is subject to part 9 of Table 6. The mention of the hours of operation was deleted from the citation because Table 6, part 9, does not mention them.
- The future effective date for the NESHAPS was deleted since it has passed.
- The numbering for the citations for the CARB ATCM have changed.

Table IV-D for S13 will be deleted since this source was not installed.

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."

The facility was operating under a custom schedule of compliance based on an Enforcement Agreement from November 25, 2014 to November 1, 2015. During that time, the facility made improvements to the CO abatement for the turbines and HRSGs. The Enforcement Agreement has passed and the custom schedule of compliance has been removed.

Since the District has not determined that the facility is out of compliance with an applicable requirement at this time, 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 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.
- Regulation 2, Rule 5: 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:
Mentions of S13 have been deleted since it was not installed.

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 the limits for which there is no monitoring required and has determined that additional monitoring is not required. The District has also examined the monitoring for other limits and has determined that the monitoring is adequate to provide a reasonable assurance of compliance. Calculations for potential to emit are 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**.**

PM_{10} Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S1, S2, S3, S4, & S14, Combustion Gas Turbines, S7, S8, S9, S10 HRSGs, S11, Cooling Tower and Exempt Cooling Tower	BAAQMD Regulation 6-1-301	Ringelmann 1.0 for more than 3 min/hr	None
S1, S2, S3, S4, & S14, Combustion Gas Turbines, S7, S8, S9, S10 HRSGs, S11, Six Cell Cooling Tower and Exempt Cooling Tower	SIP Regulation 6-301	Ringelmann 1.0 for more than 3 min/hr	None
S5, Diesel Fire Pump	BAAQMD Regulation 6-1-303	Ringelmann 2.0 for more than 3 min/hr	None
S5, Diesel Fire Pump	SIP Regulation 6-303	Ringelmann 2.0 for more than 3 min/hr	None

PM_{10} Sources			
S# & Description	**Emission Limit Citation**	**Federally Enforceable Emission Limit**	**Monitoring**
S1, S2, S3, S4, & S14, Combustion Gas Turbines, S5, Diesel Fire Pump S7, S8, S9, S10, HRSGs, S11, Cooling Tower and Exempt Cooling Tower	BAAQMD Regulation 6-1-310	0.15 grain/dscf	None
S1, S2, S3, S4, & S14, Combustion Gas Turbines, Diesel Fire Pump and Exempt Cooling Tower, S7, S8, S9, S10, HRSGs S11 Six Cell Cooling Tower	SIP Regulation 6-310	0.15 grain/dscf	None
S1, S2, S3, S4, & S14, Combustion Gas Turbines, and S7, S8, S9, S10, HRSGs	BAAQMD Regulation 6-1-310.3	0.15 grain/dscf @ 6% O2	None
S1, S2, S3, S4, & S14, Combustion Gas Turbines, and S7, S8, S9, S10, HRSGs	BAAQMD Regulation 6-310.3	0.15 grain/dscf @ 6% O2	None
Exempt Cooling Tower (2-cell), S11 Six Cell Cooling Tower	BAAQMD Regulation 6-311	40 lb/hr	None
Exempt Cooling Tower (2-cell), S11 Six Cell Cooling Tower	SIP Regulation 6-311	40 lb/hr	None
S1, S2, S3, & S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 22	38.5 tons/year PM10 for all turbines and HRSGS combined including startup and shutdown.	Annual source test, calculations

PM Discussion:
BAAQMD Regulation 6, Rule 1 "P*articulate 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. The combustion turbines (Sources S1, S2, S3, & S4) and the HRSGs (Sources S7, S8, S9, & S10) burn 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.

EPA's June 24, 1999 agreement with CAPCOA and ARB entitled "Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP" states that no monitoring will be required for opacity for diesel standby and emergency reciprocating engines if California diesel or other low-sulfur fuels are used. The reason is that the use of low-sulfur fuels reduces particulates. Also, these engines are used infrequently and therefore, are not large sources of particulate emissions. Because the S5 Fire Pump Diesel Engine will utilize "California" diesel fuel, no monitoring is required to ensure compliance with the visible emissions limitation of Regulation 6-1-303.1.

The two Cooling Towers are 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

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% O_2. 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. Sources S1, S2, S3, S4, S7, S8, S9, S10, and S14 burn 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 these sources.

The grain loading from the Cooling Towers are expected to be much less than 0.15 grains per dscf. Permit Condition #23688 Part 46 require a daily test for the TDS level in the cooling water, and an initial source test (thereafter on the 5^{th} and 15^{th} years) for the cooling drift rate, to ensure that the S11 Cooling Tower will emit less than 0.15 grains per

dscf. The smaller exempt two cell tower is much smaller than the six cell S11 Cooling Tower and monitoring will not be required.

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", proposes the following monitoring for the grain loading standard for non-utility distillate-oil-fueled emergency piston-type IC Engines: Maintain records of all engine usage (such as time or fuel meter readings) and maintenance. S5 Fire Pump Diesel Engine is subject to such monitoring.

Process Weight Standard

BAAQMD Regulation 6-1-311 limits the filterable particulate (FP) emissions of any process over 57,320 lb/hr to 40 lb/hr. Both the exempt cooling tower and S11 are above 57,320 lb/hr.

The evaluation for Application 8859 concluded that the exempt cooling tower could emit up to 0.354 lb FP/hr and S11 could emit up to 1.827 lb FP/hr. Therefore, the cooling towers comply with BAAQMD Regulation 6-1-311 by a wide margin and no additional monitoring is required.

Maximum Annual Mass Emissions Limit

The combined cycle plant is be subject to BAAQMD Permit Condition #23688, part 22, which will limits PM_{10} emissions from all power trains (S1, S2, S3, S4, and S14, gas turbines and S7, S8, S9, and S10, HRSGs) to 38.5 tons/yr. Part 22 requires the facility to demonstrate compliance with this emissions limit by continuously monitoring fuel usage and calculating total annual PM_{10} emissions by multiplying fuel usage by an emissions factor determined during the annual source test. The 2016 source tests showed that all power trains emitted about 0.002 lb PM10/MMbtu. At a maximum capacity of 500 MMbtu/hr/turbine and 139 MMbtu/hr/HRSG, annual emissions would be about 22.4 tpy. Therefore, the source tests show that the sources are in compliance.

SO_2 Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S1, S2, S3, S4, S14, Combustion Gas Turbines, S5, Diesel Fire Pump S7, S8, S9, S10 HRSGs	BAAQMD 9-1-301	Ground level concentrations of SO2 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

SO_2 Sources			
S# & Description	**Emission Limit Citation**	**Federally Enforceable Emission Limit**	**Monitoring**
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10 HRSGs	BAAQMD 9-1-302	300 ppm (dry)	Fuel Gas Total sulfur content analysis
S5 Diesel Fire Pump	BAAQMD 9-1-304	Sulfur content of fuel < 0.5% by weight	None
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10 HRSGs	NSPS Subpart KKKK 40 CFR 60.4330(a)(2)	0.060 lb/SO2/MMbtu	None
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10 HRSGs	BAAQMD condition #23688, part 22 (combined cycle)	6.43 tons/calendar year for All turbines combined including startup and shutdown of turbines except during commissioning	Periodic Sulfur Analysis, Calculations Annual Source Test

SO_2 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 to have ground level monitoring by the APCO.

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.

The S5 Fire Pump Diesel Engine will utilize “California” diesel fuel that contains no more than 15 ppm sulfur. Therefore, monitoring is not required.

NSPS 40 CFR 60.4330(a)(2)

This federal regulation, which applies after the Phase II conversion, requires that the total sulfur content of fuel used at the gas turbines be less than 0.060 lb SO2/MMBtu. As described above, the natural gas used at S1, S2, S3, S4, and S14 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 0.0028 lb SO2/MMBtu[1]. The maximum grain loading in pipeline natural gas is much lower than 0.060 lb SO2/MMBtu. Therefore, no monitoring is required to ensure compliance with this limit.

Maximum Annual Mass Emissions Limits

The combined cycle plant is subject to the BAAQMD Permit Condition #23688, Part 22, which limits SO2 emissions from all power trains (S1, S2, S3, S4, and S14 gas turbines and S7, S8, S9, and S10 HRSGs) to 6.43 tons/yr. Compliance will be determined by calculating annual SO_2 emissions as measured by annual fuel usage times an emissions factor derived from an annual source test. SO_2 emissions are similar to PM_{10} emissions in that they do not depend on any add-on control device and are influenced primarily by the amount of sulfur in the natural gas that is burned. SO2 emissions therefore do not fluctuate greatly, and so it is appropriate to monitor emissions my measuring fuel usage and multiplying it by an emissions factor determined through an annual source test. In addition, compliance with the low-sulfur-fuel requirement will be monitored through monthly fuel sulfur content sampling analysis. This monitoring requirement will have an additional benefit in ensuring that the annual SO2 emissions limit is complied with. For all of these reasons, using fuel use data in conjunction with an emissions factor determined though an annual source test is an appropriate manner to ensure compliance with the annual SO_2 emissions limit.

NOx Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S1, S2, S3, S4, S14, Combustion Gas Turbines, S7, S8, S9, S10, HRSGs	BAAQMD 9-9-301.1.3	9 ppmv @ 15% O2, dry	CEM and annual source test
S1, S2, S3, S4, S14, Combustion Gas Turbines, S7, S8, S9, S10, HRSGs	BAAQMD 9-9-301.2	9 ppmv @ 15% O2, dry Or 0.43 lbs/MW-hr	CEM
S1, S2, S3, S4, S14, Combustion Gas Turbines, S7, S8, S9, S10, HRSGs	SIP 9-9-301.3	9 ppmv @ 15% O2, dry	CEM

[1] The worst case sulfur emission factor (based on 1 gr/dscf sulfur content) is calculated as follows:
(1 gr/100scf)(10^6 Btu/MM Btu)(2 lb SO_2/lb S)/[(7000 gr/lb)(1030 Btu/scf)] = **0.0028 lb SO_2/MM Btu**

NOx Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S1, S2, S3, S4, S14, Combustion Gas Turbines, S7, S8, S9, S10, HRSGs	NSPS Subpart KKKK 40 CFR 60.4320(a)	25 ppmv @ 15% O2, dry	CEM
S1, S2, S3, S4, S14, Combustion Gas Turbines, S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 10	1464 lb/day and 102 lb/hr for all turbines and HRSGs combined during commissioning, including startup and shutdown of turbine without catalyst	CEM
S1, S2, S3, S4, S14, Combustion Gas Turbines, S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 10	1464 lb/day and 61 lb/hr for all turbines and HRSGs combined during commissioning, including startup and shutdown of turbine with catalyst	CEM
S1, S2, S3, S4, S14, Combustion Gas Turbines, S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 19a	2 ppmv @ 15% O2, dry, 1-hr average except during turbine startup or shutdown	CEM
S1, S2, S3, S4, S14, Combustion Gas Turbines, S7, S8, S9, S10, HRSGs	BAAQMD condition #23688 part 20	41 lb/turbine/startup during startup not to exceed 120 minutes	CEM
S1, S2, S3, S4, S14, Combustion Gas Turbines, S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 22	175.6 lb/day for each turbine/HRSG power train including startup and shutdown	CEM
S1, S2, S3, S4, S14, Combustion Gas Turbines, S7, S8, S9, S10, HRSGs	BAAQMD condition #23688 part 22	702.4 lb/day (as NO2) for all turbines combined, including startup and shutdown	CEM
S1, S2, S3, S4, S14, Combustion Gas Turbines, S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 22 (combined cycle)	94.1 tons per year (as NO2) for all turbines combined, including during startup or shutdown	CEM

NOx Discussion:

BAAQMD Regulation 9 Rule 9

The turbines are subject to the NO_x emission limitations in District Regulation 9, Rule 9 (Monitoring and Recordkeeping Requirements). This facility has stationary gas turbines with heat input rates greater than 150 MMBtu/hr that operate more than 4000 hours in a 36-month period. Therefore, they are required to have Continuous Emission Monitoring (CEM) (BAAQMD Regulation 9-9-501).

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 #23688, part 26) on the NO_x CEM to ensure accuracy. NO_x mass emissions are calculated using NO_x and O_2 CEM data, and the fuel heat input rate (from fuel flow meter). The District has determined that no additional monitoring is required.

CO Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 10 (combined cycle)	1056 lb/day and 88 lb/hr for all turbines combined during commissioning, including startup and shutdown of turbine without catalyst	CEM and annual source test
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 10	984 lb/day and 41 lb/hr for all turbines combined during commissioning, including startup and shutdown of turbine with catalyst	CEM
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD Condition #23688 Part 19c	2 ppmv @ 15% O2, dry 1-hr average except during turbine startup or shutdown	CEM and annual source test
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD Condition #23688 Part 19c	2.85 lb CO/hr for each turbine/HRSG, 1-hr average except during turbine startup or shutdown	CEM and annual source test
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 22	97 lb/day for each turbine/HRSG including startup and shutdown	CEM

CO Sources			
S# & Description	**Emission Limit Citation**	**Federally Enforceable Emission Limit**	**Monitoring**
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 20	2 lb/turbine/startup during startup not to exceed 120 minutes	CEM
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 22	388 lb/day for all turbines and HRSGs combined, including startup and shutdown	CEM
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 22	53.4 tons per year for all turbines combined, including startup and shutdown	CEM

CO Discussion:

BAAQMD Regulation 9 Rule 7

The turbines/HRSGs are subject to Condition #23688, part 19c, which establishes a CO emissions limit of 2.0 ppmv @ 15% O2 (1-hr avg.). The turbines/HRSGs have the potential to emit large amounts of CO. Therefore, they are required to have a CO CEM and an annual source test.

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 23688, part #26) on the CO CEMs to ensure accuracy. CO mass emissions are calculated using CO and O_2 CEM data, and the fuel heat input rate (from fuel flow meter). The District has determined that no additional monitoring is required.

POC Sources			
S# & Description	**Emission Limit Citation**	**Federally Enforceable Emission Limit**	**Monitoring**
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688 part 10	114 lb/day for all turbines combined during commissioning and including startup and shutdown of turbines w/ catalyst	Source Test, records & calculation

POC Sources			
S# & Description	**Emission Limit Citation**	**Federally Enforceable Emission Limit**	**Monitoring**
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688 part 10 (combined cycle)	288 lb/day for all turbines combined during commissioning and including startup and shutdown of turbines w/o catalyst	Source Test, records & calculation
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 19d	1 ppmv @ 15% O2, dry, 1-hr average except during turbine startup or shutdown	Source Test
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 22	20.2 lb/day for each turbine including startup and shutdown	Source Test, records & calculation
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688 part 22	80.8 lb/day for all turbines combined, including startup and shutdown	Source Test, records & calculation
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688 part 22	12.3 tons/year for all turbines combined including startup and shutdown.	Source Test, records & calculation
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688 part 20	2 lb/turbine/startup during startup not to exceed 120 minutes	Source Test

POC Discussion:

Maximum Short-Term Concentration and Maximum Daily and Annual Mass Emissions
Emissions of Precursor Organic Compounds (POC) from the LECEF Phase II facility is limited to 1 ppmvd (1-hr avg.), 20.2 pounds per day from each turbine/HRSG power train, 80.8 pounds per day from all 4 turbine/HRSG power trains combined, and 12.3 tons per year from all 4 turbine/HRSG power trains combined. It is not technically feasible to implement continuous emissions monitoring for these POC limits, as there are currently no available monitors that can measure POC emissions at the very low levels that will be emitted from this equipment (below 1.0 ppm). Instead, ongoing compliance will be assured by the fact that source testing has shown that under good combustion conditions and with a properly-functioning oxidation catalyst, POC emissions will be well below the 1.0 ppm limit.

The 2016 source tests showed that the highest POC concentration for any of the trains was 0.28 ppm @ 15% O2, dry, and that the highest emission rate was 0.00036 lb/MMbtu. At that rate, a turbine/HRSG power train would emit 5.52 lb POC/day, and four power trains would emit 22.1 lb POC/day and 4.0 tons POC/yr. The source tests show that the sources comply with the limits.

NH_3 Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 19b	5 ppmv @ 15% O2, dry, averaged over 3 hrs except during turbine startup or shutdown	NH_3 flow meter
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 19b	5 ppmv @ 15% O2, dry, averaged over 3 hrs except during turbine startup or shutdown	Source Test
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 22	104 lb/day for each turbine including startup and shutdown	Ammonia flow meter
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688, part 22	416 lb/day for all turbines combined, including startup and shutdown	Ammonia flow meter
S1, S2, S3, S4, S14, Combustion Gas Turbines S7, S8, S9, S10, HRSGs	BAAQMD condition #23688 part 22	56.9 tons/year for all turbines combined including startup and shutdown.	Source test

NH_3 Discussion:

Maximum Short-Term Concentration and Maximum Daily and Annual Mass Emissions
The facility will have the potential to emit ammonia (NH_3) from the SCR systems used to abate NOx emissions in the exhaust stream from the gas turbines/HRSGs. The ammonia is used to react with the NOx and convert it to elemental nitrogen and water. Some of the ammonia may not be fully reacted, however, and may end up being emitted in the exhaust from the SCR systems. Such emissions are called “ammonia slip”.

Ammonia slip emissions from the facility's SCR systems will be subject to the following limits: 5 ppmvd @ 15% O2, averaged over any 3-hour period; 104 pounds per day per turbine and 416 pounds per day for all 4 turbines combined; and 56.9 tons per year in total from all 4 turbines combined. NH_3 emissions will be monitored by continuously measuring the amount of NOx and ammonia being introduced into the SCR system and then determining the amount of NH_3 that is being reacted with the NOx and the amount that may be left over to be emitted as ammonia slip. The maximum ratio of NH_3 to NOx that will keep emissions below the 5 ppm permit limit has been established through source testing. The facility is required to ensure continuous compliance by maintaining the NH_3/NOx ratio below that maximum level. Re-testing will be required annually thereafter to track NH_3/NOx ratios, and the maximum allowable ratio will be adjusted if necessary according to these source test results to ensure that a proper ratio is maintained to establish compliance. This type of emissions monitoring for ammonia slip is the standard mechanism for ensuring compliance at SCR systems at facilities of this type.

The 2016 source tests showed that the highest NH3 concentration for any of the trains was 0.7 ppm @ 15% O2, dry, and that the highest emission rate was 0.7 lb/hr. At that rate, a turbine/HRSG power train would emit 16.8 lb NH3/day, and four power trains would emit 67.2 lb NH3/day and 12.3 tons NH3/yr. The source tests show that the sources comply with the limits.

HAP Sources
S1, S2, S3, S4,
Combustion Gas Turbines
S7, S8, S9, S10,
Heat Recovery Steam Boiler

HAP	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
Formaldehyde	BAAQMD condition #23688 part 43 (combined cycle)	6490 pounds/year for all turbines combined	Source Test at Startup and biennial thereafter
Acetaldehyde	BAAQMD condition #23688 part 43 (combined cycle)	3000 pounds/year for all turbines combined	Source Test at Startup and biennial thereafter
Specified PAH's	BAAQMD condition #23688 part 43 (combined cycle	3.2 pounds/year for all turbines combined	Source Test at Startup and biennial thereafter
Acrolein	BAAQMD condition #23688 part 43 (combined cycle	65.3 pounds/year for all turbines combined	Source Test at Startup and biennial thereafter

Hazardous Air Pollutant (HAP) Discussion:

BAAQMD Regulation 2, Rule 5

Emissions of formaldehyde, acetaldehyde, specified PAH's, and acrolein are source tested at one of the power trains within 60 days of startup and biennially thereafter. S3/S8 were tested in 2013 and S1/S7 were tested in 2015. The results were "non-detect," which means that the above HAPs were not detected.

The highest possible level for formaldehyde, acetaldehyde, or acrolein was 3.76E-6 lb/MMbtu. At that rate, the maximum emissions possible for any of these compounds was 21 lb/yr.

The highest possible level for PAHs was 2.15 E-8 lb/MMbtu. At that rate, the maximum emissions possible for PAHs was 012 lb/yr.

The source tests show that the sources comply with the limits.

If three consecutive biennial tests demonstrate that the emissions are less than the respective threshold levels in BAAQMD condition #23688, part 49, future testing for that pollutant may be discontinued. Continuous Emission Monitoring (CEM) is not available for HAPs.

Changes to permit:

Table VII-A will be changed as follows:

- The startup limits in Condition 23688, part 20, have been added to this table.
- The shutdown time limit in Condition 23688, part 22, has been added to this table.
- The monthly interval for monitoring of sulfur in fuel has been added.
- Citations of SIP Regulation 6-310.3 and BAAQMD Regulation 6-1-310.3, which are in Section IV, have been added.

Table VII-B will be changed as follows:

- The citations for BAAQMD Regulations 6-1-301.1 and 6-1-310 have been corrected to show that they are not federally enforceable.
- The requirement for fuel certification for BAAQMD Regulation 9-1-304 has been removed because this requirement did not exist in the permit conditions and because only complying diesel fuel is available.
- The CARB ATCM 50 hr/yr limitation for testing and maintenance has been added.

Table VII-D, for S13, Fire Pump Diesel Engine, was deleted because S13 was not installed:

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:
There are no changes to this section

IX. Acid Rain

SO2 ALLOWANCE ALLOCATIONS

The format of this section of the acid rain permit has been modified. The table format has been deleted and replaced with the following statement:

"None of the sources at the facility (S-1 through S-8) are entitled to any SO_2 allowances under Table 2 of 40 CFR Part 73 for the term of this permit."

COMMENTS, NOTES AND JUSTIFICATIONS
The following statements have been added to this section:

"Pursuant to 40 CFR Part 72.6(a)(3)(i), S1 is considered a new utility unit and is subject to the acid rain permit requirements of 72.9(a).

S1, S2, S3, and S4, Gas Turbines, are not listed in table-2 of 40 CFR Part 73, therefore, the operator did not receive initial SO2 allowances under the Acid Rain program.

S1, S2, S3, and S4, Gas Turbines, do not qualify for a new unit exemption pursuant to 40 CFR 72.7 (b)(1) since each serves a generator with a nameplate capacity greater than 25 MW."

The dates in this section will be updated.

The following section has been added to the Acid Rain Permit to conform to current District practice.

"4) PERMIT REQUIREMENTS

The owners and operators of the facility must comply with the standard requirements and special provisions set forth in the facility's Title IV permit application, which is set forth in Section XIII. The main provisions of the regulations for natural gas fired acid rain sources, such as the ones at this facility, are the requirement to obtain one SO_2 allowance for each ton of SO_2 that is emitted, stringent monitoring requirements for NO_x, CO_2, and SO_2, and stringent recordkeeping and reporting requirements. Additional acid-rain-related permit requirements are stated in Standard Condition L in Section I of this permit."

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 does not have permit shields.

XI. Revision History

This section details the revision history of the facility's Title V permit.

Changes to permit:
The revision history will be updated when the permit is renewed.

XII. Glossary

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

XIII. Title IV Permit Application

The Acid Rain permit application for the facility is part of the Title V permit. To conform to current practice, the current Title IV permit application has been appended to the Title IV permit in section IX of the Title V permit. Section XIII and the previous application submitted on November 26, 2008 will be deleted.

XIV. Enforcement Agreement

The facility entered into an enforcement agreement with the District on November 25, 2014 to upgrade the CO catalyst to comply with the CO limit for the turbines and heat

recovery steam generators. The agreement was to last until November 1, 2015, or until compliance was achieved, whichever was earlier.

The facility did upgrade the catalyst and the enforcement agreement is no longer in effect. Therefore, the enforcement agreement was deleted from the permit.

D. Alternate Operating Scenarios

No alternate operating scenario has been requested for this facility.

E. Compliance Status

The responsible official for Los Esteros Critical Energy Facility, LLC submitted a signed Certification Statement form dated March 5, 2018. On this form, the responsible official certified that the following four statements are true:

Based on information and belief formed after reasonable inquiry, the sources identified in the Applicable Requirements and Compliance Summary form that are in compliance will continue to comply with the applicable requirements;

Based on information and belief formed after reasonable inquiry, the sources identified in the Applicable Requirements and Compliance Summary form will comply with future-effective applicable requirements, on a timely basis;

Based on information and belief formed after reasonable inquiry, information on application forms, all accompanying reports, and other required certifications is true, accurate, and complete;

All fees required by Regulation 3, including Schedule P have been paid.

APPENDIX A

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 rule or regulation that gives the District authority to impose requirements

CAA
The federal Clean Air Act

CAAQS
California Ambient Air Quality Standards

CAPCOA
California Air Pollution Control Officers Association

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.

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

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