

Bay Area Air Quality Management District

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**Permit Evaluation
and
Statement of Basis
for**

**RENEWAL of
MAJOR FACILITY REVIEW PERMIT**

**for
Pacific Gas & Electric Company, Hunters Point Power Plant
Facility #A0024**

Facility Address:
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September 2004

TABLE OF CONTENTS

A.	Background.....	3
B.	Facility Description.....	5
C.	Permit Content	6
I.	Standard Conditions	6
II.	Equipment	7
III.	Generally Applicable Requirements	8
IV.	Source-Specific Applicable Requirements	9
V.	Schedule of Compliance	12
VI.	Permit Conditions	13
VII.	Applicable Limits and Compliance Monitoring Requirements	16
VIII.	Test Methods	22
IX.	Title IV Acid Rain Permit	23
X.	Glossary	23
XI.	Applicable State Implementation Plan	23
XII.	Title IV Permit Application	23
D.	Alternate Operating Scenarios:.....	23
E.	Permit Shield.....	23
F.	Compliance Status:	24
	Appendix A.....	25
	Appendix B.....	29
	Appendix C.....	34
	Appendix D.....	44
	Appendix E.....	45

Permit Evaluation/Statement of Basis for Renewal of Major Facility Review Permit

A. Background

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Volume 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a Phase II Acid Rain facility as defined by BAAQMD Regulation 2-6-217 and because it is a “major facility” as defined by BAAQMD Regulation 2-6-212. It is an Acid Rain facility because it burns fossil fuel and serves a generator that is over 25 MW that is used to generate electricity for sale. It is a “major facility” because it emits 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 addition, Phase II Acid Rain facilities must meet the requirements of Title IV of the federal Clean Air Act, Acid Rain, and the Acid Rain regulations in Parts 72 through 78 of Volume 40 of the Code of Federal Regulations. These regulations were adopted and incorporated by reference in BAAQMD Regulation 2, Rule 7, Acid Rain. The main provisions of the regulations for natural gas and distillate oil fired acid rain sources, such as the ones at this facility, are the requirement to obtain one SO₂ allowance for each ton of SO₂ that is emitted, stringent monitoring requirements for NO_x, CO, CO₂, and SO₂, and stringent recordkeeping and reporting.

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 A0024.

This facility received its initial Major Facility Review permit on September 14, 1998. The initial Title IV permit, which was incorporated into the Major Facility Review permit, was effective on January 1, 1998. This application is for a renewal of the Title IV and Title V permits. The standard sections of the permit have been upgraded to include new standard language used in all Title V permits. Also, various other corrections have been made to the permit.

Permit Evaluation and Statement of Basis: Site A0024, Pacific Gas & Electric Company, Hunters Point Power Plant, 1000 Evans Avenue, San Francisco, CA 94124

The facility has also shut down 4 large sources and requested the deletion of those sources from the permit.

The responsible official and secondary responsible official have changed.

All of these revisions are described below in the permit content section. The proposed permit shows all changes to the permit in strikeout/underline format.

The facility has submitted 9 applications since the Major Facility Review permit was issued on September 14, 1998. Following is a list of the applications:

<u>Application #</u>	<u>Description</u>	<u>Date of Receipt</u>
1237	Banking	5/1/00
2185	Boiler #7	12/1/00
2668	Banking	4/18/01
6583	Title IV Permit Renewal	8/20/02
6811	Alternative Compliance Plan	12/19/02
7172	Title V Permit Renewal	3/11/03
7375	Banking: IERC	4/15/03
19627	Modification	2/22/99
22504	Banking: IERC	4/16/99

Applications 6583 and 7172 are for renewal of the Title IV and V permits, which is the subject of this action.

Application 1237 is for a transfer of emission reduction credits owned by PG&E to Calpine Corporation. This application does not affect the permit for the remaining sources.

Application 2185 was submitted for combustion modifications at S7, Boiler, to enable the unit to comply with BAAQMD Regulation 9, Rule 11. The modifications were: installation of new burners, improving the flue gas recirculation system, installing water injection, and installing an improved burner management system. No additional permit conditions were required because the unit has continuous emissions monitors for NOx and CO.

Application 2668 is for the purpose of banking emission reduction credits from the shutdown of 4 boilers, Sources S3 through S6. This application does not affect the permit for the remaining sources.

Application 6811 is for an "alternative compliance plan" in accordance with BAAQMD Regulation 2, Rule 9, Interchangeable Emission Reduction Credits. The alternative compliance plan is contained in permit condition 21220 and is used for compliance with the non-SIP parts of BAAQMD Regulation 9, Rule 11. The engineering evaluation of this application is contained in Appendix C to this permit evaluation/statement of basis.

Application 7375 was submitted for the purpose of generating interchangeable emission reduction credits (IERC) in accordance with BAAQMD Regulation 2, Rule 9. These credits were generated for the purpose of compliance with the non-SIP parts of BAAQMD Regulation 9,

Rule 11. There are no permit conditions associated with generation of these credits; therefore, there is not a direct impact on the permit. An application must still be submitted for the use of these IERC's.

Application 19627 was submitted for the purpose of incorporating the non-SIP parts of BAAQMD Regulation 9, Rule 11 into permit conditions. This revision was necessary because the facility was no longer subject to the regulation due to a change in the definition of CPUC-regulation public utilities. The rule was amended on May 17, 2000, to make the rule applicable to any "electric power generating steam boilers." Since the permit conditions are no longer necessary, they are being deleted as part of this renewal.

Application 22504 was submitted for the purpose of generating interchangeable emission reduction credits (IERC) in accordance with BAAQMD Regulation 2, Rule 9. These credits were generated for the purpose of compliance with the non-SIP parts of BAAQMD Regulation 9, Rule 11. There are no permit conditions associated with generation of these credits; therefore, there is not a direct impact on the permit. Application 6811 was submitted for the use of IERC's and does have a direct impact on the permit.

B. Facility Description

The facility is a power plant. It has one 1,720 MMbtu/hr boiler that generates steam. The steam is used to turn a steam turbine to generate electricity. The boiler has a permit to burn natural gas and distillate oil. The facility has requested that the ability to burn distillate oil in the boiler be deleted from the permit. The facility also has two 364 MMbtu/hr gas turbines that have permits to burn distillate oil. These turbines run less than 877 hours/yr pursuant to District Regulation 9-9-302.

The facility also has miscellaneous maintenance sources.

In 1998, the facility had 4 additional boilers with a total capacity of 2,680 mmbtu/hr. These boilers, Sources S3 through S6, have since been shut down. Therefore, all requirements for these sources have been deleted from the permit. The resulting reduction in emissions, based on actual emissions in 2000 (the highest emissions during the permit term), is:

Pollutant	tons/yr
NOX	363.0
CO	96.4
SO2	1.5
VOC	7.5
PM	7.3

There has also been a significant reduction in NOx emissions at S7, Boiler, due to the impact of BAAQMD Regulation 9, Rule 11, Nitrogen Oxides and Carbon Monoxide From Utility Electric Power Generating Boilers. The actual emissions have dropped from 314 tons/yr in 1998 to 62 tons/yr in 2003.

Plans for facility retirement

PG&E has stated that it wishes to retire Hunters Point as soon as the California Independent Systems Operator (ISO) will allow. ISO staff has worked with the City of San Francisco, PG&E, and many members of the Hunters Point community to address concerns and questions related to the need for generation at Hunters Point. The ISO has described the issues that must be resolved before it can agree to the closure of Hunters Point.

This information is contained in PG&E's May 4, 2004 letter to the ISO and the ISO's July 1, 2004 response, which are attached to this report in Appendix E.

C. Permit Content

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

I. Standard Conditions

This section contains administrative requirements and conditions that apply to all facilities. If the Title IV (Acid Rain) requirements for fossil-fuel fired electrical generating facilities or the accidental release (40 CFR § 68) 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 rule dates in Standard Condition I.A have been updated.
- BAAQMD Regulation 2, Rule 6, Major Facility Review, has been added to Standard Condition I.A.
- Standard Condition I.B.1 has been amended to state that the permit continues in force after the expiration date if a complete application has been submitted in accordance with the renewal deadlines. This is the "application shield" pursuant to BAAQMD Regulation 2-6-407.
- Standard Condition I.B.11 has been added in accordance with the Manual of Procedures, Chapter 3, as revised on May 2, 2001.
- Standard Condition I.E.1 has been added to require any information, records, and reports requested or specified by the APCO.
- Standard Conditions I.F, I.G, and I.H were modified to conform to the current standard.
- The monitoring report and compliance certification dates in Standard Conditions I.F and I.G have been changed.
- Standard Condition I.J has been changed to Standard Condition I.L so that the acid rain standard conditions for all acid rain sources in the Bay Area are in Standard Condition I.L. I.K has been reserved.

Permit Evaluation and Statement of Basis: Site A0024, Pacific Gas & Electric Company, Hunters Point Power Plant, 1000 Evans Avenue, San Francisco, CA 94124

- Standard Condition I.J has been added to clarify that the capacity limits shown in Table II-A are enforceable limits.
- Standard Condition I.L has been modified to show that the facility only has one boiler.

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 of a “regulated air pollutant,” as defined in BAAQMD Rule 2-6-222, per year or 400 pounds of a “hazardous air pollutant,” as defined in BAAQMD Rule 2-6-210, per year.

Major Facility Review permits list all abatement (control) devices. This facility has no control devices.

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.

Changes to permit:

Standard language has been added to this section stating that the capacities in this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-403.

The capacity in MMbtu/hr has been added to Sources S1 and S2, Turbines.

Since the Major Facility Review permit was issued, Sources S3 through S6, Boilers, have been shut down and removed.

Because the facility has decided to give up the permit to burn oil at S7, Boiler, the reference to oil firing has been deleted.

Sources S16, No. 9 Jet Fuel Tank, and S17, Jet Fuel Loading/Unloading Facility, have been added to the equipment list. These sources handle "Jet A", which is not exempt from permits because the boiling point is less than 302° F. This is the exemption level in BAAQMD Regulation 2-1-123.2.

S29, Cold Solvent Degreaser, has been removed.

Changes after public comment

The fuel for S7, Boiler, was corrected to "gas-fired."

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 Major Facility Review 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 sandblasting or soil-vapor extraction equipment.

Section III has been modified to state 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
- BAAQMD 2-1-429, Federal Emissions Statement
- SIP Regulation 2, Rule 1, General Requirements
- SIP Regulation 5, Open Burning
- SIP Regulation 8, Rule 3, Architectural Coating
- BAAQMD Regulation 8, Rule 40 Aeration of Contaminated Soil and Removal of Underground Storage Tanks
- BAAQMD Regulation 8, Rule 47, Air Stripping and Soil Vapor Extraction Operations
- SIP Regulation 8, Rule 51, Adhesive and Sealant Products
- California Health and Safety Code Section 44300 et seq., Air Toxics "Hot Spots" Information and Assessment Act of 1987

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). 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 for particular sources. 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.

Complex Applicability Determinations

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

S1, S2, Turbines

The turbines are not subject to the Acid Rain program contained in 40 CFR Parts 72 through 78 because they are simple combustion turbines that commenced commercial operation before November 15, 1990, and are thus exempted by 40 CFR 72.6(1).

The turbines are subject to 40 CFR 68, Compliance Assurance Monitoring, because the turbines have a potential to emit more than 100 tons NO_x per year before control by water injection and water injection is considered a control method by the regulation. The compliance assurance monitoring plan is contained in BAAQMD Condition #15815.

Since the NO_x emissions after control are less than 100 tons per year, the frequency of monitoring will continue to be daily in accordance with 40 CFR 64.3(b)(4)(iii).

S7, Boiler

The boiler is subject to the Acid Rain program contained in 40 CFR Parts 72 through 78 because it is a utility unit as defined in 40 CFR 72.2.

S16, No. 9 Jet Fuel Tank, and S17, Jet Fuel Loading/Unloading Facility

These sources do not have tables in Section IV because, although they require permits, they do not have any source-specific applicable requirements.

Changes to permit:

Section IV has been modified to state 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.

A "Facility" table has been added that contains the requirements of BAAQMD Regulation 2, Rule 9, Interchangeable Emission Reduction Credits (IERC). The facility will use the IERCs to comply with the non-federally enforceable requirements in BAAQMD Regulation 9, Rule 11, Nitrogen Oxides and Carbon Monoxide From Utility Electric Power Generating Boilers. A discussion of Regulation 2, Rule 9, and Regulation 9, Rule 11, and the applicable requirements is contained in the evaluation for Application 6811, which is contained in Appendix C and forms part of this Statement of Basis.

S1, S2, Turbines:

New requirements for parametric monitoring in BAAQMD and SIP Regulation 1 have been added because the facility monitors the ratio of water to fuel on a daily basis.

BAAQMD Regulation 9-1-302, General Emission Limitation, has been removed because it exempts any source that is subject to BAAQMD Regulation 9-1-304. These turbines are subject to BAAQMD Regulation 9-1-304 because they burn liquid fuel exclusively.

The bases for BAAQMD Condition 15815, which are found in the permit condition section, have been added to the citations for the condition.

As describes above under "Complex Applicability Determinations", a CAM plan has been added in BAAQMD Condition 15815. The plan is described in detail in Section C.VI of this statement of basis.

S3 through S6, Electrical Generation Boilers:

All applicable requirements for Sources S3 through S6, Boilers, have been deleted because these sources have been shut down and removed.

S7, Electrical Generation Boiler:

Changes have been made to the citations for BAAQMD Regulation 1 because the SIP version has changed.

Various changes have been made because the facility has given up the permit to burn fuel oil at the boiler. BAAQMD Regulation 1-520.1 requires an opacity monitor only if the source burns non-gaseous fuel. NO_x and either CO₂ or O₂ monitors are still required. The following requirements will be deleted because the source will not burn fuel oil:

- BAAQMD Regulation 6-302, Opacity Limitation
- BAAQMD Regulation 6-401, Appearance of Emissions
- BAAQMD Regulation 6-501, Sampling Facilities and Instruments Required
- BAAQMD Regulation 6-502, Data, Records, and Reporting
- BAAQMD Regulation 9-1-304, Fuel Burning (Liquid and Solid Fuels)
- BAAQMD Regulation 9-11-112, Exemption, Oil Testing

Changes have been made to the citations for BAAQMD Regulation 9, Rule 11 because the rule has changed, applicability of parts of the rule relate to time periods in the part, and portions of the rule have been adopted into the SIP. In particular, BAAQMD 9-11-303 and 304 no longer apply to the boiler because the facility is using the BAAQMD 9-11-309 Alternative Emission Control Plan. Since there is no parallel requirement in the SIP rule, SIP 9-11-304 applies to the boiler.

Parts 1 through 14 of Condition 16329 have been deleted. The District imposed these conditions in 1999 pursuant to Application 19627 because Regulation 9, Rule 11 no longer applied to the facility due to a change to the definition of utility by the Public Utilities Commission. Condition 16329 was equivalent to Regulation 9, Rule 11. The rule was amended on May 17, 2000, and now applies to any electric power generating steam boilers. The condition explicitly stated that the condition would be rescinded when the rule was amended. Since the conditions were based on the parts of the rule that were not in the State Implementation Plan, the deleted permit conditions were not federally enforceable.

Condition 16329, part 1 has been added to require that S7, Boiler, burn PUC-quality natural gas exclusively.

S29, Cold Solvent Degreaser

The table for S29 has been deleted because the source has been removed.

S30, Maintenance Coating Operation

The requirements for this source have been updated. The current District Regulation 8, Rule 3, Architectural Coatings, adopted on November 11, 2001, has been included. This rule has been approved into the SIP, so the separate SIP requirements have been deleted.

BAAQMD Regulation 8, Rule 19, Surface Coating of Miscellaneous Metal Parts and Products, has been updated. The exemption for Solid Film Lubricant, BAAQMD 8-19-123, has been added to the permit. The prohibition on using surface preparation solvents with a VOC content that exceeds 50 g/l (0.42 lbs/gal), as applied, for surface preparation of any metal part or product, in Section 8-19-321, Surface Preparation Standards, has been added. The prohibition on using emission reduction credits for compliance in Section 8-19-408 has been added.

BAAQMD Regulation 8, Rule 31, Surface Preparation and Coating of Plastic Parts and Products, had been previously cited in the Section VII for this source. The citations were omitted in error from the Section IV table and are now being added. This rule is SIP-approved.

S31, Maintenance Wipe Cleaning

The requirements for this source have been updated. The current District Regulation 8, Rule 16, Solvent Cleaning Operations, adopted on October 16, 2002, has been included. The SIP requirements, approved on December 9, 1994, are cited separately. The facility has given up the permit to use trichloroethane at this source. A prohibition against use of trichloroethane and trichloroethylene has been placed in the condition.

Changes after public comment

A CAM plan has been added in BAAQMD Condition 15815. The plan is described in detail in Section C.VI of this statement of basis.

V. Schedule of Compliance

A schedule of compliance is required in all Major Facility Review 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.”

Changes to permit:

The phrase “on a timely basis” has been added to the Schedule of Compliance.

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 contained in Appendix D of this permit evaluation and statement of basis.

VI. Permit Conditions

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. Permit conditions may also be derived from periodic monitoring requirements pursuant to BAAQMD Regulation 2-5-503, Monitoring.

Each permit condition is identified with a unique numerical identifier, up to five digits. Each part of the condition is also identified by a part number and each subpart is identified by a letter (for example, Condition 789, part 1a).

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 that limits a source’s operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- **Offsets:** This term is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to Regulation 2, Rules 2 and 4.
- **PSD:** This term is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit issued pursuant to Regulation 2, Rule 2.
- **TRMP:** This term is used for a condition imposed by the APCO to ensure compliance with limits that arise from the District’s Toxic Risk Management Policy.

Any 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.

Condition 15815

Parts 1 and 2 of BAAQMD Condition 15815 were imposed in 1998 as part of Title V issuance because there was no opacity monitoring for the fuel oil fired turbines, S1 and S2.

During the public comment period, EPA Region 9 commented that in other jurisdictions, 40 CFR 64, Compliance Assurance Monitoring (CAM), had been imposed on turbines using water injection to comply with federally-enforceable NO_x limits. The District examined the issue and determined that the potential to emit for NO_x before control was 139.5 tons per year for each turbine based on the following assumptions:

- 0.88 lb NO_x/MMbtu
- 877 hours/yr (limit in BAAQMD Regulation 9-9-302)
- 2,600 gal fuel oil/hr
- 137,000 btu/gal fuel oil

Water injection is defined as a control device in 40 CFR 64.2. Based on the definition and the pre-control emissions, the District has concluded that the S1 and S2, Turbines, are subject to this requirement. Staff communicated this applicability determination to the facility. In response, the facility submitted a CAM plan on May 21, 2004.

BAAQMD Condition 15815 has been amended to include the CAM plan required by 40 CFR 64. Following are the elements of the proposed plan

- Minimum water to fuel ration of 0.55 by weight
- Continuous measurement of fuel consumption and water flow
- Accuracy of meters of plus or minus 5 percent
- Calibration of meters every two years
- Daily record of water to fuel ratio
- Monitoring for sulfur and nitrogen content of every batch delivery of fuel
- Recordkeeping for hours of operation for each turbine

This proposal is based on the example in the EPA document entitled " Draft Supplement to Compliance Assurance Monitoring Tech. Guidance Document. 12 New Case Studies." It differs in that recordkeeping will be on a daily basis, not hourly, and that the flow meters will be calibrated every two years, not every year. The District finds this plan approvable because the more rigorous plan is based on a 150-MW turbine with no limit on hours of operation, whereas this facility has two 25-MW turbines that are limited to 877 hours of operation per calendar year. Moreover, pursuant to 40 CFR 64.3(b)(4)(iii), the frequency of recordkeeping may drop to once every 24 hours if the emissions units emit less than 100 tons/yr after control.

Monitoring of water injection to determine compliance with the NO_x is proper because the water injection reduces NO_x by 70 to 90 percent and is the method used to comply with the 65 ppmv NO_x limit in BAAQMD Regulation 9-9-302. The facility has submitted results of test at similar turbines that show that the water injection rate is sufficient to meet the limit.

Since the tests submitted do not show a high margin of compliance, a requirement for source testing pursuant to 40 CFR 64.6(b) will be added. Source testing shall be performed within the

first 877 hours of operation after issuance of the renewal permit or two years after issuance of the renewal permit, whichever is earlier. The reason for this extended schedule is that the turbines typically run only about 100 hours per year when required by the California Independent System Operator, so source testing may be difficult to schedule.

Revisions to permit conditions:

Condition 15815:

- The basis for part 1 has been corrected because the sources are not subject to 6-302 since they do not have opacity monitors and to correct the basis for the monitoring from Regulation 2-6-501 to 2-6-503.
- Since NOx emissions at S1 and S2, Turbines, are controlled by water injection, a condition has been added for daily monitoring of the water-to-fuel ratio during operation in part 3. This is parametric monitoring as described in BAAQMD Regulation 1-523.
- A requirement to monitor the sulfur content of the fuel has been added. The facility may obtain a fuel certification for each shipment or obtain a laboratory analysis of a composite sample of the sulfur content of the fuel in the tank.
- The basis for part 4 has been corrected from Regulation 9-304 to 9-1-304.
- Regulations 6-310 and 9-9-301 have been deleted from basis for Condition 15815, part 5 because they were incorrect. The correct basis is BAAQMD Regulation 9-9-302.
- In part 9, a shutdown condition has been added for the turbines in response to the facility's statements that it intends to shut the sources down as soon as the sources are no longer subject to a Condition 2 Reliability Must Run Agreement or equivalent.

Condition 16329

- Parts 1 through 14 have been deleted. The deletion is explained in part C.IV of this permit evaluation/statement of basis.
- A requirement to burn PUC-quality natural gas exclusively at S7, Boiler, has been added as Part 1.
- In part 2, a shutdown condition has been added for the boiler in response to the facility's statements that it intends to shut the source down as soon as the source is no longer subject to a Condition 2 Reliability Must Run Agreement or equivalent.

Condition 20221

The facility will use IERCs as defined by BAAQMD Regulation 2, Rule 9, to comply with the non-federally enforceable requirements in Regulation 9, Rule 11, Nitrogen Oxides and Carbon Monoxide From Utility Electric Power Generating Boilers. The regulation requires an Alternative Compliance Plan for use of IERCs. Condition 20221 contains the Alternative Compliance Plan.

Part 1 has been amended to require CO2 monitoring instead of O2 monitoring, since BAAQMD Regulation 1-520.1 allows both.

Part 4a has been amended to require records of lb/MMbtu instead of ppmvd, since the Alternate Compliance Plan is for compliance with Regulation 9, Rule 11, and the limit in the rule is in lb/MMbtu.

Changes after public comment

The CAM plan in BAAQMD Condition 15815 described above was added.

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 with the following exception. Sources S1 and S2, Turbines, are subject to 40 CFR 68, Compliance Assurance Monitoring, because the NOx emissions at each turbine would exceed 100 tons per year without control, the turbines are subject to a federally enforceable NOx limit, and NOx emissions are controlled by water injection.

The tables below contain only the limits for which there is no monitoring or inadequate monitoring in the applicable requirements. The District has examined the monitoring for other limits and has determined that monitoring is adequate to provide a reasonable assurance of compliance. Calculations for potential to emit will be provided in the discussion when no monitoring is proposed due to the size of a source.

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

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

PM Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
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PM Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S1, S2, Turbines	BAAQMD Regulation 6-301	Ringelmann 1.0 for less than 3 min/hr	Daily visible emissions monitoring when operating
S7	BAAQMD Regulation 6-301	Ringelmann 1.0 for less than 3 min/hr	None
S7	BAAQMD Regulation 6-304	Ringelmann 2.0 or greater than 40% opacity for less than 3 min/hr during tube cleaning	None
S1, S2, Turbines	BAAQMD Regulation 6-310	0.15 gr/dscf	None
S7	BAAQMD Regulation 6-310.3	0.15 gr/dscf at 6% O2	None

PM Discussion:

BAAQMD Regulation 6 “Particulate Matter and Visible Emissions”

Visible Emissions

Daily visible emission monitoring when operating was imposed on S1 and S2, Turbines, when the Title V permit was issued in 1998. This monitoring continues to be the most rigorous visible emissions monitoring imposed on a source of this size for opacity. The potential to emit for PM for each turbine, using AP-42 factors, is:

$$(0.012 \text{ lb PM/MMbtu}) \times (2600 \text{ gallons fuel oil/hr}) \times (139,000 \text{ btu/gallon}) \times (877 \text{ hr/yr}) = 3803 \text{ lb PM}_{10}/\text{yr} = 1.9 \text{ tons/yr}$$

Source S7, Boiler, has an opacity monitor pursuant to District Regulation 1-520.1 because it holds a permit to burn distillate oil. The facility is giving up the permit to burn fuel oil and has accepted a condition to burn natural gas exclusively at this source. Therefore, the source will no longer have an opacity monitor. The Title IV Acid Rain regulation, 40 CFR 75, also exempts gas-fired equipment from the requirement for opacity monitoring.

Moreover, 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 6, Visible Emissions. Therefore, no monitoring is necessary for this requirement.

Particulate Weight Limitation

BAAQMD Regulation 6-310 limits filterable particulate (FP) emissions from any source to 0.15 grains per dry standard cubic foot (gr/dscf) of exhaust volume. Section 310.3 limits

filterable particulate emissions from “heat transfer operations” to 0.15 gr/dscf @ 6% O₂. These are the “grain loading” standards.

S1 and S2, Turbines

S1 and S2, Turbines, are subject to BAAQMD Regulation 6-310, 0.15 gr PM /dscf. No monitoring has been imposed because the margin of compliance is high, as shown by the following calculations.

Using the AP-42 emission factor and diesel oil data, and a typical diesel oil flue gas production rate of 9190 dscf/MMbtu at 0% oxygen, the particulate grain loading in each turbine's exhaust is expected to be less than 0.01 grains/dscf at 15% oxygen.

$$(0.012 \text{ lb PM/MMbtu}) \times (7000 \text{ gr/lb}) / (9190 \text{ dscf/MMbtu}) = 0.009 \text{ gr/dscf}$$

The ratio of the limit to the calculated grain loading is 16:1, therefore, no additional monitoring is necessary to assure compliance.

S7, Boiler

S7, Boiler is subject to BAAQMD Regulation 6-310.3, 0.15 gr/dscf PM @ 6% O₂. No monitoring has been imposed because the margin of compliance is high, as shown by the following calculation.

Natural Gas

The AP-42 factor for natural gas combustion is 7.6 lb/million standard cubic feet of natural gas (MMscf).

Converting to an emission factor per MMbtu:

$$(7.6 \text{ lb/MMscf}) \times (\text{MMscf}/1,050 \text{ MMbtu}) = 0.00724 \text{ lb/MMbtu}$$

The flue gas production rate for natural gas at 0% oxygen is 8,710 dscf. At 6% oxygen, the production rate is:

$$(20.9/20.9-6) (8710 \text{ dscf}) = 12,217 \text{ dscf}$$

The calculated particulate loading is:

$$(0.00724 \text{ lb PM/MMbtu}) \times (7000 \text{ gr/lb}) / (12,217 \text{ dscf/MMbtu}) = 0.004 \text{ gr/dscf}$$

The ratio of the limit to the calculated grain loading is 37.5:1, therefore, no additional monitoring is necessary to assure compliance.

SO₂ Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S1, S2, Turbines S7, Boiler	BAAQMD 9-1-301	Ground level concentrations of SO ₂ shall not exceed: 0.5 ppm for 3 consecutive minutes AND 0.25 ppm averaged over 60 consecutive minutes AND 0.05 ppm averaged over 24 hours	None
S7, Boiler	BAAQMD 9-1-302	300 ppm (dry)	None
S1, S2, Turbines	BAAQMD 9-1-304	Sulfur content of fuel < 0.5% by weight	Fuel certification

SO₂ Discussion:

BAAQMD Regulation 9-1-301

Area monitoring to demonstrate compliance with the ground level SO₂ concentration requirements of Regulation 9-1-301 is at the discretion of the APCO (per BAAQMD Regulation 9-1-501). This facility does not have equipment that emits large amounts of SO₂ and therefore is not required 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 for S7, Boiler, which will exclusively burn natural gas.

S1 and S2, Turbines, are subject to BAAQMD Regulation 9-1-304, a limit of no more than 0.5% sulfur in liquid fuels, because they burn fuel oil. The standard monitoring, fuel certification, has been imposed on these sources.

Lead Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S1, S2, Turbines S7, Boiler	BAAQMD 11-1-301	6.75 kg/day	None
S1, S2, Turbines S7, Boiler	BAAQMD 11-1-302	1.0 g/m ³ averaged over 24 hours	None

Following are detailed citations of the lead standards:

- 11-1-301 Daily Limitation:** A person shall not discharge any emission of lead, or compound of lead calculated as lead, from any emission point in excess of 6.75 kg (15 lbs) per day.
- 11-1-302 Ground Level Concentration Limit Without Background:** A person shall not discharge any emission of lead, or compound of lead calculated as lead, that will result in ground level concentrations in excess of 1.0 ug/m³ averaged over 24 hours.

These limits shall be compared with the potential to emit for lead from each emission point.

Compliance with 11-1-301

The AP-42 emission factor for lead from fuel oil combustion at S1 and S2, Turbines, is 1.4×10^{-5} lb/MMbtu. Each turbine can burn 2600 gal fuel oil/hr or 62,400 gal fuel oil/day, which is equivalent to 8,674 MMbtu/day. The maximum amount of lead that could be emitted per turbine is 0.12 lb/day or 0.05 kg/day.

The AP-42 emission factor for lead from natural gas combustion at S7, Boiler, is 0.0005 lb/MMscf. The boiler can burn 1.64 MMscf/hr or 39.31 MMscf/day. The maximum amount of lead that could be emitted by the boiler is 0.0196 lb/day or 0.009 kg/day.

Since the potential to emit in both cases is at least 125 times lower than the limit, no additional monitoring is required.

Compliance with 11-1-302

The maximum lead emission levels above and the dispersion calculations prescribed in BAAQMD Regulation 11-1-601 were used to determine compliance with 11-1-302. The maximum 24-hr average ground level lead concentration caused by the facility at maximum operation is expected to be about 0.003 micrograms/cubic meter, which is in compliance with the 1.0 micrograms/cubic meter limit. The calculations are attached in Appendix A and form part of this Statement of Basis. These calculations are based on fuel oil combustion at the turbines and the boiler. Natural gas combustion emissions are much lower. Since the margin of compliance is high, no monitoring is required for this limit.

Following is a list of revisions to Section VII:

- The language at the beginning of the section has been made clearer.
- The headings at the top of the table have been changed. The "Pollutant" column has been changed to "Type of Limit" since not every limit is a pollutant limit. The first "Emission Limit" column has been changed to "Citation of Limit" since not every limit is an emission limit. The second "Emission Limit" column has been changed to "Limit" since not every limit is an emission limit and the column actually contains a short summary of the limit.
- The "type of limit" has been changed to "opacity" for Regulation 6-301.
- The "type of limit" has been changed to "FP" or "filterable particulate" for Regulation 6-310 and 6-310.3. Filterable particulate is defined as "particulate as measured by BAAQMD Method ST-15, Particulate." This is the type of particulate that is regulated by Regulation 6-310.

- Table VII-B has been deleted because the sources have been shut down.

S1 and S2, Turbines

- The description of the limit for BAAQMD 6-301 has been expanded from "Ringelmann No. 1" to "Ringelmann No. 1 for no more than 3 min/hr", which is more complete.
- The citation of Regulation 6-310.3 in Table VII-A has been corrected to Regulation 6-310. The turbines are not "heat transfer operations," therefore the limit is no longer corrected to 6% oxygen.
- BAAQMD Condition 15815, part 5, has been deleted from the citation of the 65 ppmv NO_x limit in BAAQMD Regulation 9-9-302 because it is actually an "hours of operation" limit.
- The averaging period for the limit in Regulation 9-9-302 has been removed because there is no averaging period in the rule or the Manual of Procedures. [The averaging period is based on the method used to determine compliance and different methods have different test times. The EPA reference method, for example, is a series of grab samples that take about 3 seconds each. The BAAQMD method is the average of 3 one-half hour runs that can be conducted hours apart or within minutes of each other.](#)
- The existing water-to-fuel monitoring was added in the "Monitoring Type" column.
- The 877 hours of operation limit/year is now considered a separate limit, not a NO_x limit, based on BAAQMD Regulation 9-9-302 and BAAQMD Condition 15815, part 5.
- Regulation 9-1-302 has been deleted from Table VII-A because it does not apply to the turbines.
- Fuel certification has been added for BAAQMD Regulation 9-1-304.
- The citation of the limit for the water injection rate has been corrected from "Recordkeeping" to "BAAQMD Condition 15815, part 3."

S3 to S6, Boiler

The table has been deleted because the boilers are no longer operating.

S7, Boiler

- The description of the limit for BAAQMD 6-301 has been expanded from "Ringelmann No. 1" to "Ringelmann No. 1 for no more than 3 min/hr", which is more complete.
- The description of the limit for BAAQMD 6-304 has been expanded from "Ringelmann No. 2" to "Ringelmann No. 2 or 40% opacity for no more than 3 min/hr", which is more complete.
- Parts 1 through 14 of Condition 16329 have been deleted. The deletion is explained in part C.IV of this Permit Evaluation/Statement of Basis.
- Outdated limits from Regulation 9, Rule 11 have been deleted.

Various changes have been made because the facility has given up the permit to burn fuel oil at the boiler. BAAQMD Regulation 1-520.1 requires an opacity monitor only if the source burns non-gaseous fuel. NO_x and either CO₂ or O₂ monitors are still required. The following requirements will be deleted because the source will not burn fuel oil:

- BAAQMD Regulation 6-302, Opacity Limitation
- BAAQMD Regulation 9-1-304, Fuel Burning (Liquid and Solid Fuels)
- BAAQMD Regulation 9-11-304.1.2, the oil-firing limit of 700 ppmv NO_x

- BAAQMD Regulation 9-11-304.1.2, the weighted average NOX limit for simultaneous natural gas and oil firing
- The requirement for opacity monitoring in 40 CFR Part 75. Pursuant to 40 CFR 75.14(c), opacity monitoring is not required for gas-fired units.

The term "system-wide" has been deleted from the citations for BAAQMD Regulation 9, Rule 11. When the rule was adopted, PG&E had four facilities: two in San Francisco, one in Antioch, and one in Pittsburg. The average of all four facilities was used to determine compliance with the NOx limit. Since three of the facilities have been sold and four boilers at this facility have been shut down, PG&E no longer has a "system" and therefore, no need for a system-wide average.

S29, Cold Solvent Degreaser

The table for S29 has been deleted because the source has been removed.

S30, Maintenance Coating Operation

- The rules to which this operation is subject-Regulation 8, Rules 3, 19, and 31-have become more complex, with explicit limits for many particular types of coatings. Since the Title V permit should contain the numerical limits, the limits for the coatings that the facility is likely to use have been added to the permit. The frequency of monitoring has been changed to the frequency in the rules instead of on an "event" basis.

S31, Maintenance Wipe Cleaning

- The trichloroethylene limit is now contained only in the SIP rule.
- The frequency of monitoring has been changed to the frequency in the rules instead of on an "event" basis.

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.

The test methods for Condition 16329 have been deleted since the relevant parts of the condition have been deleted.

Changes to permit

EPA Reference Method 5 (40 CFR 60, Appendix A), Determination of Particulate Emissions from Stationary Sources, has been added as an alternative method for BAAQMD Regulation 6-310.

IX. Title IV Acid Rain Permit

The Title IV Acid Rain permit is contained in the Title V permit. 40 CFR 75 requires that it contain the following elements:

- Statement of Basis
- SO₂ allowance allocations and NO_x requirements, if any.
- Any comments, notes or justifications regarding permit decisions
- The permit application (attached at the end of the Title V permit)

Changes to permit

The dates, name of BAAQMD Air Pollution Control Officer and Designated Representative have been changed. Sources 3 through 6, Boilers, have been deleted since they have been shut down. The note about changes to 40 CFR Part 73 Tables 2, 3, and 4 has been deleted since the number of allowances allocated to the remaining boiler has not been changed.

X. Glossary

Additions and corrections have been made to the glossary.

XI. Applicable State Implementation Plan

The applicable regulations and rules from the State Implementation Plan are no longer attached to the permit. This section now states that the regulations and rules are available on EPA Region IX's website.

XII. Title IV Permit Application

The Title IV Permit Application is considered part of the Title IV permit and therefore, is attached to the permit.

D. Alternate Operating Scenarios:

No alternate operating scenario has been requested for this facility.

E. 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 that identifies and justifies specific federally enforceable regulations and standards are not applicable to a source or group of sources, or (2) A provision in a major facility review permit that identifies and justifies specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting which 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 Major Facility Review permits. The District's program does not allow other types of streamlining in Major Facility Review permits.

This facility has no permit shields.

F. Compliance Status:

The owner certified that all equipment was operating in compliance on March 11, 2003. The owner also submits annual compliance certifications.

The Director of Compliance and Enforcement sent a review of the compliance record of PG&E (Site #: A0024) on March 8, 2004. The Compliance and Enforcement Division staff had reviewed the records for the period from February 28, 2003 through February 28, 2004. This review was initiated as part of the District evaluation of an application by the facility for a Title V permit renewal. During the period subject to review:

- No Notices of Violation were issued.
- No alleged complaints were received.
- The facility did not operate under a Variance or an Order of Abatement from the District Board.
- The facility requested breakdown relief for two indicated NO_x excesses and three inoperative monitors. Both indicated excesses were found not to be in violation. All three inoperative monitors are now online and in compliance.

The Director of Compliance and Enforcement supplied more compliance history detail on the excesses and monitor breakdowns in their memorandum of April 13, 2004. More information was requested at the public informational meeting of April 6, 2004.

The first NO_x excess was submitted to the District in error. The second excess lasted 36 minutes but was not a violation because it occurred during performance testing, which is exempt in accordance with BAAQMD Regulation 9-11-111.

Monitors were inoperative for 230 hours and 24 minutes. The detail of the dates and reasons is in the memorandum. Some monitor downtime is allowed as long as the facility complies with BAAQMD Regulation 1-522 and the Manual of Procedures, Volume 5, regarding monitor downtime.

No ongoing non-compliance issues have been identified to date.

Both memoranda are attached in Appendix D.

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APPENDIX A
DISPERSION CALCULATIONS FOR LEAD

OFFICE MEMORANDUM

February 3, 2004

TO: Brenda Cabral

Via: Brian Bateman

From: Scott Lutz

SUBJECT: PGE, Hunters' Point Plant 24, REGULATION 11-1, LEAD

Regulation 11-1-302 states that a person shall not discharge any emission of lead, or compound of lead, that will result in ground level concentrations in excess of $1.0 \mu\text{g}/\text{m}^3$, averaged over 24 hours.

Regulation 11-1-601 states that ground level emissions limited by Section 11-1-302 shall be determined by use of dispersion calculations described in the Manual of Procedures, Volume VI, Section 2.

Based on the potential to emit calculations provided, the analysis (see Appendix 1) shows that the maximum 24-hr average ground level lead concentration caused by PGE is expected to be about $3.0 \text{ E-}3 \mu\text{g}/\text{m}^3$. Therefore, it is shown that PGE complies with Regulation 11-1-302.

Both turbines exhaust through one stack. A scenario was considered that had only one turbine running to analyze the effect of reduced velocity. Because of the reduced emission rate, the impact is less from S1 than from S1 + S2. Therefore, the impact from S7 still dominates and the maximum 24-hr average ground level lead concentration caused by PGE is still expected to be about $3.0 \text{ E-}3 \mu\text{g}/\text{m}^3$.

APPENDIX 1
CALCULATION OF GROUND LEVEL LEAD CONCENTRATION

PGE Hunters' Point, Plant 24

Methodology

According to the Manual of Procedures, Volume VI, Section 2.:

"Emission limitations required to meet Regulation 11-1-302 shall be determined by use of formulas 4.1 and 5.13, and figures 3-3 and 3-9, in "Workbook of Atmospheric Dispersion Estimates," by D. Bruce Turner, Public Health Service Publication No. 999-AP-26, Revised 1969, published by the U.S. Department of Health, Education and Welfare. In using said equations and figures, a neutral or "D" stability category shall be assumed, a wind shall be assumed that remains throughout the averaging period directed within a 22.5° sector of the compass rose at an average speed of two meters per second, and an ambient air temperature of 293 K shall be assumed.

Calculations

1. Stack parameters:

	S1	S1 + S2	S7
V _S	16.9 m/s	33.8 m/s	16.8 m/s
T _S	722 K	722 K	428 K
d	4.7 m	4.7 m	3.5 m
H _S	44 m	44 m	76 m

2. Calculate plume rise using formula 4.1 (Holland's Equation) in Turner's workbook.

$$\delta H = (V_S d/u)(1.5 + (2.68 \text{ E-}3)(p d)((T_S - T_A)/T_S))$$

using

$$\begin{aligned} u &= 2 \text{ m/s} \\ T_a &= 293 \text{ K} \\ p &= 1013 \text{ mb} \end{aligned}$$

	S1	S1 + S2	S7
δH	361 m	721 m	132 m

3. Determine X_{MAX} from Figure 3-9 in Turner's Workbook.

H = Effective height of emission

$H = H_S + \delta H$

	S1	S1 + S2	S7
H	405 m	765 m	208 m

From Fig. 3-9 (attachment A-1), assuming "D" stability as specific in the MOP and H from above:

	S1	S1 + S2	S7
X_{MAX}	17 km	17 km	9.5 km

4. Determine Vertical Dispersion Coefficient (σ_z) from Figure 3-3 in Turner's workbook.

From Fig. 3-3 (attachment A-2), assuming "D" stability and X_{MAX} from above:

	S1	S1 + S2	S7
σ_z	180 M	180 M	130 m

5. Calculate maximum annual average (X_{AN}) and 24-hour average (X_{24}) concentrations using Formula 5.13 in Turner's Workbook:

$$X_{AN} = (2.03 Q)(\exp[-0.5 (H/\sigma_z)^2]) / (\sigma_z u X_{MAX})$$

Using $Q = \text{g/sec lead}$ [from Title V potential to emit calculation]

$$X_{AN} = \text{g/m}^3, \text{ maximum annual average}$$

$$X_{24} = 4 X_{AN} = \text{g/m}^3, \text{ maximum 24-hr average}$$

	S1	S1 + S2	S7	Maximum Total
Q	6.5 E-4 g/s	1.3 E-3 g/s	1.9 E-3 g/s	
X_{AN}	1.7 E-8 $\mu\text{g/m}^3$	2.5 E-8 $\mu\text{g/m}^3$	4.3 E-5 $\mu\text{g/m}^3$	
X_{24}	6.8 E-8 $\mu\text{g/m}^3$	1.0 E-7 $\mu\text{g/m}^3$	1.7 E-4 $\mu\text{g/m}^3$	1.7 E-4 $\mu\text{g/m}^3$

APPENDIX B

GLOSSARY

ACT

Federal Clean Air Act

APCO

Air Pollution Control Officer

AP-42

EPA's Compilation of Air Pollutant Emission Factors

ARB

Air Resources Board

BAAQMD

Bay Area Air Quality Management District

BACT

Best Available Control Technology

Basis

The underlying authority that 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

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.

IERC

Interchangeable Emission Reduction Credit, as defined by BAAQMD Regulation 2-9-212.

Major Facility

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

MFR

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

MOP

The District's Manual of Procedures.

NAAQS

National Ambient Air Quality Standards

NESHAPS

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

NMHC

Non-methane Hydrocarbons (Same as NMOC)

NMOC

Non-methane Organic Compounds (Same as NMHC)

NO_x

Oxides of nitrogen.

NSPS

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

NSR

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

Offset Requirement

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

Phase II Acid Rain Facility

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

POC

Precursor Organic Compounds

PM

Particulate Matter

PM₁₀

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

PSD

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

SIP

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

SO₂

Sulfur dioxide

THC

Total Hydrocarbons (NMHC + Methane)

Title V

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

TOC

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

TPH

Total Petroleum Hydrocarbons

TRMP

Toxic Risk Management Plan

TSP

Total Suspended Particulate

VOC

Volatile Organic Compounds

Units of Measure:

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

Permit Evaluation and Statement of Basis: Site A0024, Pacific Gas & Electric Company, Hunters Point Power Plant, 1000 Evans Avenue, San Francisco, CA 94124

APPENDIX C
Application 6811

**Engineering Evaluation
Pacific Gas and Electric Company
Plant #24, Hunters Point
Application # 6811
Regulation 2, Rule 9
Alternative Compliance Plan**

Background

At the time Regulation 2-9 was adopted, 23 utility boilers at four facilities owned and operated by PG&E were subject to Regulation 9-11. However, three facilities were sold and transferred to Mirant (formerly Southern Energy Delta) on April 16, 1999. PG&E retained ownership of the Hunters Point facility with the five boilers (S-3, 4, 5, 6, 7) and was subject to the Advanced Technology Alternative Emission Control Plan (ATAECP "system-wide emissions bubble") of Regulation 9-11, Section 309. Under the ATAECPP, the individual boilers are not required to comply with a specific emission limit, but a system-wide average. The current system-wide average NO_x limit is 0.057 lb/MMBtu for 2002 and 2003. Future limits will be ratcheted down over the years to 0.037 in 2004 and to the final limit of 0.018 lb/MMBtu in 2005 and thereafter.

In March 2001, four of the five boilers were permanently shutdown at the HPPP facility. Only Unit 7 remains in operation. PG&E has also entered into an agreement with the City and County of San Francisco regarding the future shutdown of the entire Hunters Point facility. However, before the HHP facility may be shutdown, the California Independent System Operators and Federal Energy Regulatory Commission must first authorize PG&E to terminate the "Reliability Must Run" Contact.

This application is for an Alternative Compliance Plan (ACP), which would allow PG&E to utilize existing Interchangeable Emission Reduction Credits (IERCs) to demonstrate compliance with the new, more stringent, NO_x limits.

Summary

PG&E's Hunters Point Power Plant Boiler No. 7 is subject to BAAQMD Regulation 9-11, which regulates NO_x emissions from electric power generating steam boilers. On January 1, 2004, Section 9-11-309.1 requires PG&E to comply with a NO_x emission rate limit of 0.037 lb NO_x/ million Btu heat input and the limit is further reduced to 0.018 lb/MMBtu-hr on January 1, 2005, and, thereafter.

PG&E plans to shut down this aging power plant as soon as other reliable sources of power are on-line. PG&E has been able to reduce emissions from this boiler through relatively inexpensive changes to combustion controls and equipment. Further reductions would require the installation of very expensive tailpipe emission control systems. If PG&E has to invest in controls for this facility, PG&E will need to continue operating the facility in order to recoup its investment.

District Regulation 2-9 provides a mechanism for PG&E to comply with Regulation 9-11-309.1 without installing additional controls, at least for a limited time. Regulation 2-9 allows a facility to generate Interchangeable Emission Reduction Credits (IERCs) by over complying with current requirements. The IERCs generated by over compliance may be used to offset emissions that exceed new, tighter limits from future rules. A 10% Environmental Benefit Surcharge ensures that the environment, and the public, benefit from the transaction.

PG&E has submitted an application for Alternative Compliance Plan, which will allow them to continue to operate Boiler No. 7 after the new limits become effective. Under this plan in 2004, PG&E may use up to 100 tons of IERCs previously generated by emission reductions at Hunters point to offset emissions that exceed the new 9-11 NO_x limits.

The plan cannot result in an increase in emissions over baseline levels.

Pursuant to the California Environmental Quality Act (CEQA), the District has completed an initial study of the potential impacts of this project, and has determined that there are no potentially significant environmental impacts. CEQA requires the preparation of a negative declaration for this project. The applicant, however, has requested that the District prepare an Environmental Impact Report. The District has prepared a draft EIR, at the applicant's request, even though it is not required under CEQA.

In November 2001, the BAAQMD APCO approved the PG&E IERC application for both the Potrero (Application No 22441) and Hunters point (application No. 22504) facilities. The requested credits were for emission reductions due to combustion controls implemented at HHP and Potrero.

Facility	Certificate	Generation Period	Certificate Expiration	Tons NOx (as NO₂)
Potrero	6-A	1/1/97-12/31/97	1/1/98-1/31/02	145.9
	6-B	1/1/98-12/31/98	1/1/99-1/31/03	233.7
	6-C	1/1/99- 4/16/99	4/17/99-4/16/04	31.8
Hunters Point	7-A	1/1/97-12/31/97	1/1/98-1/31/02	409.5
	7-B	1/1/98-12/31/98	1/1/99-1/31/03	455.3
	7-C	1/1/99-12/31/99	1/1/00-12/31/04	262.7

Available IERCs

PG&E has generated and banked IERCs from the Potrero and Hunters Point Power Plants as shown in the above table. Several community and environmental groups challenged the issuance of the IERCs to PG&E by filing an appeal to the BAAQMD Hearing Board (Docket No. 3364). PG&E reached a settlement agreement with these groups regarding the banking and use of IERCs. In the settlement agreement, PG&E agreed to relinquish all of the IERCs represented by Certificates 6-A, 6-B, 6-C, 7-A, 7-B and 7-C except for 100 tons of IERCs represented by Certificate 7-C. PG&E further agreed to use no more than 100 tons of IERCs in 2004.

IERCs expire five years following their effective date. The IERCs represented by Certificate 7-C became effective January 1, 1999 and will expire December 31, 2004. BAAQMD has canceled Certificate 6-A, 6-B, 6-C, 7-A, 7-B and 7-C and has reissued a new Certificate 7-D reflecting the 100 tons of remaining IERCs with a December 31, 2004 expiration date. PG&E has recently submitted an application for further IERCs that, if issued, would be usable in later years.

Regulation 9-11

An Alternative Compliance Plan (ACP) must satisfy all the requirements of Rule 2-9-303 before the IERCs may be used to comply with Regulation 9-11.

Alternative Compliance Plan

Under the Alternative Compliance Plan (ACP), PG&E will use as much as 100 tons of NOx IERCs from Certificate 7-D. As much as 91 tons of NOx reductions would otherwise be required under Regulation 9-11. Regulation 9-11 limits the average NOx emission rate on an hourly basis; the ACP must also show hourly compliance. PG&E will be required to calculate actual daily NOx emissions, and compare those

emissions with the allowable emissions under Regulation 9-11. Offsets will be provided (at a 1.10 to 1 ratio to make up any shortfall).

Actual emissions for a source with a CEM

1. Measure hourly average NOx ppm concentration (C_{NOx}) and percent CO₂ (%CO₂) using Continuous Emissions Monitoring (CEMs);
2. Calculate the emissions rate using the formula $E = 1.194 \times 10^{-7} \times C_{NOx} \times 1040 \times 100/\%CO_2$ in lb/MMBtu¹;
3. Measure hourly natural gas fuel usage, and convert to heat (H) in MMBtu.
4. Multiply the heat (H) times the emission rate (E) to obtain the emissions in lbs.

Reg. 9-11 allowable emissions

1. Measure hourly usage of type of fuel;
2. Multiply fuel usage by heat content for fuel to obtain heat release;
3. Multiply total heat release by Reg. 9-11-302 limit of 0.037 of NOx (as NO₂)/ MMBTU for 2004.

Amount of IERCs consumed

1. Calculate actual emissions for the affected source on hourly basis;
2. Calculate allowable emissions for the affected source on hourly basis;
3. If total hourly actual emissions are less than or equal to allowable emissions, sources comply with Reg. 9-11 without using IERCs for that hour;
4. If total hourly emissions are greater than allowable emissions, subtract allowable emissions from actual emissions to obtain the amount of IERCs consumed for that hour;
5. Multiply the hours IERCs by 1.1 to include the 10% environmental benefit surcharge.

PG&E will operate the HPPP electric generating facility only to the extent required by the California Independent System Operator (ISO) and to meet its obligations under its "Reliability-Must Run" Contact while complying with Regulation 9, Rule 11-309.1. There are no plans to use any IERCs in 2003, and the proposed ACP restricts use to no more than 100 tons in 2004.

This plan only covers calendar year 2004. PG&E has indicated that it will submit another plan to cover 2005. PG&E submitted application No 7375 to apply for IERCs that will be used in future plans.

¹Re: 40 CFR Part 75, Appendix F – Conversion Procedure Equation F-6

Statement of Compliance

An Alternative Compliance Plan must satisfy the requirements of Regulation 2, Rule 9-303 in order to comply with a NOx rule in Regulation 9-11. PG&E's ACP complies with Regulation 2-9, Section 303 as indicated below.

303.1 Only IERCs that have been generated, approved, and banked in accordance with this rule may be used in an ACP.

The IERCs that will be used under this ACP will include only those generated, approved and banked in accordance with the provisions of Reg. 2-9.

303.2 NOx emissions from each source or group of sources (if grouping is allowed under the applicable emission standard) in the ACP, less IERCs applied, shall not exceed that amount or level of NOx emissions, which would result if the affected source or sources complied with the applicable BARCT requirements of Regulation 9 on a daily basis.

The ACP will track actual and allowable emissions on an hourly basis. If actual emissions exceed allowable, PG&E will be required to provide IERCs for the difference, plus an environmental benefit surcharge of 10%.

303.3 The ACP must be reviewed and approved by the APCO on an annual basis.

The initial review of this ACP is being conducted under this application. The ACP will be reviewed annually hereafter.

303.4 The ACP must include methods for demonstrating compliance on a daily basis, by listing:

4.1 All sources covered by the ACP;

The proposed includes a list of all sources (i.e. Source No. S-7) covered by the ACP.

4.2 Maximum firing rate (higher heating value) of each source;

The proposed ACP includes maximum firing rate (higher heating value) for each source.

4.3 Type(s) of fuel and heat content (higher heating value) of each fuel combusted in each source;

The propose ACP includes the type(s) of the fuel and heat content (higher heating value) of each fuel combusted in each source (see below).

Source No:	S-7
Boiler No.	7
Max. Firing rate:	1720 MMBTU/hr
Fuel type:	natural gas only
Higher Heating Value:	1040 BTU/CF

4.4 NOx emission rate for each type of fuel combusted in each source;

The NOx emission rate will be determined on an hourly basis using data from the CEMS on Boiler 7. HPPP emission rates will be calculated using its NOx Compliance Monitoring System computer.

4.5 A comparison of the actual nitrogen oxide emission rate and the nitrogen oxide emission rate that would be allowed under the applicable BARCT provision(s) of Regulation 9, in the absence of this rule, for each source, or group of sources (if grouping is allowed under the applicable emission standard),

The attached Table 1 shows hypothetical exemplar compliance tracking data for Regulation 2-9. Each hour, the actual total mass NOx emissions for the boiler will be listed in the table and compared to the allowable amount under BARCT (0.037 lb/MMBU for 2004. The IERCs required (including the 10% surcharge required by Regulation 2-9-306) for hourly compliance plus the running balance of available IERCs are shown in the next columns. This spread sheet will be kept in the control room at the power plant and will be available for District inspection.

4.6 Detailed calculation of the amount of IERCs required for BARCT compliance, in accordance with the procedure in Section 2-9-605;

Actual hourly NOx mass emissions and fuel throughput are taken from the Continuous Emission Monitoring System. Compliance with Rule 9-11 will be determined based on hourly calculation of the total NOx mass emission rate (lb) of the affected boiler divided by the actual fuel throughput (MMBTU). Allowable hourly mass emissions are determined by multiplying the actual throughput (MMBTU) by the allowable emission (0.037 lb NOx (as NO₂)/MMBTU for 2004). For each hour in which actual emissions are not greater than allowable emissions, no IERCs are needed to achieve compliance. For each hour in which the opposite is true, the amount of IERCs is needed to comply with Regulation 2-9 will be determined by subtracting allowable emissions from actual emissions and then applying the environmental benefit surcharge by multiplying by one to one and one tenth (1: 1.1).

The daily total will be determined by summing up the hourly totals. The attached Table 1 illustrates all of the above calculations. Start-up and shutdown allowances all will be treated as provided in Regulation 9-11.

The hourly IERCs will be totaled on a monthly basis. PG&E will submit quarterly status reports regarding the ACP. Following the end of the 1-year ACP period, PG&E will be required to surrender the amount of IERCs needed for compliance within 30 days.

303.6 Failure to comply with any emission calculation, emission testing, monitoring, record keeping or reporting provision of an approved plan, or failure to surrender sufficient IERC banking certificates within 30 days following the end of the ACP period, shall constitute a violation of the applicable Regulation 9 BARCT Rule(s).

Regulation 2, Rule 9, Section 502 Alternative Compliance Plan Record Keeping and Reporting

Section 502.1: The information required in subsection 2-9-303.4 shall be available for inspection by the APCO on each production or operation day.

The owner/operator shall keep information on site of each operating day on site and make such information be available for inspection by the District inspection staff.

Section 502.2: The person submitting the ACP shall retain records for five years from the date the record was made and shall submit such information as required by the APCO to determine compliance with the ACP.

The owner/operator shall keep all records on site for at least 5 years.

Section 502.3: The ACP shall include [a requirement for] quarterly reports submitted to the APCO, within 30 days following the end of each calendar quarter, or other 3-month interval established in the plan.

In Each quarterly report the owner/operator shall include:

3.1 A summary of the amount of IERCs used during the preceding quarter;

3.2 A running total of all IERCs used during the current ACP period;

3.3 A projection of the amount of IERCs that will be needed for the entire ACP period, based on the IERCs usage rates calculated in Section 502.3.1 and 502.3.2; and

3.4 Certification that the facility possesses IERCs equal to the amount projected in Section 502.3.3 or a description of how the facility will adjust its operation so that the amount of IERCs needed does not exceed the amount of IERCs possessed by the facility.

The owner/operator shall submit these quarterly reports within 30 days following the end of each calendar quarter and shall include all the above information.

Section 502.4: Within 30 days following the end of the ACP period, the owner/operator of the facility shall submit an annual reconciliation report summarizing the amount of IERCs used during the preceding 12-month ACP period, and shall surrender the banking certificate(s) for all IERCs used during the ACP period plus the applicable environmental benefit surcharge.

The owner/operator shall submit annual reconciliation reports within 30 days of the end of each 12-month ACP period, and banking certificates shall be surrendered as required.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The California Environmental Quality Act (CEQA) requires environmental review for projects developed or approved by California state, regional, or local government. PG&E has submitted this permit application

to the District for approval. This permit application does not qualify under any of the CEQA exemptions contained in Regulation 2-1-311 (ministerial exemption), Regulation 2-1-312 (categorical exemption), or Section 15061 of the State CEQA Guidelines. The District is not aware of any other public agency that will be preparing a Negative Declaration or EIR for this project. Accordingly, the District is the Lead Agency for this project under CEQA.

The District has received from the applicant a completed, signed and dated preliminary environmental study as required by Regulation 2-1-426.1, with information equivalent to that contained in Appendix H of the State CEQA Guidelines. Therefore, the application is deemed complete for CEQA purposes. In October 2002, PG&E entered into an agreement with Communities for a Better Environment, Southeast Alliance for Environmental Justice, Bayview Hunters Point Community Advocates, and Literacy for Environmental Justice regarding the banking and usage of IERCs in an effort to expedite closure of Hunters Point Power Plant. To implement that agreement, PG&E agreed to prepare an environmental impact report for any ACP application for Hunters Point Power Plant. This agreement, of course, does not affect the District's responsibility as lead agency under CEQA to determine whether or not a CEQA Environmental Impact Report (EIR) should be prepared.

The District has prepared an Initial Study, dated June 2, 2003, on this proposed project. The purpose of an Initial Study is to provide the District with information to use as the basis for deciding whether to prepare an EIR or Negative Declaration under CEQA. Based on the Initial Study, the District has determined that there is no substantial evidence that the project or any of its aspects may cause a significant effect on the environment. Pursuant to the State CEQA Guidelines Sections 15063 (b)(2) and 15064 (f)(3), the District should prepare a Negative Declaration for this project. However, the applicant has requested that the District prepare an Environmental Impact Report for the project. Because the applicant has made the request and bears the burden of the resulting cost and delay, the District will grant the request.

Upon the air pollution control officer's (APCO's) approval of the preliminary decision to approve the Advanced Technology Alternative Emission Control Plan (ATAECP) and its related CEQA documents, the District will circulate the CEQA documents for public review as part of the regular 30-day public notice stating the preliminary decision of the APCO. All comments received on the CEQA documents will be considered and responded to. The final action by the District to approve or deny the ATAECPP will be taken only after this information and the comments received during the public review process are reviewed and considered by the APCO.

The District has prepared a draft Environmental Impact Report for this project, which will be subject to public review along with this Preliminary Decision to Approve the Advanced Technology Alternative Emission Control Plan (ATAECP) to allow Pacific Gas & Electric to use IERCs to comply with the NOx emissions limits in Regulation 9, Rule 11.

Public Notice / Comment

Before the District may approve the initial ACP for a source or group of sources, the APCO must publish in at least one newspaper of general circulation within the District a notice stating the preliminary decision of the APCO to approve the ACP (per Reg. 2-9-405). The public comment period shall last at least for 30 days.

PERMIT CONDITIONS

- 1 The owner/operator shall operate a continuous emission monitor system (CEMS) to measure the NOx and O₂ concentrations from boiler number 7 at Hunters Point Power Plant.
2. The owner/operator shall not use Interchangeable Emission Reduction Credits (IERCs) for Hunters Point Power Plant exceeding 100 tons of NOx (as NO₂) for the year of 2004.

3. The owner/operator shall determine the amount of IERCs necessary for compliance with Regulation 9, Rule 11. To show compliance with Rule 9-11, the owner/operator shall keep a spreadsheet in a District approved format. The spreadsheet must include a running balance of both IERCs consumed and IERCs remaining for each month, actual hourly heat input in million BTU, actual NOx (as NO₂) emissions rates per hour, and allowable NOx (as NO₂) emissions rates based on Regulation 9-11 limits of 0.037 lb/MMBTU for 2004. (Table 1 of the Engineering Evaluation Report AN 6811 in an example of a District approved daily summary spreadsheet format)

4. The owner/operator shall maintain the records of continuous emission monitoring (NOx and CO₂) and fuel usage records for boiler number 7 for a period of at least five (5) years. Such records must be retained for a minimum of 5 years from date of entry and made available to the APCO upon request. These records must include, but are not limited to:
 - i. The continuous emission monitoring measurements for NOx in ppmvd and pound per hour, and CO₂ in percent.
 - ii. The type, quantity (Btu/hr), and higher heating value of fuel burned on an hourly basis.
 - iii. The results of any performance testing, calibrations checks, zero adjustments, and maintenance of any continuous emission monitors.
 - iv. The date, time, and duration of any start-up, shutdown, or malfunction in the operation of the unit, emission control equipment, or emission monitoring equipment

5. The owner/operator shall submit quarterly reports to the APCO, within 30 days following the end of each calendar quarter or other 3-month interval established in the plan. Each quarterly report must include:
 - i. Summary of the amount of IERCs used during the preceding quarter;
 - ii. A running total of all IERCs used during the current ACP period;
 - iii. A projection of the amount of IERCs that are needed for the entire ACP period, based on the IERC usage rates calculated in Section 502.3.1 and 502.3.2; and
 - iv. Certification that the facility possesses IERCs equal to the amount projected in Section 502.3.3 or a description of how the facility will adjust its operation so that the amount of IERCs does not exceed the amount of IERCs possessed by the facility

6. The owner/operator shall submit an annual reconciliation report to the APCO within 30 days of the end each 12-month ACP period, and surrender the banking certificate(s) for all IERCs used during that ACP period plus the applicable environmental benefit surcharge.

RECOMMENDATION

Staff recommends that the APCO approve the Preliminary Decision to approve the Advanced Technology Alternative Emission Control Plan (ATAECP) to allow Pacific Gas & Electric to use IERCs to comply with the NOx emissions limits in Regulation 9, Rule 11.

by: _____ Date: _____
 Pamela Leong, Air Quality Engineer II

Table 1

Hypothetical Exemplar Compliance Data

Hunters Point Power Plant, Unit 7

Period from to: 1/1/2004 00-00-00 to 1/1/2004 23:00:00
 Applicable Limit 0.037 lb NOx/MMBTU
 IERCs available at start for period 200,000 lb NOx

Date and Time	Total MMBTU	NOx lb (as NO ₂)	NOx (as NO ₂) lb/MMBTU	Allowable NOx (as NO ₂) lb	IERCs used in lb	IERCs balance in lb
	Measured	Measured	Calculated	Calculated	Calculated	200,000
01-Jan-04 00:00:00	428.3	11.2	0.026	15.85	0.00	200,000
01-Jan-04 01:00:00	444.0	10.6	0.024	16.43	0.00	200,000
01-Jan-04 02:00:00	450.9	10.27	0.023	16.68	0.00	200,000
01-Jan-04 03:00:00	800.9	25.84	0.032	29.63	0.00	200,000
01-Jan-04 04:00:00	1248.5	49.02	0.039	46.20	3.11	199,996.89
01-Jan-04 05:00:00	517.5	16.37	0.032	19.15	0.00	199,996.89
01-Jan-04 06:00:00	1302.0	55.22	0.042	48.17	7.75	199,989.14
01-Jan-04 07:00:00	1519.0	65.63	0.043	56.20	10.37	199,978.77
01-Jan-04 08:00:00	1577.0	70.88	0.045	58.35	13.78	199,964.99
01-Jan-04 09:00:00	1639.6	74.61	0.046	60.67	15.34	199,949.65
01-Jan-04 10:00:00	1640.0	75.77	0.046	60.68	16.60	199,933.05
01-Jan-04 11:00:00	1642.6	77.04	0.047	60.77	17.89	199,915.16
01-Jan-04 12:00:00	1642.6	77.38	0.047	60.78	18.26	199,896.90
01-Jan-04 13:00:00	1635.0	74.71	0.046	60.50	15.64	199,881.26
01-Jan-04 14:00:00	1641.7	74.70	0.046	60.74	15.35	199,865.91
01-Jan-04 15:00:00	1642.0	74.88	0.045	60.75	15.54	199,850.37
01-Jan-04 16:00:00	1641.8	74.39	0.058	60.75	15.01	199,835.36
01-Jan-04 17:00:00	1642.9	95.3	0.044	60.75	38.00	199,797.36
01-Jan-04 18:00:00	1556.9	69.18	0.043	57.60	12.73	199,784.62
01-Jan-04 19:00:00	735.5	31.78	0.046	27.21	5.02	199,779.60
01-Jan-04 20:00:00	448.3	15.06	0.026	16.59	0.00	199,779.60
01-Jan-04 21:00:00	428.3	11.26	0.023	15.85	0.00	199,779.60
01-Jan-04 22:00:00	445.4	10.32	0.023	16.48	0.00	199,779.60
01-Jan-04 23:00:00	444.5	10.21	0.023	16.45	0.00	199,779.60

IERCs used during period = 220.40
 IERCs available end of period = 199,779.60
 Includes 10% environmental benefit surcharge required by BAAQMD Rule 2-9-306

APPENDIX D

COMPLIANCE REPORTS

APPENDIX E