Pacific Gas and Electric Company®

Dena Parish
Environmental Compliance Manager
Power Generation
Humboldt Bay Generating Station

1000 King Salmon Ave., Bldg. 22
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April 30, 2009

Mr. Chris Davis
Compliance Project Manager
California Energy Commission
Energy Facilities Siting Division
1516 Ninth Street, MS 2000
Sacramento, California 95814-5512

RE: HBGS CCR Title 20, Section 1769, Submittal of Permit Modifications (06-AFC-07C)

Dear Mr. Davis,

Please find enclosed a Petition for Modifications to the CEC air quality conditions of certification. PG&E has also requested these changes to the HBGS Authority to Construct/PSD permit conditions through the submittal to the North Coast Unified Air Pollution Control District of an application for modifications to the Authority to Construct for the Humboldt Bay Generating Station.

Should you have any questions or concerns, please do not hesitate to contact me. Thank you for your time and consideration.

Respectfully,

Dena Parish
Environmental Compliance Manager
Humboldt Bay Generating Station
1000 King Salmon Ave.
Eureka, CA 95503
(707) 444-6568

Attachment

cc: Nancy Matthews, Sierra Research
Susan Strachan, Strachan Consulting (electronic)

Petition to Amend Air Quality Conditions in the Humboldt Bay Generating Station Final Decision

Submitted to the

California Energy Commission

April 30, 2009

Submitted by

Pacific Gas and Electric Company

With Technical Assistance By

1801 J Street
Sacramento, CA 95811

Table of Contents

Executive Summary

Pacific Gas and Electric Company (PG&E) petitions the California Energy Commission to modify the certification for Humboldt Bay Generating Station (HBGS) (a.k.a. Humboldt Bay Repowering Project) (06-AFC-7C). Since receiving the Final Determination of Compliance (FDOC) from the North Coast Unified Air Quality Management District (District) and CEC license for HBGS, PG&E has worked with Wärtsilä, the manufacturer of the new power plant generating equipment, to develop construction, commissioning, and other operation- and compliance-related schedules and procedures for the facility. As a result of these more detailed development procedures, PG&E has determined that changes to some of the permit conditions are needed to allow the facility to be commissioned and operated effectively and efficiently. With this application, PG&E is proposing to make the following types of changes to the conditions:

- Clarify what type of permit PG&E holds for HBGS, and include provisions for permit extension/renewal;
- Revise operating and emissions limitations applicable during the commissioning period;
- Revise conditions applicable to project operation; and
- Correct typographic errors and inconsistencies.

These changes are proposed to enhance PG&E's ability to comply with the permit conditions and to improve the consistency and enforceability of the permit. The proposed changes will make the permit conditions more consistent with the ambient air quality analyses that were performed during the original permit review. None of the requested amendments involve changes to maximum permitted emissions limits, revisions to ambient air quality modeling analyses, or new operating scenarios. With adherence to the Conditions of Certification, the HBGS, as modified, will not cause significant adverse impacts to the environment.

SECTION 1.0

Introduction

1.1 Overview of Modifications

Pacific Gas and Electric Company (PG&E) petitions the California Energy Commission (CEC) to modify the certification for the Humboldt Bay Generating Station (HBGS) (a.k.a. Humboldt Bay Repowering Project [HBRP] 06-AFC-7C). The Application for Certification (AFC) for this project was filed in 2006 (PG&E, 2006) and the facility received CEC certification on September 24, 2008 (CEC, 2008).

The applicant filed an application for modifications to the District Authority to Construct/Prevention of Significant Modification permit on April 6, 2009. This Petition for Modification proposes to modify several conditions of certification related to air quality to make them consistent with the modified conditions requested in the application to the District. These modifications generally fall into four areas: clarifying the type of air permit that was granted by the District in April 2008; revising conditions related to commissioning of the new generating equipment; revising conditions related to facility requirements after the commissioning phase has ended; and correcting typographical errors and inconsistencies.

None of the proposed modifications will increase emissions above currently permitted maximum levels or will affect the ambient air quality modeling analyses upon which the findings of compliance were based. A detailed description of the proposed modifications to permit conditions is included in the District application for amendment, which is included as Attachment 1 to this petition.

This Petition for Modification contains all of the information that is required pursuant to the CEC's Siting Regulations (California Code of Regulations [CCR] Title 20, Section 1769, Post Certification Amendments and Changes). The information necessary to fulfill the requirements of Section 1769 is provided in Sections 1.0 through 6.0 as summarized in Table 1.

TABLE 1

Informational Requirements for Post-Certification Modifications

Section 1769 Requirement	Section of Petition Fulfilling Requirement
(A) A complete description of the proposed modifications, including new language for any conditions that will be affected	Section 2.0—Proposed modifications Section 3.1 —Proposed changes to Conditions of Certification are provided in Part III to the attached permit application
(B) A discussion of the necessity for the proposed modifications	Section 1.3

TABLE 1

Informational Requirements for Post-Certification Modifications

Section 1769 Requirement	Section of Petition Fulfilling Requirement
(C) If the modification is based on information that was known by the petitioner during the certification proceeding, an explanation why the issue was not raised at that time	Section 1.3
(D) If the modification is based on new information that changes or undermines the assumptions, rationale, findings, or other bases of the final decision, an explanation of why the change should be permitted	Sections 1.4, 3.1, Attachment 1
(E) An analysis of the impacts the modification may have on the environment and proposed measures to mitigate any significant adverse impacts	Section 3.1
(F) A discussion of the impact of the modification on the facility's ability to comply with applicable laws, ordinances, regulations, and standards	Section 3.1, Attachment 1
(G) A discussion of how the modification affects the public	Section 4.0
(H) A list of property owners potentially affected by the modification	Section 5.0
(I) A discussion of the potential effect on nearby property owners, the public and the parties in the application proceedings.	Section 6.0

1.2 Ownership of the Facility Property

PG&E will continue to own and operate the HBGS. PG&E is one of the largest combination natural gas and electric utilities in the United States. The company provides natural gas and electric service to approximately 15 million people throughout northern and central California.

1.3 Necessity of Proposed Changes

The Siting Regulations require a discussion of the necessity for the proposed revision to HBGS certification and whether the modification is based on information known by the petitioner during the certification proceeding (Title 20, CCR, Sections 1769 [a][1][B], and [C]). This Petition for Modification is necessary to clarify the license conditions and thus to improve consistency and enforceability. The modification is based on information that was not known by PG&E during the certification proceeding.

1.4 Consistency of Changes with Certification

The Siting Regulations also require a discussion of the consistency of the proposed project revision with the applicable laws, ordinances, regulations, and standards (LORS) and whether the modifications are based on new information that changes or undermines the assumptions, rationale, findings, or other basis of the final decision (Title 20, CCR Section 1769 [a][1][D]). If the project is no longer consistent with the certification, the Petition for Modification must provide an explanation of why the modification should be permitted.

The proposed changes to permit conditions are consistent with all applicable LORS. This Petition for Modification is not based on new information that changes or undermines any basis for the final Decision. The findings and conclusions contained in the Commission Decision for HBGS (CEC, 2008) are still applicable to the project, as modified.

1.5 Summary of Environmental Impacts

The CEC Siting Regulations require that an analysis be conducted to address the potential impacts the proposed modifications may have on the environment and proposed measures to mitigate any potentially significant adverse impacts (Title 20, CCR, Section 1769 [a][1][E]).

The regulations also require a discussion of the impact of the modification on the facility's ability to comply with applicable LORS (Section 1769 [1][a][F]). Section 3.0 of this Petition for Modification includes a discussion of the potential environmental impacts associated with the modifications, as well as a discussion of the consistency of the modification with LORS. Section 3.0 also includes updated environmental baseline information if changes have occurred since the AFC that would have a bearing on the environmental analysis of the Petition for Modification. Section 3.0 concludes that there will be no significant environmental impacts associated with implementing the actions specified in the Petition for Modification and that the project as modified will comply with all applicable LORS.

1.6 Conditions of Certification

The construction of the HBGS modifications identified in this petition would require several changes to the CEC Conditions of Certification as described in the Commission Decision for the HBGS. The proposed changes are provided in Attachment 1.

SECTION 2.0

Description of Project Modifications

This section includes a brief description of the proposed project modifications, consistent with CEC Siting Regulations (Title 20, CCR, Section 1769 [a][1][A]). A detailed analysis of each proposed change is provided in the application to the NCUAQMD, which is included as Attachment 2 to this petition.

PG&E proposes to make several changes to the HBGS permit, as follows:

- Clarify what type of permit PG&E holds for HBGS, and include provisions for permit extension/renewal;
- Clarify the definitions of "operational minute" and "operational mode transfer";
- Revise the procedure for monitoring ammonia slip to make it consistent with the SCR and ammonia injection system design;
- Revise the operating and emissions limitations applicable to the commissioning period to make them consistent with modeled operating scenarios in original permit application;
- Clarify that some operating limitations are not applicable during the commissioning period;
- Add provisions for alternative compliance plans to conditions related to daily $PM_{2.5}$ emissions limits;
- Revise the conditions related to compliance with daily PM_{10} limit during Diesel Mode operation;
- Clarify the procedure for submittal of revised screening health risk assessment;
- Clarify the funding procedures for meteorological and ambient monitoring stations; and
- Correct typographic errors and inconsistencies.

These changes are proposed to enhance PG&E's ability to comply with the permit conditions and to improve the consistency and enforceability of the permit. None of the changes involve changes to maximum permitted emissions limits, ambient air quality modeling, or operating scenarios.

SECTION 3.0

Environmental Analysis of Proposed Project Modifications

The proposed modifications to the HBGS would be limited to changes to conditions related to air quality, and would not affect air pollutant emissions or ambient air quality modeling results. As a result, the environmental analysis for all of the environmental disciplines does not differ significantly from that described in the AFC, and the impacts associated with this Petition for Modification would be less than significant. The following environmental disciplines would not differ significantly from the AFC:

- Biological Resources;
- Cultural Resources;
- Geology and Paleontology;
- Hazardous Materials Management;
- Land Use;
- Noise;
- Public Health;
- Socioeconomics;
- Soils and Water;
- Traffic and Transportation;
- Visual Resources;
- Waste Management; and
- Worker Safety and Fire Protection.

The proposed changes will not affect emissions or ambient air quality impacts that were evaluated in the AFC. The following section addresses the need for the proposed changes and briefly explains why the proposed changes will not result in any changes to the air quality conformance determination. A more extensive discussion of each proposed change is provided in the application to the District, which is included here as Attachment 2. The modifications require changes to the Conditions of Certification, and the changes are provided in Attachment 1 to this petition.

3.1 Air Quality

This section presents the evaluation of impacts resulting from the proposed modifications to air quality conditions of certification.

3.1.1 Environmental Baseline Information

This Petition for Modification does not require changes to the environmental baseline information as described in the AFC for air quality. There have been no significant changes in ambient air quality or meteorological conditions since the AFC was filed.

PG&E proposes to modify some of the conditions of certification to address inconsistencies with LORS and internal inconsistencies as well as clarifications to simplify and improve enforceability. No changes to emissions or source locations are proposed for the HBGS.

3.1.2 Environmental Consequences

The proposed changes to air quality related conditions of certification will not result in any increase in allowable emissions or changes to maximum ambient air quality impacts upon which the determination of conformity with air quality and public health-related LORS was based. The proposed changes will not affect the screening health risk assessments prepared by the CEC staff and the application for the project. The proposed changes will not create a significant air quality impact.

3.1.3 Mitigation Measures

No additions to or changes to the mitigation measures are necessary for air quality for this proposed modification.

3.1.4 Consistency with LORS

The proposed changes to air quality related conditions of certification will conform with all applicable LORS related to air quality.

3.1.5 Conditions of Certification

The proposed changes to air quality related conditions of certification are provided in Attachment 2. No other changes to conditions are being proposed.

3.2 LORS

The Commission Decision certifying the HBGS project concluded that the project is in compliance with all applicable LORS. The project, as modified, will continue to comply with all applicable LORS.

SECTION 4.0

Potential Effects on the Public

This section discusses the potential effects on the public that may result from the modifications proposed in this Petition for Modification application, per CEC Siting Regulations (Title 20, CCR, Section 1769[a][1][G]).

No adverse effects on the public will occur because of the changes to the project as proposed in this Petition for Modification.

SECTION 5.0

List of Property Owners

This section lists the property owners in accordance with the CEC Siting Regulations (Title 20, CCR, Section 1769[a][1][H]). A list of property owners whose property is located within 1,000 feet of the proposed facility is included as Attachment 3. The list is provided in a format suitable for copying to mailing labels.

SECTION 6.0

Potential Effects on Property Owners

This section addresses potential effects of the project changes proposed in this Petition for Modification on nearby property owners, the public, and parties in the application proceeding, per CEC Siting Regulations (Title 20, CCR, Section 1769 [a][1][I]).

The project as modified will not differ significantly in potential effects on adjacent land owners, compared with the project as previously proposed. The project would therefore have no adverse effects on nearby property owners, the public, or other parties in the application proceeding.

SECTION 7.0

References

California Energy Commission (CEC). 2008. Final Commission Decision on Humboldt Bay Repowering Project. California Energy Commission, Sacramento, California. September.

North Coast Air Quality Management District (District). 2008. Title V Federal Operating Permit. NCUAQMD Permit To Operate and Final Determination Of Compliance ATC Permit No: 443-1. April.

Pacific Gas and Electric Company (PG&E). 2006. Application for Certification for the Humboldt Bay Repowering Project. Submitted to the California Energy Commission.

ATTACHMENT 1

Proposed Changes to Air Quality Conditions of Certification

DEFINITIONS

As used in this Permit, the terms shall have the meaning set out herein.

a. Acfm: actual cubic feet per minute

b. Alternative Liquid Fuel: An alternative diesel fuel or CARB Diesel Fuel with fuel additives that meets the requirements of the California Air Resources Board Verification Procedure, as codified in Title 13, CCR, sections 2700-2710

c. APCO: the NCUAQMD Air Pollution Control Officer

d. Calendar Day: Any continuous 24-hour period beginning at 12:00 AM or 0000 hours

e. California Air Resources Board (CARB) Diesel Fuel: Any diesel fuel that is commonly or commercially known, sold, or represented by the supplier as diesel fuel No. 1-D or No. 2-D, pursuant to the specifications in ASTM D975-81, "Standard Specification for Diesel Fuel Oils," as modified in May 1982, which is incorporated herein by reference, and that meets the specifications defined in Title 13 CCR, sections 2281, 2282 and 2284

f. CAM Plan: Compliance Assurance Monitoring Plan, as defined in 40 CFR 64

g. CARB: the California Air Resources Board

h. CEC CPM: California Energy Commission Compliance Program Manager

i. CEMS: Continuous Emissions Monitoring System

j. CFR: the Code of Federal Regulations

k. Commencement of Onsite Construction: the commencement of a program of significant and continuous construction at the Facility or modification of the emissions unit(s) subject to this Permit

l. Commissioning Activities: All testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the owner's engineer to ensure safe and reliable steady state operation of the reciprocating engines and associated electrical delivery systems

m. Commissioning Period: For each reciprocating engine considered separately, the time period that commences when a Reciprocating Engine is first fired. The period shall terminate when each individual reciprocating engine has successfully completed both performance and compliance testing. The commissioning period shall not exceed 180 days under any circumstances.

n. COMS: Continuous Opacity Monitor

o. Corrected Concentration: The concentration of any pollutant (generally NOx, CO, ROC, or NH3) corrected to a standard stack gas oxygen concentration. For emission points S-1 through S-12, the standard stack gas oxygen concentration is 15% O2 by volume on a dry basis

p. Diesel Mode: the firing of reciprocating engines S-1 through S-10 on CARB diesel, when the heat input from liquid fuel exceeds 0.8 MMBtu/hr, and when the engine operates under the theoretical Diesel cycle.

q. Diesel Particulate Matter (DPM): filterable particulate matter (PM) measured using EPA method 5

r. Diesel Particulate Matter ATCM Emergency Use: shall only pertain to engines S-11 and S-12 and shall mean providing electrical power or mechanical work during any of the following events and subject to the following conditions:

i. The failure of loss of all or part of normal electrical power service or normal gas supply to the facility which is demonstrated by the Permittee to the NCUAQMD APCO's satisfaction to have been beyond the reasonable control of the Permittee.

ii. The failure of the facility's internal power distribution system which is demonstrated by the owner or operator to the NCUAQMD APCO's satisfaction to have been beyond the reasonable control of the Permittee.

iii. The pumping of water for fire suppression or protection.

s. NCUAQMD: North Coast Unified Air Quality Management ~~NCUAQMD~~District

t. Dscfm: dry standard cubic feet per minute

u. Emergency: operation arising from a sudden and reasonably unforeseeable event beyond the control of the permittee (e.g., an act of God) which causes the excess of a limitation under this permit and requires immediate and corrective action. An "emergency" does not include noncompliance as a result of improperly designed or installed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

v. EPA: the United States Environmental Protection Agency

w. Facility: the site of the Humboldt Bay ~~Repowering Project~~Generating Station at HBPP

x. Firing Hours: Period of time during which fuel is flowing to a unit, measured in minutes divided by 60

y. ~~HBRP~~HBGS: Humboldt Bay ~~Repowering Project~~ Generating Station

z. HBPP: Existing Humboldt Bay Power Plant and applicable NCUAQMD permits.

aa. Heat Input: the energy (heat) input of the fuel combusted at the higher heating value (HHV) of the fuel

bb. HHV: Higher Heating Value

cc. Hr: one hour – a standard measurement of time

dd. H2S: Hydrogen Sulfide

ee. Lb: pound – an English unit of measurement of weight and mass being equivalent to 7000 grains, 16 ounces, and 0.453 kilograms

ff. Maintenance and Testing: Operation of the reciprocating engines to (a) evaluate the ability of an engine or its supported equipment to perform during an emergency; or (b) facilitate the training of personnel on emergency activities; or (c) perform emissions testing, maintenance and operational testing, or safety-related testing as required by any government agency or by the manufacturer as a requirement of any law, regulation, rule, ordinance, standard, or contract

gg. MMBtu: million British thermal units

hh. Natural Gas: any mixture of gaseous hydrocarbons containing at least 80 percent methane by volume as determined by Standard Method ASTM D1945-64

ii. Natural Gas Curtailment: A reduction in the natural gas supply available to the Facility as specified below.

i. Curtailment directed by a regulatory agency, or automatically implemented by PG&E in accordance with procedures approved by a regulatory agency; and

ii. Curtailment cannot be related to fuel pricing (i.e., units will not be switched to Diesel fuel operation simply because gas prices are higher than Diesel prices).

jj. Natural Gas Mode: the firing of natural gas and CARB diesel or alternative liquid fuel in the engines where the diesel fuel or alternative liquid fuel is used solely for pilot injection, and the engine operates under the theoretical Otto cycle

~~kk.NCUAQMD: North Coast Unified Air Quality Management NCUAQMD~~

~~ll.~~kk. NFPA: National Fire Protection Association

~~mm.~~ll. Normal Operations: the operation of the Wärtsilä reciprocating engines identified in this permit, when firing in natural gas mode with diesel pilot injection, when not in startup, shutdown or malfunction mode

~~nn.~~mm. Notice: unless otherwise stated, shall be in writing, sent postage prepaid, to the APCO and include all information required. Notice shall be sent to the APCO at the following address: 2300 Myrtle Ave., Eureka, CA 95501

~~oo.~~nn. Operational Minute: a 60 second period when the engines are being fired. Each Operational Minute shall be designated as either “Natural Gas Mode” or “Diesel Mode”. The sum of the Operational Minutes in each mode shall be used for determining compliance with hours of operation limitations.

~~pp.~~oo. Operational Mode Transfer: the switching of fuel mode while operating at engine loads greater than 50%. ~~If the units are operated in Diesel Mode for one Operating Minute or more during any Clock Hour, the entire hour shall be considered as operation in Diesel Mode for purposes of determining compliance with emission limits. The sum of the Operational Minutes shall be used for determining compliance with hours of operation limitations.~~

~~qq.~~pp. O2: Oxygen

~~rr.~~qq. Permittee: the owner or operator identified on the Permit title page (PG&E)

~~ss.~~rr. PM: Particulate Matter

~~tt.~~ss. Ppmvd: parts per million, volumetric dry

~~uu.~~tt. Responsible Official: person(s) who have direct supervisorial authority or control to affect operations of the equipment authorized pursuant to this Permit, and who have the ability to certify that a source complies with all applicable federal requirements and federally enforceable permit conditions as generally defined in NCUAQMD Rule 101 §1.245

~~vv.~~uu. Rolling 3-hour Period: Any consecutive three-hour period, not including start-up or shut-down periods

~~ww.~~vv. ROC: reactive organic ~~carbon~~ compound consistent with NCUAQMD Rule 101 §1.294 and HSC

~~xx.~~ww. Quarter: calendar quarter, consisting of the following Q1 -January through March; Q2 -April through June; Q3 -July through September; Q4 -October through December

~~yy.~~xx. Shutdown Period: The 30 minute period immediately prior to the termination of fuel flow to the reciprocating engine.

~~zz.~~yy. SO2: Sulfur Dioxide

~~aaa.~~zz. Startup Period: The lesser of the first 60 minutes of continuous fuel flow to the reciprocating engine after fuel flow is initiated or the period of time from reciprocating engine fuel flow initiation until the reciprocating engine achieves two consecutive valid 15-minute average CEM data points in compliance with the emission concentration limits of conditions #100 and #102.

~~bbb.~~aaa. VEE: Visible Emissions Evaluation

~~ccc.~~bbb. Year: Any consecutive twelve-month period of time

FEDERALLY ENFORCEABLE GENERAL REQUIREMENTS

TITLE V PERMIT MODIFICATIONS AND RENEWAL

AQ-1. This Permit shall serve as the Prevention of Significant Deterioration preconstruction permit for the sources identified herein, and is issued pursuant to 40 CFR Part 70 and Regulation V of the Rules and Regulations of the North Coast Unified Air Quality Management District.

[NCUAQMD Reg 5 Rule 405(b)] [NCUAQMD Reg V Rule 502 Section 2.32 (5/19/05)] [40 CFR 70.5(a)(1)(iii)]

Verification: No verification needed.

AQ-2. This permit shall be valid for a period not to exceed 545 days from the date of issuance unless renewed by the APCO for good cause shown. Upon completion of the construction and the commissioning phase for the internal reciprocating enginesPrior to commencing operation of any of the equipment authorized under this Permit, the Permittee shall submit obtain a Title V Permit to Operate application tofrom the Air Pollution Control Officer.

[NCUAQMD Reg 5 Rule 405(b)] [NCUAQMD Reg V Rule 502 Section 2.2 3(5/19/05)] [40 CFR 70.5(a)(1)(iii)]

Verification: The project owner shall submit to both the District and CPM the Title V Permit to operate application upon completion of commissioningand any renewal applications.

AQ-3. If modifications to the Title V Ppermit to Operate are necessary, the Permittee of the Title V source permitted herein shall submit to the Air Pollution Control Officer a complete Title V permit application for either an Administrative, Minor, or Significant Title V permit modification. The application shall not be submitted prior to receiving any required preconstruction permit from the NCUAQMD. [NCUAQMD Reg 5 Rule 405(c)]

[NCUAQMD Reg V Rule 502 Section 2.3 (5/19/05)] [40 CFR 70.5(a)(1)(ii)]

Verification: The project owner shall submit to both the District and CPM the Title V modification application after receiving applicable preconstruction permit(s).

AQ-4. The Permittee shall submit to the Air Pollution Control Officer timely updates to the Title V application as new requirements become applicable to the source, and in no event less than quarterly (i.e., every three months).

[40 CFR 70.5(b)]

Verification: The project owner shall submit to both the District and CPM the Title V application updates as needed.

AQ-5. A Permittee's responsible official shall promptly provide additional information in writing to the Air Pollution Control Officer upon discovery of submittal of any inaccurate information as part of the application or as a supplement thereto; or of any additional relevant facts previously omitted which are needed for accurate analysis of the application; and including inaccurate information known, or which should have been known or should be known, by the Permittee(s).

[NCUAQMD Reg 5 Rule 420(c)] [NCUAQMD Reg V Rule 502 Sections 5.1, 5.3, 5.4 (5/19/05)] [40 CFR 70.5(a)(2) and (b)]

Verification: The project owner shall submit to both the District and CPM the ~~Title V~~ information as needed.

AQ-6. Upon written request of the Air Pollution Control Officer, the Permittee's responsible official shall supplement any complete application with additional information within the time frame specified by the Air Pollution Control Officer.

[NCUAQMD Reg 5 Rule 420(b)] [NCUAQMD Reg V Rule 502 Section 5.2 (5/19/05)] [40 CFR 70.5(a)(2) and (b)]

Verification: The project owner shall submit to both the District and CPM the ~~Title V~~ additional information as needed.

AQ-7. PSD preconstruction permit expiration terminates the Permittee's right to operate the stationary sources itemized in this permit unless a timely and complete Title V permit application has been submitted, in which case the existing PSD preconstruction permit will remain in effect until the Title V permit has been issued or denied. In order to be considered timely, a complete Title V permit application must be submitted prior to the expiration of the PSD preconstruction permit.

[NCUAQMD Reg 5 Rule 400(b)(c) and (d)] [NCUAQMD Reg V Rule 502 Sections 1.2, 1.3, and 1.4] [40 CFR 70.7(b) and (e)(2) (v)]

Verification: The project owner shall submit to both the District and CPM the Title V application prior to expiration of the applicable PSD preconstruction permit.

AQ-8. When submitting an application for a permit pursuant to Regulation 5, the Permittee's responsible official shall include the following information: A certification by a responsible official of all reports and other documents submitted for permit application; compliance progress reports at least every 6 months for, and submitted no later than 30 days after, the periods January 1st through June 30th and July 1st through December 31st of each year; statements on compliance status with any applicable enhanced monitoring; and annual compliance plans, no later than January 30th of each year, which shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

[NCUAQMD Reg 5 Rule 415(m)] [NCUAQMD Reg V Rule 502 Section 4.13 (5/19/05)] [40 CFR 70.5(c)(9) and (d)]

Verification: The project owner shall submit to both the District and CPM the ~~Title V~~ application as needed.

AQ-9. With the exception of acid rain units subject to Title IV of the Clean Air Act and solid waste incinerators subject to section 129(e) of the Clean Air Act, each permit issued pursuant to NCUAQMD Regulation 5 to operate for any source shall include a condition for a fixed term not to exceed five years from the time of issuance. A permit to operate for an acid rain unit shall have a fixed permit term of five years. A permit to operate for a solid waste incinerator shall have a permit term of 12 years; however, the permit shall be reviewed at least every five years.

[NCUAQMD Reg 5 Rule 660] [NCUAQMD Reg V Rule 504 Section 11 (5/19/05)] [40 CFR 70.6(a)(2)]

Verification: No verification needed.

COMPLIANCE

AQ-10. The Permittee shall comply with all conditions of the Authority to Construct /PSD ~~Title V~~ permit. [NCUAQMD Reg 5 Rule 610(g) (1)] [NCUAQMD Reg V Rule 504 Section 2.7 (5/19/05)]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-11. Compliance with the conditions of this Authority to Construct/PSD ~~Title V~~ permit shall be deemed compliance with all applicable requirements identified in the ~~Title V~~ permit. [40 CFR 70.6(f)]

Verification: No verification needed.

AQ-12. The Permittee may not assert or use as a defense, expressly, impliedly, or by operation of law or past practice, in any enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Authority to Construct/PSD~~Title V~~ permit. [NCUAQMD Reg 5 Rule 610(g) (4)] [NCUAQMD Reg V Rule 504 Section 2.7.4 (5/19/05)]

Verification: No verification needed.

AQ-13. Once issued, the Title V permit may be modified, revoked, reopened, and reissued or terminated for cause. [NCUAQMD Reg 5 Rule 570(a) and (b)] [NCUAQMD Reg V Rule 503 Section 9 (5/19/05)]

Verification: No verification needed.

AQ-14. The Permittee shall furnish to the Air Pollution Control Officer, within 10 (ten) days of the request, any information that the Air Pollution Control Officer may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with this Authority to Construct/PSD ~~Title V~~ permit. Upon request, the permittee shall also furnish to the Air Pollution Control Officer copies of records required to be kept by conditions of this permit. For information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality. [40 CFR 70.6(a)(6)(v)]

Verification: The project owner shall submit to both the District and CPM the ~~Title V~~ permit compliance information within ten days of request by the Air Pollution Control Officer.

AQ-15. Noncompliance with any federally enforceable requirement in ~~this~~ the Title V permit is grounds for Title V permit termination, revocation and reissuance, modification, enforcement action, or denial of the Title V permit renewal application. [NCUAQMD Reg 5 Rule 610(g) (3)] [NCUAQMD Reg V Rule 504 Section 2.7.3 (5/19/05)]

Verification: No verification needed.

AQ-16. A pending Title V permit action (e.g. a proposed permit revision) or notification of anticipated noncompliance does not stay any permit condition. [NCUAQMD Reg 5 Rule 610(g) (5)] [NCUAQMD Reg V Rule 504 Section 2.7.5 (5/19/05)]

Verification: No verification needed.

AQ-17. This Authority to Construct/PSD~~Title V~~ permit does not convey any property rights of any sort or any exclusive privilege. [NCUAQMD Reg 5 Rule 610(g) (2)] [NCUAQMD Reg V Rule 504 Section 2.7.2 (5/19/05)]

Verification: No verification needed.

AQ-18. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the Air Pollution Control Officer or an authorized representative to perform all of the following:

A. Enter upon the stationary source's premises where this source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Title V permit;

C. Inspect at reasonable times, the stationary source, equipment (including monitoring and air pollution control equipment), practices and operations regulated or required under this Authority to Construct/PSD~~Title V~~ permit; and

D. As authorized by the Federal Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of ensuring compliance with the Authority to Construct/PSD~~Title V~~ permit conditions or applicable federal requirements.

[NCUAQMD Reg 5 Rule 610(e)] [NCUAQMD Reg V Rule 504 Section 2.5 (5/19/05)]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

REPORTS AND RECORDKEEPING

AQ-19. Monitoring Reports

A. The Permittee shall submit to the Air Pollution Control Officer at least once every six months, unless required more frequently by an applicable requirement, reports of all required monitoring set out in this ~~Title V~~Authority to Construct/PSD permit.

B. The reporting periods for this permit shall be for the six month periods January 1st through June 30th and July 1st through December 31st. The reports shall be submitted by July 30th and January 30th of each year respectively.

C. Any and all instances of deviations from ~~Title V~~ permit conditions must be clearly identified in such reports. All required reports must be certified by the responsible official and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

[NCUAQMD Reg 5 Rules 460 and 625] [NCUAQMD Reg V Rule 502 Section 11 and Rule 504 Section 5 and (5/19/05)] [40 CFR 70.6(a)(3)(ii) and (iii)]

Verification: The project owner shall submit to the CPM and APCO the semiannual operational reports that include monitoring results (**AQ-SC9**).

AQ-20. Compliance Reports

A. The Permittee shall submit to the Air Pollution Control Officer and to U.S. EPA (Air-3, U.S. EPA, Region IX) on an annual basis, unless required more frequently by additional applicable federal requirements, a certification of compliance by the Permittee's responsible official with all terms and conditions contained in the Authority to Construct/PSD~~Title V~~ permit, including emission limitations, standards and work practices.

B. The reporting period for this permit shall be January 1st through December 31st. The report shall be submitted by January 30th of each year. The initial report shall be for the period January 1st 2009 through December 31st 2009 and shall be submitted by March 1st 2010.

C. All required reports must be certified by the responsible official and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

D. The compliance certification shall include the following:

i. The identification of each term or condition of the Authority to Construct/PSD~~Title V~~ permit that is the basis of the certification.

ii. The method(s) used for determining the compliance status of the source, currently and over the reporting period, and whether such method(s) provides continuous or intermittent data.

iii. The status of compliance with the terms and conditions of the Authority to Construct/PSD~~Title V~~ permit for the period covered by the certification, based on the method designated in Section D (ii) of this condition.

iv. Such other facts as the Air Pollution Control Officer may require in order to determine the compliance status of the source.

v. A method for monitoring the compliance of the stationary source with its emissions limitations, standards and work practices.

[NCUAQMD Reg 5 Rule 650] [NCUAQMD Reg V Rule 504 Section 10 (5/19/05)] [40 CFR 70.6(b)(5)]

Verification: The project owner shall submit to the CPM and APCO the annual operational reports that include compliance results (**AQ-SC9**).

AQ-21. The Permittee shall report within 24 hours of detection any deviation from a federally enforceable ~~Title V~~ permit condition not attributable to an emergency. In order to fulfill the reporting requirement of this condition, the permittee shall notify the Air Pollution Control Officer by telephone followed by a written statement describing the nature of the deviation from the federally enforceable permit condition. [NCUAQMD Reg 5 Rule 625] [NCUAQMD Reg V Rule 504 Section 5 (5/19/05)] [40 CFR 70.6(a)(3)(iii)]

Verification: The project owner shall submit to both the District and CPM the notification within 24 hours after determining any deviation from a federally enforceable ~~Title V~~ permit condition.

AQ-22. All monitoring data and support information required by a federally enforceable applicable requirement must be kept by the stationary source for a period of 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the federally enforceable applicable requirement in the ~~Title V~~ permit. [NCUAQMD Reg 5 Rules 455 and

615] [NCUAQMD Reg V Rule 502 Section 10 and Rule 504 Section 3 (5/19/05)] [40 CFR 70.6(a)(3)(ii)]

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB and the Commission upon request.

PUBLIC NUISANCE

AQ-23. The Permittee(s) shall not discharge such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. [NCUAQMD Reg 1 Rule 400(a)]

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB and the Commission upon request.

VISIBLE EMISSIONS

AQ-24. The owner, operator or Permittee of this ~~Title V~~ source shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is:

A. As dark or darker in shade as that designated No. 2 (6-minute average), on the Ringelmann Chart, as published by the United States Bureau of Mines, or

~~A.~~B. Of such opacity as to obscure a human observer's view, or a certified calibrated in-stack opacity monitoring system to a degree equal to or greater than No. 2 on the Ringelmann Chart.

[NCUAQMD Rule 410] [NCUAQMD Reg I Rule 104 Section 2 (5/19/05)]

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB and the Commission upon request.

PARTICULATE MATTER

AQ-25. A. General Combustion Sources

The Permittee of this ~~Title V~~ source shall not discharge particulate matter into the atmosphere from any combustion source in excess of 0.46 grams per standard cubic meter (0.20 grains per standard cubic foot) of exhaust gas, calculated to 12 percent carbon dioxide; or in excess of the limitations of NSPS Rule 490, as applicable.

B. Steam Generating Units The Permittee of this ~~Title V~~ source shall not discharge particulate matter into the atmosphere from any steam generating unit, installed or modified after July 1, 1976, in excess of 0.23 grams per standard cubic meter (0.10 grains per standard cubic foot) of exhaust gas, calculated to 12 percent carbon dioxide; or in excess of the limitations of NSPS Rule 490.

C. Steam Generating Utility Power Plants Notwithstanding the limitations set out above, no steam generating power plants which produce electric power for sale to any public utility shall discharge particulate matter into the atmosphere in excess of 0.10 pounds per million BTU heat input or any other specific applicable permit limitation, whichever is the more restrictive emission condition.

D. Non-Combustion Sources The Permittee of this ~~Title V~~ source shall not discharge particulate matter into the atmosphere from any non-combustion source in excess of 0.46 grams per actual cubic meter (0.20 grains per cubic foot) of exhaust gas or in total quantities in excess of the maximum allowable process weight rate as follows:

TABLE I

ALLOWABLE RATE OF EMISSION BASED ON PROCESS WEIGHT RATE					
Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Kg/Hr	Lb/Hr	Lb/Hr	Kg/Hr	Lb/Hr
100	45	0.55	6,000	2,720	8.6
200	92	0.88	7,000	3,380	9.5
400	183	1.4	8,000	3,680	10.4
600	275	1.83	9,000	4,134	11.2
800	377	2.22	10,000	4,540	12.0
1,000	454	2.58	12,000	5,460	13.6
1,500	681	3.38	16,000	7,260	16.5
2,000	920	4.1	18,000	8,220	17.9
2,500	1,147	4.76	20,000	9,070	19.2
3,000	1,362	5.38	30,000	13,600	25.2
3,500	1,690	5.96	40,000	18,100	30.5
4,000	1,840	6.52	50,000	22,700	35.4
5,000	2,300	7.58	60,000	27,200	40.0

Where the process weight per hour is between two listed figures, such process weight and maximum allowable particulate emission per hour shall be interpolated linearly. The total process weight of all similar process operations located at a single plant or of similar multiple plants located on a single premise, shall be used for determining the maximum allowable particulate emission from the combination of such operations.

[NCUAQMD Rule 420] [NCUAQMD Reg I Rule 104 (5/19/05)]

Verification: The project owner shall submit the results of source tests to both the District and CPM in accordance with Condition **AQ-16**~~**24**~~**24**.

AQ-26. The Permittee of this ~~Title V~~ source shall not handle, transport or store or allow open storage of materials in such a manner which allows or has the potential to allow unnecessary amounts of particulate matter to become airborne. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following:

A. Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust.

B. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Containment methods can be employed during sandblasting and other similar operations.

C. Conduct agricultural practices in such a manner as to minimize the creation of airborne dust.

D. The use of water or approved dust surfactants for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.

E. The application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts.

F. The paving of roadways and their maintenance in a clean condition.

G. The prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

[NCUAQMD Rule 430] [NCUAQMD Reg I Rule 104 Section 4 (5/19/05)]

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB and the Commission upon request.

SULFUR COMPOUNDS

AQ-27. The owner(s), operator(s) or Permittee(s) of this ~~Title V~~ source shall not discharge into the atmosphere from any single source of emissions whatsoever sulfur oxides, calculated as sulfur dioxide (SO2) in excess of 1,000 ppm; or in excess of the specific source emission limitations of Federal New Source Performance Standards, as applicable.

[NCUAQMD Rule 440] [NCUAQMD Reg I Rule 104 Section 5 (5/19/05)]

Verification: The project owner shall submit the results of source tests to both the District and CPM in accordance with Condition **AQ-1624**.

OPEN BURNING

AQ-28. The Permittee of this ~~Title V~~ source shall not ignite or cause to be ignited or suffer, allow or maintain any open outdoor fire for the disposal of rubber, petroleum or plastic wastes, demolition debris, tires, tar paper, wood waste, asphalt shingles, linoleum, cloth, household garbage or other combustible refuse; or for metal salvage or burning of motor vehicle bodies No other open burning shall occur without the owner, operator(s) or Permittee having first obtained a Coordinated Authorized Burn Permit from the Air Pollution Control Officer.

[NCUAQMD Reg 2 Rules 200 & 201]

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB and the Commission upon request.

EQUIPMENT BREAKDOWNS

AQ-29. The Permittee shall comply with the emergency provisions contained in all applicable federal requirements.

A. Within two weeks of an emergency event, the owner(s), operator(s) or Permittee's responsible official shall submit to the Air Pollution Control Officer a signed contemporaneous log or other relevant evidence which demonstrates that:

i. An emergency occurred.

ii. Identification of the cause(s) of the emergency.

iii. The facility was being properly operated at the time of the emergency.

iv. Identification of each and every step taken to minimize the emissions resulting from the emergency.

v. Within two working days of the emergency event, the permittee shall notify the Air Pollution Control Officer with a description of the emergency and any mitigating or corrective actions taken.

B. The Permittee has the burden of proof to establish that an emergency occurred in any enforcement proceeding.

[NCUAQMD Reg 5 Rule 450]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report **(AQ-SC9)**.

TITLE VI REQUIREMENTS (OZONE DEPLETING SUBSTANCES)

AQ-30. The Permittee of this ~~Title V~~ source allowing or causing the opening of appliances containing CFCs for maintenance, service, repair, or disposal must comply with the required practices set out in and pursuant to 40 CFR 82.156. [40 CFR 82 Subpart F]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-31. Equipment used during the maintenance, service, repair, or disposal of appliances containing CFCs shall comply with the standards for recycling and recovery equipment set out in and pursuant to 40 CFR 82.158. [40 CFR 82 Subpart F]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-32. The Permittee and its contractors and agents performing maintenance, service, repair or disposal of appliances containing CFCs must be certified by an approved technician certification program set out in and pursuant to 40 CFR 82.161. [40 CFR 82 Subpart F]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

ASBESTOS

AQ-33. The Permittee of this ~~Title V~~ source shall comply with the standards of 40 CFR 61 Subpart M which regulates demolition and renovation activities pertaining to asbestos materials.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

PAYMENT OF FEES

AQ-34. The Permittee of this ~~Title V~~ source shall pay an annual permit fee and other fees as required in accordance with NCUAQMD Rule 300. Failure to pay these fees by the dates due will result in immediate suspension of this ~~Title V Permit to Operate~~Authority to Construct/PSD effective on the date the fees were due, and on notification by the Air Pollution Control Officer of such suspension. Operation without an effective ~~Title V~~Authority

to Construct/PSD permit subjects the owner(s), operator(s) and Permittee(s) to potential enforcement action and fee penalties by the NCUAQMD and the U.S. EPA pursuant to ~~Section 502(a) of the Clean Air Act as amended in 1990~~NCUAQMD Rule 411. [NCUAQMD Reg IV~~5~~ Rule ~~670~~411]

Verification: The project owner shall submit to the CPM and APCO the annual operational reports that include information on fees paid (**AQ-SC9** and **AQ-20**).

ACCIDENTAL RELEASES

AQ-35. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the Permittee(s) of this ~~Title V~~ permit shall register and submit to the U.S. EPA the required data related to the risk management plan (RMP) for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r) (3) of the CAA as amended in 68.130. The list of substances, threshold quantities and accident prevention regulations promulgated under Part 68 do not limit in any way the general duty provisions under Section 112(r)(1). [40 CFR Part 68]

Verification: Refer to **Haz-2**.

AQ-36. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the Permittee shall comply with the requirements of 40 CFR Part 68 no later than the latest of the following dates as provided in 40 CFR 68.10(a):

A. June 21, 1999,

B. Three years after the date on which a regulated substance is first listed under 68.130, or

C. The date on which a regulated substance is first present above a threshold quantity in a process.

[40 CFR Part 68]

Verification: The project owner shall submit to both the District and CPM the information required under this condition.

AQ-37. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the Permittee(s) shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68. [40 CFR Part 68]

Verification: The project owner shall submit to both the District and CPM the information required under this condition.

AQ-38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the Permittee(s) shall annually certify compliance with all applicable requirements of Section 112(r) as part of the annual compliance certification. This annual compliance certification shall be submitted and received no later than January 30th of each year. [40 CFR Part 68]

Verification: The project owner shall submit to the CPM and APCO the certification requirement as part of the annual compliance certification (**AQ-SC9**).

CONDITIONAL TRANSFER OF OWNERSHIP

AQ-39. In the event of any changes in control or ownership of these facilities, this permit together with its terms and conditions shall be binding on all subsequent owners and

operators. The Permittee shall notify the succeeding owner and operator of the existence of this permit and its conditions by letter, a copy of which shall be forwarded to the NCUAQMD, and which shall identify the exact effective date of the transfer of ownership.

The new owner(s) and operator(s) of this ~~Title V~~ source shall notify the Air Pollution Control Officer within 30 (thirty) days of the transfer of ownership and which notification shall include a certification by the responsible party that the ~~Title V~~ facility operations are to be operated in the same operational parameters as set out herein, and as before the transfer of ownership.

Any permit or written authorization issued pursuant herein shall not be transferable, by operation of law or otherwise, from one location to another, or from one person to another, unless such transfer occurs as a condition of this permit or as a modification to the permit and with written notification to the Air Pollution Control Officer within 30 (thirty) days of transfer of ownership.

[NCUAQMD Rule 240]

Verification: The project owner shall submit to both the District and CPM the notification within 30 days of the transfer of ownership (see also **AQ-59**).

SEVERABILITY

AQ-40. If any term or condition of this permit, for any reason, be adjudged by a court of competent jurisdiction to be invalid, such judgment shall not affect or invalidate the remainder of this permit. These permit conditions are enforceable individually and severally. [NCUAQMD Reg 5 Rule 610(h)] [40 CFR 60.6(b)(5)]

Verification: No verification needed.

LOCAL ENFORCEABLE ONLY, GENERAL REQUIREMENTS

APPLICABILITY

AQ-41. The requirements outlined in this section are non-federally enforceable local permit requirements. [NCUAQMD Rule 102]

Verification: No verification needed.

AQ-42. The Permittee of this ~~Title V~~ source shall not cause or permit the construction or modification of any new source of air contaminants or modifications to an existing source, either minor or major, without first having obtained an Authority to Construct (ATC) permit from the Air Pollution Control Officer.

Verification: No verification needed.

AQ-43. This permit is effective only upon payment of the initial permit fees set out in NCUAQMD Rules and Regulations.

Verification: No verification needed.

ADMINISTRATION

AQ-44. This Permit is issued pursuant to California Health and Safety Code Section 42300. Commencement of any act or operation authorized by this Permit shall be conclusively deemed to be acceptance of all terms and conditions contained herein.

Verification: No verification needed.

AQ-45. The Permittee shall comply with all conditions of this permit. Any violation of any condition of this Permit is a violation of NCUAQMD Rules and Regulations, and California State Law. [NCUAQMD Rule 105 §1.0]

Verification: No verification needed.

AQ-46. The Permit Conditions shall be liberally construed for the protection of the health, safety and welfare of the people of the NCUAQMD. [NCUAQMD Rule 100 §6.3; Rule 102 §5.0]

Verification: No verification needed.

AQ-47. The NCUAQMD Rules and Regulations may be superseded or revised by the NCUAQMD Board with notice as required by state law. It is Permittee's responsibility to stay current with Rules and Regulations governing its business. The Permittee is therefore expected to comply with all applicable Rules and Regulations. [NCUAQMD Rule 100 §6.0; Rule 105 §1.0]

Verification: No verification needed.

AQ-48. Permit requirements apply to the facility owner and/or operator(s) and any contractor(s) or subcontractor(s) performing any activity authorized under this Permit. Any person(s) including contractor(s), subcontractor(s), not in compliance with the applicable permit requirements are in violation of State and Local laws and subject to appropriate civil and criminal penalties. The facility owner and/operator, and all contractor(s) or subcontractor(s) are strictly liable for the actions and violations of their employee(s). A violation committed by a contractor(s) or subcontractor(s) shall be considered a violation by the facility owner(s) and/or operator(s), and is also a violation by the contractor(s) and/or any subcontractor(s). [NCUAQMD Rule 105 §5.0]

Verification: No verification needed.

AQ-49. Changes in plans, specifications, and other representations proposed in the application documents shall not be made if they will increase the discharge of emissions or cause a change in the method of control of emissions or in the character of emissions. Any proposed changes, regardless of emissions consequence, shall be submitted as a modification to this Permit. No modification shall be made prior to issuance of a permit revision for such modification. [NCUAQMD Rule 102]

Verification: No verification needed.

AQ-50. Knowing and willful misrepresentation of a material fact in the application for the Permit, or failure to comply with any condition of the Permit, or of the NCUAQMD Rules and Regulations, or any state or federal law, shall be grounds for revocation of this Permit. [NCUAQMD Rule 102]

Verification: No verification needed.

AQ-51. Permittee shall not construct, erect, modify, operate, or use any equipment which conceals the emission of an air contaminant, which would otherwise constitute a violation of the limitations of this Permit. [NCUAQMD Rule 104 §1.2]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-52. This Permit does not convey any property rights of any sort, or any exclusive privilege.

Verification: No verification needed.

AQ-53. The "Right of Entry", as delineated in NCUAQMD Rule 109 §1.0 and California Health and Safety Code Section 41510 of Division 26, shall apply at all times. Failure to grant immediate access to NCUAQMD, CARB, or other authorized personnel shall be grounds for permit suspension or revocation.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-54. The APCO reserves the right to amend this Permit in order to ensure compliance with all applicable Federal, State and Local laws, Rules and Regulations or to mitigate or abate any public nuisance. Such amendments may include requirements for additional operating conditions, testing, data collection, reporting and other conditions deemed necessary by the APCO.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-55. In the event that two or more conditions may apply, and such conditions both cannot apply without conflict, the condition(s) most protective of the environment and the public health and safety shall prevail. In the event that a condition(s) of the Permit and a requirement of a Federal, State or Local law, rule or regulation may also apply, and both cannot apply without conflict, the requirements most protective of the environment and the public health and safety shall prevail. [NCUAQMD Rule 100 §6.3; NCUAQMD Rule 102 §5.0]

Verification: No verification needed.

AQ-56. If any provision or condition of this Permit is found invalid by a court of competent jurisdiction, such finding shall not affect the validity or enforcement of the remaining provisions. [NCUAQMD Rule 102 §5.0]

Verification: No verification needed.

AQ-57. This Permit shall be posted in a conspicuous location at the site and shall be made available to NCUAQMD representatives upon request. [NCUAQMD Rule 102 §8.0]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-58. The Permittee shall pay an annual permit fee and other fees as required in accordance with NCUAQMD Regulation IV. Failure to pay these fees will result in the forfeiture of this

Permit. Operation without a permit subjects the source to potential enforcement action by the NCUAQMD. In the event of facility closure or change of ownership or responsibility, the new owner or operator shall be assessed and shall pay any unpaid fees. [NCUAQMD Regulation IV -Fees]

Verification: The project owner shall submit to the CPM and APCO the annual operational reports that include information on fees paid (**AQ-SC9** and **AQ-20**).

AQ-59. This Permit is not transferable from either one location to another, from one piece of equipment to another, or from one person to another, except as provided herein. In the event of any change in control or ownership of the subject facility, the Permittee shall notify the succeeding owner of this Permit and its conditions; and shall notify the NCUAQMD of the change in control or ownership within fifteen (15) days of that change. [NCUAQMD Rule 400 §5.0]

Verification: The project owner shall submit to both the District and CPM the notification within 15 days of the change in control or ownership (see also **AQ-39**).

AQ-60. A request for Transfer of Ownership of this Permit shall be submitted to the APCO prior to commencing any operation of the subject equipment and/or operations by any owner(s) and/or operator(s) not otherwise identified in this Permit. Failure to file the Transfer of Ownership constitutes a separate and independent violation, and is cause for voiding this Permit. The burden of applying for a Transfer of Ownership is on the new owner(s) and/or operator(s). Any Permit transfer authorized pursuant to a transfer of ownership request shall contain the same conditions as this Permit. [NCUAQMD Rule 400 §5.0; Rule 102 §5.0]

Verification: The project owner shall submit to both the District and CPM the request for transfer of ownership before commencing operation by a previously unidentified owner and/or operator (see also **AQ-39**).

AQ-61. For purposes of this Permit, the terms identified in the Definition Section shall have the meaning set out therein. [NCUAQMD Rule 102 §5.0]

Verification: No verification needed.

EMISSIONS & OPERATION

AQ-62. This Permit does not authorize the emission of air contaminants in excess of those allowed by the Federal Clean Air Act, California Health and Safety Code or the Rules and Regulations of the NCUAQMD. This Permit shall not be considered as permission to violate existing laws, ordinances, regulation or statutes of other governmental agencies.

Verification: No verification needed.

AQ-63. Permittee shall not discharge such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. [CH&S §41700; NCUAQMD Rule 104 §1.1]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-64. Permittee shall not discharge into the atmosphere from any source whatsoever any air contaminant for a period or periods aggregating more than three (3) minutes in any one hour which is as dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines; or of such opacity as to obscure an observer's view to a degree equal to or greater than Ringelmann 2 or forty (40) percent opacity. [CH&S §41701; NCUAQMD Rule 104 §2.0]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-65. The handling, transporting, or open storage of material in such a manner which allows unnecessary amounts of particulate matter to become airborne shall not be permitted. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne. [NCUAQMD Rule 104 §4.0]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-66. All equipment regulated by this Permit shall at all times be maintained in good working order and shall be operated as efficiently as possible so as to ensure compliance with all applicable emission limits. For purposes of compliance with this requirement, good working order, efficient operation, and proper maintenance shall mean the implementation of all protocols, procedures, and activities recommended by the device manufacturer or those required by this Permit. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

RECORDS & TRAINING

AQ-67. The Permittee shall provide training and instruction to all contractor(s), subcontractor(s), and employee(s). Training shall include the identification of all the requirements contained within this Permit, and the appropriate method to be used to comply with the permit conditions. Training shall occur prior to any of the contractor(s), subcontractor(s), or employee(s) constructing or operating equipment authorized by this permit. Records documenting the persons receiving instruction and the instruction materials shall be made available to the APCO upon request. [NCUAQMD Rule 105 §5.0]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-68. Permittee shall furnish to the APCO, within a reasonable time, any information that the NCUAQMD may request to determine compliance with this Permit or whether cause exists for modifying, revoking and reissuing, or terminating this Permit. Upon request, Permittee shall also furnish to the NCUAQMD copies of records required to be kept by this Permit. [CH&S §42303; NCUAQMD Rule 103 §6.0, Rule 102 §5.0]

Verification: The project owner shall submit to both the District and CPM the compliance information as needed.

PERMIT TERM

AQ-69. This Permit is issued pursuant to NCUAQMD Rule 110 Section 9 and shall only become effective after ~~a Final Determination of Compliance has been issued by the APCO~~ the California Energy Commission approves the project pursuant to NCUAQMD Rule 110 §9.6.

Verification: No verification needed.

AQ-70. The authorization for equipment installation and construction activities identified in this Permit shall expire no more than 545 days from date of issue, unless extended by the APCO for good cause shown. [NCUAQMD Rule 102 §5.0]

Verification: No verification needed.

AQ-71. Once the subject equipment has been constructed in compliance with the conditions of this permit, this Authority to Construct Permit shall serve as a Temporary Permit to Operate for a period not to exceed one hundred and eighty (180) days of operation. Should the need arise, the Temporary Permit to Operate may be extended by the APCO for up to an additional ninety (90) days for good cause shown. The burden of proof lies with the Permittee to demonstrate good cause for such action. [CH&SC §42301.1; NCUAQMD Rule 102 §2.0]

Verification: No verification needed.

FEDERALLY ENFORCEABLE, EQUIPMENT SPECIFIC REQUIREMENTS

The information specified under this section is enforceable collectively and severally by the NCUAQMD, U.S. EPA, and the public.

Authorized Equipment

AQ-72. The Permittee shall install and construct the project as described in Authority To Construct application September 29th 2006 and its series of amendments ending with the most recent submittal of February 27th 2008. Should discrepancies or contradictions exist between the application and this Permit, the provisions of this Permit shall prevail. The specific components authorized are listed in Table 1.0 and Table ~~2.0~~1.1 below. For each of the reciprocating internal combustion engines S-1 through S-10, both a Selective Catalytic Reduction system (SCR) and an oxidation catalyst shall be designated “A-(engine number) SCR” and “B-(engine number) oxidation catalyst respectively”. [NCUAQMD Rule 504 §2.1]

Table 1.~~1~~ 0 Authorized Emission Devices

Unit No.	Equipment	Nominal Size
S-1	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #1, equipped with lean burn technology, abated by A-1 SCR and B-1 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-2	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #2, equipped with lean burn technology, abated by A-2 SCR and B-2 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-3	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #3, equipped with lean burn technology, abated by A-3 SCR and B-3 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-4	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #4, equipped with lean burn technology, abated by A-4 SCR and B-4 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-5	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #5, equipped with lean burn technology, abated by A-5 SCR and B-5 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-6	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #6, equipped with lean burn technology, abated by A-6 SCR and B-6 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-7	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #7, equipped with lean burn technology, abated by A-7 SCR and B-7 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-8	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #8, equipped with lean burn technology, abated by A-8 SCR and B-8 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-9	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #9, equipped with lean burn technology, abated by A-9 SCR and B-9 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-10	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #10, equipped with lean burn technology, abated by A-10 SCR and B-10 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-11	Caterpillar DM8149 (or equivalent) Diesel-fired Emergency IC Engine powering a 350kW electrical generator	469 HP
S-12	Clarke/John Deere JU6H-UF50 (or equivalent) Diesel-fired Emergency IC Engine powering a fire water pump	210 HP

Table ~~2.0~~1.1 Authorized Control Devices

Control Equipment	Manufacturer	Model	Specifications
Oxidation Catalyst	HUG Engineering (or equivalent)	OCT-0806-040-0062/450 (or equivalent)	Catalyst: Platinum Reactor Temperature: 608°F to 908°F Outlet Temperature: 608°F to 908°F Max Flow: 143,000 acfm Control Efficiency: 13 ppmvd CO @ 15% O_2 while in NG Mode; 20 ppmvd CO @ 15% O_2 while in Diesel Mode
Selective Catalytic Reduction System	HUG Engineering (or equivalent)	RVF-0890-040-200/300 (or equivalent)	Catalyst: Vanadium Pentoxide Reactor Temperature: 608°F to 908°F Outlet Temperature: 608°F to 908°F Max Flow: 143,000 acfm Control Efficiency: 6 ppmvd NOx @ 15% O_2 while in NG Mode; 35 ppmvd NOx @ 15% O_2 while in Diesel Mode

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-73. The Permittee shall not modify the equipment subject to this permit in such a manner so as to exceed the Heat Input Capacities, or deviate from the nominal full-load design specifications as submitted in the AFC, and as identified in Table ~~1.1~~2.0, Table ~~1.2~~2.1, or Table ~~1.3~~2.2. [NCUAQMD Rule 102 §5.0]

Table ~~1.1~~2.0 S-1 Through S-10 Engine Specifications

Primary Fuel	Natural Gas
Backup Fuel	CARB Diesel
Design Ambient Temperature	67.5 ˚F
Nominal Heat Input Rate (HHV)	143.9 MMBtu/hr natural gas plus 0.79 MMBtu pilot fuel (natural gas mode) – OR – 148.9 MMBtu/hr CARB Diesel Fuel (diesel mode)
Nominal Exhaust Temperature	728˚F
Nominal Exhaust Flow Rate	121,500 acfm
Exhaust Release Height	100 Feet (above grade)
Nominal Exhaust O2 Concentration, dry volume	11.6%
Nominal Exhaust CO2 Concentration, dry volume	5.3%

Emission Controls	Lean Burn Technology and SCR; Oxidation Catalyst
SIC	4911
SCC	20100202 natural gas mode; 20100301 diesel mode

Table ~~1.2~~2.1 S-11 Engine Specifications

Primary Fuel	CARB Diesel
Nominal Heat Input Rate (HHV)	4.0 MMBtu/hr
Heat Input, gal/hr	29.1
SIC	4911
SCC	20100301

Table ~~1.3~~2.2 S-12 Engine Specifications

Primary Fuel	CARB Diesel
Nominal Heat Input Rate (HHV)	1.68 MMBtu/hr
Heat Input, gal/hr	12.3
SIC	4911
SCC	SCC 20201607

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-74. The Permittee shall only fire reciprocating engines S-1 through S-10 with fuel which meets or exceeds the fuel specifications identified in Table~~s 1.3 and 1.4~~2.3. Prior to firing reciprocating engines S-1 through S-10 with an Alternative Fuel or CARB Diesel with additives, the Permittee shall make a request to the APCO to switch fuel types. The request shall include all necessary information to characterize emission changes which may occur as a result of the change. The Permittee shall not fire reciprocating engines S-1 through S-10 with a liquid fuel other than CARB Diesel without prior approval from the APCO. [NCUAQMD Rule 102 §5.0]

Table ~~1~~2.~~3~~4 Fuel Specifications for S-1 through S-10

Fuel Type	Property	Value
Natural Gas	Sulfur Content	< 1 gr / 100scf per test; annual average <0.33gr/100scf
CARB Diesel	Sulfur Content	< 15 ppm

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-75. Reciprocating engines S-1 through S-10 shall be equipped with a monitoring system capable of measuring and recording hours of operation (in tenths of an hour) and fuel consumption (in cubic feet and gallons) while operating in natural gas mode and diesel mode. The measuring devices shall be accurate to plus or minus 1% at full scale, and shall be tested at least once every twelve months or at more frequent intervals if necessary to ensure compliance with the 1% accuracy requirement. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-76. The exhaust stacks shall not be fitted with rain caps or any other similar device which would impede vertical exhaust flow. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-77. The Permittee shall install and maintain a non-resettable hour meter with a minimum display capability of 9,999 hours upon the Emergency IC Diesel Generators S-11 and S-12. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-78. The Emergency IC Diesel Generators S-11 and S-12 shall use one of the following fuels:

a. CARB Diesel Fuel, or
b. An alternative diesel fuel that meets the requirements of the Verification Procedure (as codified in CCR Title 13 Sections 2700-2710), or
c. CARB Diesel Fuel used with fuel additives that meets the requirements of the Verification Procedure (as codified in CCR Title 13 Sections 2700-2710), or
d. Any combination of a) through d) above.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-79. The reciprocating engines S-11 and S-12 shall be certified to meet the EPA Tier 3 emission levels. [40 CFR 60 Subpart IIII]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-80. The Permittee shall obtain APCO approval for the use of any equivalent engine for S-11 or S-12 not specifically approved by this Authority to Construct. Approval of an equivalent engine shall be made only after the APCO's determination that the submitted design and performance data for the proposed IC engine is equivalent to the approved engine. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to both the District and CPM the application for equivalent emergency engines as needed.

AQ-81. The Permittee's request for approval of an equivalent engine shall include the following information: engine manufacturer and model number, horsepower (hp) rating, exhaust

stack information, and manufacturer's guaranteed emission concentrations. [NCUAQMD Rule 504 §4.0; NCUAQMD Rule102 §5.0]

Verification: The project owner shall submit to both the District and CPM the application for equivalent emergency engines as needed.

AQ-82. The Permittee's request for approval of an equivalent engine shall be submitted to the NCUAQMD at least 90 days prior to the planned installation date. The Permittee shall also notify the NCUAQMD at least 30 days prior to the actual installation of the NCUAQMD approved equivalent engine. [NCUAQMD Rule 103 §6.0]

Verification: The project owner shall submit to both the District and CPM the application for equivalent emergency engines at least 90 days prior to the planned installation date.

AQ-83. The Permittee shall install exhaust gas temperature monitoring devices at the inlet and the outlet of the oxidation catalyst. [40 CFR §63.6625; BACT]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-84. Ammonia injection points shall be equipped with operational ammonia flow meters and injection pressure indicators. The flow meters shall be accurate to plus or minus 1% at full scale and shall be calibrated at least once every twelve months or at more frequent intervals if necessary to ensure compliance with the 1% requirement. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-85. The Permittee shall install points of access to the Emission Devices, Control Devices, and Continuous Emission Monitoring Devices such that source testing in accordance with the appropriate reference test methods can be performed. All points of access shall conform to the latest Cal-OSHA safety standards. For purposes of compliance with this part, appropriate test methods shall mean the test methods identified in the Testing and Compliance Monitoring Conditions section of this Permit; and the collection of gas samples with a portable NOx, CO, and O2 analyzer. Sample collection ports shall be located in accordance with 40 CFR Part 60 Appendix A, and with the CARB document entitled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-86. Each reciprocating engine shall be equipped with a continuous emission monitor (CEM) for NOx, CO, and O2. Continuous emissions monitor(s) shall meet the requirements of 40 CFR part 60, Appendices B and F, and NCUAQMD-approved protocol during normal operations. The monitors shall be designed and operated so as to be capable of monitoring emissions during normal operating conditions and during Startup and Shutdowns Periods. [NCUAQMD Regulations Appendix B]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-87. The Permittee shall demonstrate compliance with the ammonia slip limit by using the following calculation procedure: The ~~ammonia emission concentration shall be verified by the continuous recording of the ratio of the~~ ammonia injection rate to each ~~the NOx inlet rate into the~~ SCR control system shall be continuously recorded ~~(molar ratio)~~. Correlations between the engine heat input rates, the SCR system ammonia injection rate~~s~~, and corresponding ammonia emission concentration ~~The maximum allowable NH3:NOx molar ratio~~ shall be determined for each fuel in accordance with permit condition AQ-166~~-~~, and shall be verified in accordance with permit conditions AQ-164 and AQ-167~~during any required source test, and shall not be exceeded until reestablished through another valid source test~~. Alternatively, the Permittee may be required to install, operate and maintain a continuous in-stack emissions monitor for emissions of ammonia. The Permittee shall obtain APCO approval for the installation and use the ammonia CEMs equipment at least 60 days prior to the planned installation date. [NCUAQMD Rule 103 §6.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-88. Both onsite and offset emission credits were utilized for this project. Prior to commencement of construction, in accordance with Rule 106 §6.6, the Permittee shall provide to the NCUAQMD APCO documentation of transfer of ownership of offsite Emission Reduction Credits sufficient to offset the emissions identified in Table 3. Prior to commencement of the Commissioning Period, the Permittee shall surrender to the NCUAQMD sufficient offsite emission credits to offset the increases listed in Table 3.0 below. NOx credits provided to offset PM10 increases shall be at an inter-pollutant ratio of 3.58:1 after the appropriate distance ratio is applied. The Permittee shall permanently shut down NCUAQMD ~~the existing facility and all emission units permitted under Title V Permit To Operate NCU 059-12~~Permit Units No. NS-020 (Boiler #1), NS-021 (Boiler #2) and NS-057 (Gas Turbines) in accordance with Condition #110. [40 CFR 51, Appendix S; NCUAQMD Rule 110]

Table 3.0 HBRP Required Offsite Offsets By Quarter

Pollutant	Pollutant Quantities in Tons			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
PM10	2.45	2.35	2.37	2.34
ROC	0.62	0.59	0.59	0.59

Verification: The project owner shall submit to both the District and CPM the information on Emission Reduction Credits prior to construction.

EMISSION LIMITING CONDITIONS

AQ-89. The Permittee shall not discharge particulate matter into the atmosphere from any combustion source in excess of 0.20 grains per cubic foot of dry gas calculated to 12 percent CO2 at standard conditions. [NCUAQMD Rule 104 §3.1]

Verification: The project owner shall submit the results of source tests to both the District and CPM in accordance with condition **AQ-1624**.

AQ-90. The Permittee shall not discharge sulfur dioxide into the atmosphere in excess of 1000 ppmv or 40 tons per year. [NCUAQMD Rule 104 §5.0]

Verification: The project owner shall submit the results of source tests to both the District and CPM in accordance with condition **AQ-1624**.

AQ-91. Visible emissions from reciprocating engines S-1 through S-12 shall not be as dark or darker in shade as that designated as No. 1 on the Ringleman Chart, or of such opacity so as to obscure an observer's view to a degree equal to or greater than 20%, for any period or periods aggregating more than 3 minutes in any one hour. This visible emission limitation shall not apply during Startup or Shutdown Periods or during the Commissioning Period. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-92. ~~The Permittee~~ The Permittee shall not operate reciprocating engines S-1 through S-10 such that the emissions of NOx, from a combination of all engines, exceeds 392 lbs per hour. Furthermore, except ~~as provided below~~during the Commissioning Period, the Permittee shall not operate reciprocating engines S-1 through S-10 such that more than 2 units are in a Diesel Startup Period during any one Clock Hour. Following completion of the emissions testing for all ten units required under Condition AQ-163, the Permittee may request the use of an alternative compliance demonstration method. Such a request shall include, but not be limited to the following:

A. Identification of alternative operational limit(s) and/or alternative method(s) for determining compliance with the facility wide pound per hour NOx emission limit; and
B. Source test data and calculations demonstrating that revisions to emission factors, and/or utilization of an alternative compliance determination method, are appropriate.

Upon written approval by the District of the alternative compliance demonstration method, this~~e~~ permit ~~limitation on the number of Diesel Mode Startups~~ condition may be modified. In no event shall the facility wide hourly limit of 392 lbs of NOx be increased, nor any operational activities permitted, ~~which~~ if such changes would allow an exceedance of any ~~emission limitation~~ambient air quality standard. [NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-93. The Permittee shall not discharge diesel particulate matter from reciprocating engines S-1 through S-10 while operating in Diesel Mode such that emissions of Diesel Particulate Matter exceed 0.11 g/bhp-hr. [NSPS 40 CFR Part 60 Subpart IIII]

Verification: The project owner shall submit the results of source tests to both the District and CPM in accordance with condition **AQ-1624**.

AQ-94. The Permittee shall not discharge Carbon Monoxide from reciprocating engines S-1 through S-10 in excess of 0.14 g/bhp-hr or 20 ppmvd @ 15% O2. [40 CFR 63 Subpart ZZZZ]

Verification: The project owner shall submit the results of source tests to both the District and CPM in accordance with condition **AQ-1624**. A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

HEAT INPUT & FUEL LIMITATIONS

Engines S-1 Through S-10

~~95.~~AQ-95. The Permittee shall not operate reciprocating internal combustion engines S-1 through S-10 in such a manner so as to exceed the heat input capacities listed in Table 4.0 on a per engine basis. [NCUAQMD Rule 102 §5.0]

Table 4.0 Heat Input Limitations Per Engine

Each Unit[1]		Heat Input, MMBtu (HHV)	
		Hourly 3 hr rolling average	Daily 24 hour rolling average
Natural Gas Mode[2]	Natural Gas	143.9	3,454
	Diesel (Pilot)	0.8	19
Diesel Mode	Diesel	148.9	3574

Notes:

1) Each unit can only run in either Natural Gas or Diesel Mode, not both simultaneously.
2) Heat Input in Natural Gas Mode is the sum of natural gas and diesel pilot also.

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-96. Except as provided in Condition 98 below, t~~T~~he Permittee shall not operate reciprocating internal combustion engines S-1 through S-10 in such a manner so as to exceed the heat input capacities listed in Table 4.1 below calculated as a sum of all 10 engines. [NCUAQMD Rule 102 §5.0]

Table 4.1 Heat Input Limitations S-1 Through S-10 Engines Combined

Sum of All 10 Units		Heat Input, MMBtu (HHV)		
		Hourly	Daily	Annual
Natural Gas Mode[1]	Natural Gas	1,439	34,536	9,277,233[2]
	Diesel (Pilot)	7.9	190	51,576
Diesel Mode	Diesel	1,489	30,376[2,3]	148,900[2]

Notes:

1) Total Heat Input in Natural Gas Mode is the sum of natural gas and diesel pilot.
2) This limit applies to operation for maintenance and testing, and during periods of Natural Gas Curtailments as defined in this permit. The limit shall not apply to fuel consumed during the Commissioning Period.
3) This limit was established to ensure compliance with the PM2.5 standard

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-97. A. The Permittee shall not exceed the diesel fuel firing limits listed in Table 4.2 below while operating reciprocating engines S-1 through S-10 in Natural Gas Mode.

[NCUAQMD Rule 102 §5.0]

Table 4.2 Diesel Fuel Firing Limitations (Pilot)

Engines S-1 Through S-10	Gallons of Diesel Fuel		
	Hourly 3 hr rolling average	Daily 24 hour rolling average	Annual 365 day rolling average
All Combined	58	1,402	376,734

~~98.~~ B. Except as provided in Condition 98 below, t~~T~~he Permittee shall not exceed the diesel fuel firing limits listed in Table 4.3 below while operating reciprocating engines S-1 through S-10 in Diesel Mode. [NCUAQMD Rule 102 §5.0]

Table 4.3 Diesel Fuel Firing Limitations

Engines S-1 Through S-10	Gallons of Diesel Fuel		
	Hourly 3 hr rolling average	Daily 24 hour rolling average	Annual 365 day rolling average
Per Engine	1,088	26,106	-
All Combined	10,876	221,877[1,2]	1,087,630[1]

Notes:

1) This limit applies to operation for maintenance and testing, and during periods of Natural Gas Curtailments as defined in this permit. The limit shall not apply to fuel consumed during the Commissioning Period.
2) This limit was established to ensure compliance with the PM2.5 standard (85% average load)

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-98. The Permittee may request, and the APCO may approve, revisions to the daily 24-hour rolling average limitations on Diesel fuel use in Conditions AQ-95 and AQ-97. Such a request shall include:

a. Proposed revisions to the corresponding lb/MMBtu and/or lb/hr PM_{10} emission limits in Condition 103, so that the products of the allowable Diesel fuel use in Conditions 95 and 97 and the corresponding emission limits in Condition 103 do not exceed the daily and annual PM_{10} emissions limits in Conditions 105 and 106, respectively; and

b. All supporting calculations and test data that demonstrate to the satisfaction of the APCO that the proposed revisions to the fuel use limitations will not cause the daily and annual PM_{10} emissions limits in Conditions 105 and 106 to be exceeded.

Verification: The Permittee shall submit a request for revisions to these conditions to the CPM and the APCO for approval prior to exceeding the limits on Diesel fuel use in Conditions AQ-95 and AQ-97.

POLLUTANT LIMITATIONS

S-1 -S-10 Startup & Shutdown Periods

AQ-99. The Permittee shall not operate reciprocating engines S-1 through S-10, such that they individually discharge pollutants exceeding the limits identified in Table 5.0 below during Startup or Shutdown Periods. [NCUAQMD Rule 102 §5.0]

Table 5.0 Start & Shutdown Period Emission Limits

Mode of Operation	Pollutant				
	NOx	CO	ROC	PM10	SOx
Natural Gas, lb/hr	23.6	24.1	17.9	3.6	0.4
Diesel Mode, lb/hr	164	25.5	17.2	10.8	0.22

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

S-1 -S-10 Natural Gas Mode

AQ-100. The Permittee shall not operate reciprocating engines S-1 through S-10, such that they individually discharge pollutants exceeding the limits identified in Table 5.1 below based upon a three (3) hour average with the exception of NOx which shall be based upon a one (1) hour average. The limits shall not apply during Startup or Shutdown Periods. [40 CFR 63.6(f)(1), NCUAQMD Rule 102 §5.0]

Table 5.1 Natural Gas Mode Emission Limits – per engine

Pollutant	Emission Rate		
	ppmvd @ 15% O2	lb/hr	lb/MMBtu
CO	13	4.13	0.029
NH3	10	1.9	0.013
NOx	6.0	3.1	0.022

PM10	-	3.6	-
ROC	28	5.1	0.035
SOx	-	0.40	0.0028

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-101. The combined discharge of pollutants, from the reciprocating engines S-1 through S-10 shall not exceed the limits listed in Table 5.2 below during any Calendar Day in which none of the engines are operated in Diesel Mode for any period of time. For purposes of compliance with this condition, the emissions from Startup and Shutdown Periods shall be included in the daily calculation of emissions.

[NCUAQMD Rule 102 §5.0]

Table 5.2 S-1 Through S-10 Combined Natural Gas Mode Limit

Pollutant	Emission Rate lb/Day
CO	1,589
NH3	456
NOx	1,360
PM10	864
ROC	1,608
SOx	97

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

S-1 -S-10 Diesel Mode

AQ-102. The Permittee shall not discharge pollutants into the atmosphere from the reciprocating engines S-1 through S-10 while in Diesel Mode, based upon a three (3) hour rolling average, in excess of the emission limits identified in Table 5.3 below. The limits shall not apply during Startup or Shutdown Periods. [40 CFR 63.6(f)(1), NCUAQMD Rule 102 §5.0]

Table 5.3 Diesel Mode Emission Limits – per engine

Pollutant	Emission Rate		
	ppmvd @ 15% O2	lb/hr	lb/MMBtu
CO	20.0	6.9	0.047
NH3	10	2.1	0.014
NOx	35.0	19.9	0.134

PM10	-	10.8	0.137
ROC	40.0	7.9	0.053
SOx	0.40	0.22	0.0016

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-103. The discharge of Diesel Particulate Matter into the atmosphere from the reciprocating engines S-1 through S-10 while in Diesel Mode shall not exceed the emission limits identified in Table 5.4 below. The limits shall not apply during the Commissioning Period as defined in this permit. [NCUAQMD Rule 102 §5.0;]

Table 5.4 Diesel Particulate Matter Limitations

Engines S-1 Through S-10	Gallons of Diesel Fuel		
	Hourly 3 hr rolling average	**Daily 24 hour rolling average**	**Annual 365 day rolling average**
Per Engine	5.56	133.4	-
All Combined	55.6	1,334	5,560

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-104. The combined discharge of pollutants from the reciprocating engines S-1 through S-10 during any Calendar Day shall not exceed the limits listed in Table 5.5 below during any Calendar Day in which one or more of the engines are operated in diesel mode for any period of time. For purposes of compliance with this condition, the emissions from Startup and Shutdown Periods shall be included in the daily calculation of emissions.

Table 5.5 S-1 Through S-10 Combined Diesel Mode Limit

Pollutant	Emission Rate lb/Day
CO	2,219
NH3	506
NOx	9,103
PM10	1,542
ROC	2,183
SOx	97

For purposes of determining compliance of reciprocating engines S-1 through S-10 with the daily PM10 limit in Table 5.5, the Permittee shall ~~not operate~~calculate

and record PM10 emissions from each engine for each Calendar Day as follows: 0.180 pounds per minute times the number of reciprocating engines S-1 through S-10 in Diesel Mode Operational Minutes during that Calendar Day plus 0.060 pounds per minute times the number of Natural Gas Mode Operational Minutesfor more than 142 engine-hours per day. during that Calendar Day. Following completion of the PM10 emissions testing required under Condition AQ-163 on all 10 engines, the Permittee may request the use of an alternative compliance demonstration method. Such a request shall include, but not be limited to the following:

C. Identification of the highest PM emission rates of the 10 units as determined during initial performance testing.

DA. Identification of alternative operational limit(s) and/or alternative method(s) for determining compliance with the facility wide pound per day PM emission limit; and

EB. Source test data and calculations demonstrating that revisions to emission factors and/or compliance determination method(s) are appropriate.

Upon written approval by the District of the alternative compliance demonstration method, the permit limitation on the number of hours of operation in Diesel Mode may be modified. Until an alternative compliance demonstration method is approved, the Permittee shall not operate the engines in Diesel Mode for more than 142 engine-hours per Calendar Day. The highest PM pollutant values identified during the initial performance testing shall become the permitted emission limits for all engine units. In no event, shall the newly established emission limits be in excess of 10.8 lbs/hr. (the manufacturer's guaranteed emission rates indentified in the AFC), and in the ATC materials submitted by the applicant). In no event shall the facility wide daily limit of 1,542 pounds be increased, nor any operational activity permitted, which if such an increase would allow an exceedance of any emission limitationambient air quality standard. Compliance with the daily facility wide PM emission limit shall be calculated as a function of engine hourly emission rate times the number of hours of operation per day. [NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-105. The combined discharge of pollutants from the reciprocating engines S-1 through S-10 during any calendar year shall not exceed the limits listed in Table 5.6 below. [NCUAQMD Rule 102 §5.0]

Table 5.6 S-1 Through S-10 Combined Annual Emission Limits

Pollutant	Emission Rate Tons/Yr
CO	172.7
NH3	63.3
NOx	179.1
PM10	119.8
ROC	190.8
SOx	~~4.3~~4.4

Verification: The project owner shall submit to the CPM and APCO the annual operational reports that include monitoring and compliance results (**AQSC9** and **AQ-20**).

Engines S-11 and S-12

AQ-106. The Permittee shall not operate reciprocating engines S-11 and S-12 such that pollutant discharge into the atmosphere exceeds the quantities in Table 5.7 below. [NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

Table 5.7 Reciprocating Engines S-11 and S-12 Emission Limits

Unit	Pollutant	g/Hp – hr	lb/hr
S-11 Emergency Generator	CO	0.63	0.65
	DPM	0.05	0.05
	NOx	3.47	3.59
	ROC (non-methane HC)	0.4	0.41
	SOx	-	0.0061
S-12 Fire Pump	CO	0.59	.27
	DPM	0.14	0.06
	NOx	4.9	2.27
	ROC (non-methane HC)	0.5	0.23
	SOx	-	0.0026

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-107. The combined discharge of pollutants from the reciprocating engines S-11 through S-12 during any calendar year shall not exceed the limits listed in Table 5.8 below. [NCUAQMD Rule 102 §5.0]

Table 5.8 S-11 Through S-12 Combined Annual Emission Limits

Pollutant	Emission Rate lbs/Yr
CO	45
NOx	287
PM10	5.5
ROC	31.5
SOx	0.4

Verification: The project owner shall submit to the CPM and APCO the annual operational reports that include monitoring and compliance results (**AQSC9** and **AQ-20**).

STARTUP COMMISSIONING & SIMULTANEOUS OPERATION

AQ-108. This Permit supplements existing NCUAQMD Permit Numbers for the HBPP of NS-020 (Boiler #1), NS-21 (Boiler #2) and NS-057 (Turbines) until such time as the sources are decommissioned. [NCUAQMD Rule 102 §5.0]

Verification: No verification needed.

AQ-109. The Permittee shall notify the NCUAQMD of the anticipated date of initial startup of the reciprocating engines S-1 through S-10 not more than 60 days, or less than 30 days prior to initial startup. The Permittee shall notify the APCO of the actual startup of reciprocating engines S-1 through S-10 not more than 15 days after actual initial startup. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to the CPM and APCO the notification of reciprocating engine startup not more than 60 days or less than 30 days prior to initial startup, and notification of actual startup not more than 15 days after initial startup.

AQ-110. The existing generating units at Humboldt Bay Power Plant shall be shut down as soon as possible following the commercial operation of all of the reciprocating engines S-1 through S-10. The existing generating units at Humboldt Bay Power Plant [NCUAQMD Permit Units NS-020 (Boiler #1), NS-21 (Boiler #2) and NS-57 (Turbines)] and any of the new ~~HBRP~~ HBGS reciprocating engines S-1 through S-10 shall not be in simultaneous operation for more than 180 calendar days, including their individual Commissioning Periods; and shall be shutdown and their Permits to Operate (PTOs) surrendered once engines S-1 through S-10 have successfully completed their Commissioning Phase as defined elsewhere in this permit. Operation of the existing plant units and any engine or engines for any portion of a calendar day, shall accrue toward the maximum limit of 180 days. [NCUAQMD Rule 110, Rule 102 §5.0]

Verification: The project owner shall surrender to the CPM and APCO the permits for existing units at Humboldt Bay Power Plan within 180 days after initial startup of the new reciprocating engines.

AQ-111. Selective catalytic reduction (SCR) systems and oxidation catalysts shall serve each reciprocating engine except as provided for in Condition AQ-114. Permittee shall submit SCR and oxidation catalyst design details to the NCUAQMD for review and approval at least 90 days prior to scheduled delivery of these systems to the site. The Permittee shall not install or operate the SCR and oxidation catalyst systems without authorization from the APCO. [NCUAQMD Rule 110, Rule 102 §5.0]

Verification: The project owner shall submit to the CPM and APCO for approval the design details for control devices not ~~more~~ less than 90 days prior to scheduled delivery.

AQ-112. Permittee shall submit continuous emission monitor design, installation, and operational details to the NCUAQMD within 120 days following commencement of construction. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to the CPM and APCO for approval the details for continuous emission monitors not more than 120 days after commencing construction.

AQ-113. In accordance with the NCUAQMD approved Commissioning Plan required under Condition AQ-123, the reciprocating engines shall be tuned to minimize emissions in the time frame specified in the approved Commissioning Plan. [NCUAQMD Rule 102 §5.0;]

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan as required in **AQ-123**.

AQ-114. In accordance with the NCUAQMD approved Commissioning Plan required under Condition AQ-123, the Selective Catalytic Reduction (SCR) system and the oxidation catalyst shall be installed, adjusted, and operated to minimize emissions from each reciprocating engine in the time frame specified in the Commissioning Plan.

[NCUAQMD Rule 102 §5.0;]

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan as required in **AQ-123**.

AQ-115. The continuous monitors specified in ~~Permit~~ Conditions AQ-~~#~~75, AQ-~~#~~83, and AQ-~~#~~86 shall be installed, calibrated, and operational prior to the first firing of reciprocating engines S-1 through S-10. After first firing, the detection range of the CEMS shall be adjusted as necessary to accurately measure the resulting range of NOx and CO emission concentrations. [NCUAQMD Rule 102 §5.0;]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-116. The Permittee shall record and monitor the parameters identified in Table 7.0 of this Permit at least once every 15 minutes (excluding normal calibration periods or when the monitored source is not in operation). The Permittee shall use APCO approved methods to calculate heat input rates, oxides of nitrogen mass emission rates (reported as nitrogen dioxide), carbon monoxide mass emission rates, and NOx and CO emission concentrations, summarized for each hour and each day.

[NCUAQMD Rule 102 §5.0; NCUAQMD Regulation Appendix B]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-117. The total number of firing hours of each reciprocating engine S-1 through S-10 without abatement of emissions by the SCR system and the oxidation catalyst shall not exceed 100 hours for each engine during the Commissioning Period. Such operation of each reciprocating engine without abatement shall be limited to discrete Commissioning Activities that can only be properly executed without the SCR system and the oxidation catalyst in place. Upon completion of these activities for each engine, the Permittee shall provide written notice to the NCUAQMD and the unused balance of the allowable firing hours without abatement for that engine shall expire. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan as required in **AQ-123**.

AQ-118. When one or more reciprocating engines S-1 through S-10 are undergoing Commissioning Activities without an SCR system and oxidation catalyst installed, the Permittee shall not: [NCUAQMD Rule 102 §5.0]

a. Fire more than five uncontrolled reciprocating engines simultaneously.

b. Operate the uncontrolled engines such that their combined hours of operation exceed 90 engine-hours during any Calendar Day.

~~c. Operate the uncontrolled engines such that their combined hours of operation while in the "alignment phase" exceed 13 engines-hours during any Calendar Day.~~

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan as required in **AQ-123**.

AQ-119. During the Commissioning Period ~~while any of the engines are being operated without an SCR system and oxidation catalyst~~, the Permittee shall not operate reciprocating engines S-1 through S-10, such that the combined emissions from all of the engines regardless of their commissioning status, exceed any of the limits in Table 5.9 below: [NCUAQMD Rule 102 §5.0]

Table 5.9 S-1 through S-10 Combined Commissioning Emission Limits

Pollutant	lbs/hr	lbs/day
CO	197.2	2,662
NOx	~~323.3~~392	4,365
PM10	54	1,296
ROC (as Methane)	86.6	1,559
SOx (SO2)	2.0	48.4

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan as required in **AQ-123**.

AQ-120. For each engine during its Commissioning Period, after ~~four hours of~~ steady-state operation of the SCR system and the oxidation catalyst has occurred, the NOx and CO emissions from that reciprocating engine shall thereafter comply with the limits

specified in Permit Conditions AQ-#99 through AQ-#105. For purposes of compliance with this condition, steady-state operation shall mean: the engine, SCR system, and oxidation catalyst all functioning according to manufacturers' specifications and operating in compliance with emission limits ~~as determined by the CEMS~~and are ready for source performance testing in accordance with the requirements of Condition AQ-163. In no event, shall the Commissioning Period for each engine exceed 180 consecutive calendar days beginning on the first day the engine is first fired. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan as required in **AQ-123**.

AQ-121. Firing hours on 100% CARB Diesel Fuel or Alternative Liquid Fuel during the Commissioning Period shall not be considered Maintenance and Testing for purposes of compliance with the annual operating hour limitations specified in the Operational Conditions section of this Permit. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan as required in **AQ-123**.

AQ-122. The total mass emissions of NOx, CO, ROC, PM10, and SOx that are emitted from the reciprocating engines during the Commissioning Period shall accrue towards the annual emission limits specified in Condition AQ-#107. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan as required in **AQ-123**.

AQ-123. The Permittee shall submit a plan to the NCUAQMD at least four weeks prior to the first operation of the first of reciprocating engines S-1 through S-10, describing the procedures to be followed during the Commissioning Period. The plan shall include a description of each Commissioning Activity, the anticipated duration of each activity in hours, and the purpose of the activity. The activities described shall include, but not be limited to, the tuning of the reciprocating engines, the installation and operation of the SCR systems and the oxidation catalysts, the installation, calibration, and testing of the NOx and CO continuous emissions monitors, and any activities requiring the firing of each unit without abatement by an SCR system or oxidation catalyst. [40 CFR Part 63; NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan at least four weeks prior to the first operation of the reciprocating engines.

AQ-124. Not later than 90 days prior to first operation, the Permittee shall prepare and submit to the NCUAQMD for approval a plan for complying with the requirements of 40 CFR 63 Subpart ZZZZ. This compliance plan shall provide for an initial performance test on each engine to demonstrate that each oxidation catalyst is achieving a minimum 70% reduction in CO over a four hour period. During the initial performance test, the Continuous Emission Monitors shall successfully complete a performance evaluation in accordance using PS3 and 4A of 40 CFR Part 60 Appendix B; the oxidation catalyst pressure drop and inlet temperature shall be measured using ASTM D6522-00 [§63.6625(a)]; and the CEMS data collected in accordance with §63.6625(a) with the data reduced to 1-hour averages.

Verification: The project owner shall submit to the CPM and APCO for approval the ~~commissioning~~ compliance plan as required in **AQ-1243**.

AQ-125. Not later than 90 days prior to first operation, the Permittee shall prepare and submit to the NCUAQMD for approval a plan for complying with the requirements of 40 CFR 60 Subpart IIII. This compliance plan shall provide for an initial performance test on each reciprocating engine to demonstrate compliance with the NOx and PM limitations of

40 CFR §60.4204(c)(1) and (c)(2) and shall establish operating parameters to be monitored continuously to ensure that each reciprocating engine continues to meet the applicable emission standards.

Verification: The project owner shall submit to the CPM and APCO for approval the ~~commissioning~~ compliance plan as required in **AQ-125~~3~~**.

OPERATIONAL CONDITIONS

Engines S-1 through S-10

AQ-126. In the event of an excess emission incident, regardless of the cause, the Permittee shall immediately take corrective action to minimize the release of excess emissions. Notice shall be provided to the NCUAQMD as indicated in the Reporting and Recordkeeping Section of this Permit. For purposes of compliance with this condition, excess emissions shall mean discharge of pollutants in quantities which exceed those authorized by Federal, State, NCUAQMD Rules, and this Permit. [40 CFR 70.6(a)(3)(iii)(B); NCUAQMD Rule 105 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-127. All equipment listed in Table 1.0 Authorized Emission Devices and ~~2.0~~1.1 Authorized Control Devices shall be operated and maintained by the Permittee in accordance with manufacturer's specifications for optimum performance; and in a manner so as to minimize emissions of air contaminants into the atmosphere. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-128. The Permittee shall implement and maintain a written Startup, Shutdown, and Malfunction Plan as described in as described in 40 CFR 63.6(e) (3) which contains specific procedures for maintaining the reciprocating engines S-1 through S-12, their associated control devices, their associated CEMS, sensors, measuring devices, and their associated exhaust gas duct work, during periods of startup, shutdown, and malfunction. The plan must clearly describe the startup and shutdown sequence procedure for each unit. The Plan shall also include a specific program of corrective actions to be implemented in the event of a malfunction in either the process or control systems. Modifications to the Plan are subject to APCO approval and the Permittee shall not operate the reciprocating engines S-1 through S-12 and their associated control devices unless a NCUAQMD approved Startup, Shutdown, and Malfunction Plan is in effect. The Plan shall be submitted to the NCUAQMD not less than thirty (30) calendar days prior to the Commissioning Period for any of reciprocating engines S-1 through S-10.

[NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to the CPM and APCO for approval the startup, shutdown, and malfunction plan at least 30 days prior to the commissioning period.

AQ-129. The Permittee shall develop, implement and maintain a written Device Operational Plan that contains specific procedures for operating the reciprocating engines S-1 through S-12, their associated control devices, their associated CEMS, sensors, measuring devices, and their associated exhaust gas duct work under the varying load conditions which may occur during normal modes of operation. The Plan shall also include

specific protocols to be followed when transitioning between modes of operation. This plan shall be consistent with the requirements of this Permit, and all local, state and federal laws, rules, and regulations. The plan shall include, but not be limited to, daily system integrity inspections and the recording of operational parameters. The Plan shall be submitted to the NCUAQMD not more than sixty ~~-(30~~60) calendar days following expiration of the Commissioning Period for any of reciprocating engines S-1 through S-10. The Plan is subject to APCO approval. The Permittee shall not operate the reciprocating engines S-1 through S-12 and their associated control devices, after the expiration of the Commissioning Period for any of the reciprocating engines plus 60 days, unless a NCUAQMD approved Device Operational Plan is in effect. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to the CPM and APCO for approval the device operational plan within 30 days after the commissioning period.

AQ-130. The Permittee shall develop, implement and maintain a written Device Maintenance & Replacement Plan that contains specific procedures for equipment maintenance and identifies replacement intervals for components of the reciprocating engines S-1 through S-12, their associated control devices, their associated CEMS, sensors, measuring devices, and their associated exhaust gas duct work. The Plan shall be submitted to the NCUAQMD not more than thirty (30) calendar days following expiration of the Commissioning Period for any of reciprocating engines S-1 through S-10. The Plan is subject to APCO approval. The Permittee shall not operate the reciprocating engines S-1 through S-12 and their associated control devices, after the expiration of the Commissioning Period for any of the reciprocating engines plus 60 days, unless a NCUAQMD approved Device Maintenance & Replacement Plan is in effect. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to the CPM and APCO for approval the device maintenance and replacement plan within 30 days after the commissioning period.

AQ-131. The Permittee shall only operate the Reciprocating engines S-1 through S-10 in Natural Gas Mode except during the Commissioning Period, during Maintenance and Testing, and during Natural Gas Curtailments as set forth in this permit. [NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-132. The Permittee shall not operate reciprocating engines S-1 through S-10 such that Startup Periods exceed 60 minutes in length. This limitation shall not apply during the Commissioning Period. [NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-133. The Permittee shall not operate reciprocating engines S-1 through S-10 such that Shutdown Periods exceed 30 minutes in length. This limitation shall not apply during the Commissioning Period. [NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-134. The Permittee shall not operate the reciprocating engines S-1 through S-10 such that the combined hours of operation during Startup and Shutdown Periods exceeds 30 engine-hours per day. This limitation shall not apply during the Commissioning Period. [NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-135. The Permittee shall not operate the reciprocating engines S-1 through S-10 such that the combined hours of operation during Startup and Shutdown Periods exceeds 3,650 engine-hours per calendar year. Of the 3,650 engine hours available hours, the hours of operation during Startup and Shutdown Periods in Diesel Mode shall not exceed 500 engine-hours per calendar year. For the purpose of determining compliance with this condition, Startup and Shutdown Periods during the Commissioning Period shall not accrue toward these limitations. [NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-136. The Permittee shall not operate any of the reciprocating engines S-1 through S-10 below 50% load except during Startup and Shutdown Periods and during the Commissioning Period. [NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-137. The Permittee shall not operate the reciprocating engines S-1 through S-10 for more than 80 engine-hours per Calendar Day at loads less than 12.0 MW except during the Commissioning Period. [NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-138. While operating the reciprocating engines S-1 through S-10 in Diesel Mode, the Permittee shall fire the engines:

a. Only with CARB Diesel as specified in Table 2.3~~1~~.4 Fuel Specifications for S1 through S-10;

b. For not more than 50 hours per year for maintenance and testing per engine; and

c. Such that the combined engine operating hours do not exceed 1000.0 engine hours per year on a 365 day rolling average basis.

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-139. For each Oxidation Catalyst installed, during the performance testing required pursuant to the Testing and Monitoring section of this Permit, the Permittee shall determine the pressure drop across each catalyst. The Permittee shall operate the reciprocating engines S-1 through S-10 such that the pressure drop across the catalyst does not exceed the following acceptable range for any period of time: The acceptable pressure range is two inches of water column (plus or minus 10%) deviation from the pressure drop established during performance testing. [40 CFR 63 Subpart ZZZZ]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-140. The Permittee shall not operate reciprocating engines S-1 through S-10 if the inlet temperature of the oxidation catalyst is outside of the acceptable operating range for any period of time. The acceptable operating range of the oxidation catalyst is greater than or equal to 450 ˚F and less than or equal to 1350 ˚F. Each reciprocating engine is paired with a single oxidation catalyst unit. For purposes of compliance with this condition, each engine and catalyst pair is evaluated separately. This Condition does not apply during Startup or Shutdown Periods, during the Commissioning Period, or during malfunctions. [40 CFR 63 Subpart ZZZZ]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-141. The Permittee shall not operate reciprocating engines S-1 through S-10 unless the CO emissions from the units are abated by the oxidation catalyst at a rate greater than or equal to 70% over uncontrolled emission levels, calculated on a 3 hour rolling average. Verification of the emissions reduction shall be completed in accordance with 40 CFR 63 Subpart ZZZZ. This Condition does not apply during Startup or Shutdown Periods, during the Commissioning Period, or during malfunctions. [40 CFR 63 Subpart ZZZZ]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

Engines S-11 and S-12

AQ-142. The Permittee shall not operate the reciprocating engines S-11 and S-12, for the purpose of maintenance and testing, in excess of the hour limits listed in Table 6.~~1~~ 0 below [NCUAQMD Rule 102 §5.0]:

Table 6.~~1~~ 0 S-11 and S-12 Hourly Operating Limits

Device	Daily	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
S-11	1	12	12	13	13
S-12	1	12	12	13	13

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-143. The Permittee shall not operate the reciprocating engines S-11 and S-12, for the purpose of maintenance and testing, within the same 24 hour period. [NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-144. The Permittee shall not operate the reciprocating engines S-11 and S-12, for the purpose of maintenance and testing, when any of the reciprocating engines S-1 through S-10 are operating in diesel mode. [NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-145. The Permittee shall not operate reciprocating engine S-11, for the purpose of maintenance and testing, for more than 45 minutes in any 60 minute period.

[NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

REPORTING & RECORDKEEPING

AQ-146. The Permittee shall report all occurrences of breakdowns of the equipment listed in Table 1.0 Authorized Emission Devices or Table 1.12~~.0~~ Authorized Control Devices which result in the release of emissions in excess of the limits identified in this Permit. Said report shall be submitted to the NCUAQMD in accordance with the timing requirements of NCUAQMD Rule 105 §5.0.

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-147. The Permittee shall maintain a Breakdown log that describes the breakdown or malfunction, includes the date and time of the malfunction, the cause of the malfunction, corrective actions taken to minimize emissions and the date and time when the malfunction was corrected. [NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-148. The Permittee shall immediately record the following information when an event occurs where emissions from the equipment listed in Table 1.0 Authorized Emission Devices are in excess of any limits incorporated within this permit:

a. Date and time of the excess emission event
b. Duration of the excess emission event
c. Description of the condition or circumstance causing or contributing to the excess emission event
d. Emission unit or control device or monitor affected
e. Estimation of the quantity and type of pollutants released
f. Description of corrective action taken
g. Actions taken to prevent reoccurrence of excess emission event.

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-149. The Permittee shall provide to the NCUAQMD, a completed “Compliance Certification” form signed by the Facility’s Responsible Official which certifies the compliance status of the facility twice per calendar year. The compliance certification form must be submitted to the NCUAQMD according to the following schedule: The semiannual certification (covering quarters 1 and 2) must be submitted prior to July 31st of the reporting

year; and the annual certification (covering quarters 1, 2, 3, and 4) prior to March 1st of the following calendar year. The content of the Certification shall include copies of the records designated in Table 7.0 to be kept "Annually".

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-150. The Permittee shall maintain a monthly log of usage for the Emergency IC Diesel Generators S-11 and S-12 in accordance with applicable Reporting Requirements for Emergency Standby Engines, Item (e)(4)(I) of Section 93115, Title 17, California Code of Regulations, Air Toxic Control Measure (ATCM) for Stationary Compression Ignition (CI) engines. The monthly log of usage shall list and document the nature of use for each of the following by recording the hour meter readings for each operational event:

a. Emergency use hours of operation;
b. Maintenance and testing hours of operation (e.g., load testing, weekly testing, rolling blackout, general power outage, etc);
c. Hours of operation for emission testing to show compliance with §93115(e)(2)(A)3 and (e)(2)(B)3 of the ATCM;
d. Hours of operation to comply with requirements of NFPA 25;
e. Hours of operation for all other uses other than those specified in section (e)(2)(A)3 and (e)(2)(B)3 of the ATCM;
f. Fuel used through the retention of fuel purchase records that account for all fuel used in the engine and all fuel purchased for use in the engine, and, at a minimum, contain the following information for each individual fuel purchase transaction:
    i. Identification of the fuel purchased as either CARB Diesel, or an alternative diesel fuel that meets the requirements of the Verification Procedure;
    ii. Sulfur content of the fuel;
    iii. Amount of fuel purchased;
    iv. Date when the fuel was purchased;
    v. Signature of owner or operator or representative of Permittee who received the fuel; and
    vi. Signature of fuel provider indicating fuel was delivered.

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-151. The Permittee shall continuously maintain onsite for the most recent five year period and shall be made available to the NCUAQMD APCO upon request, the records as listed in Table 7.0 below.

Table 7.0 Required Records for Engines S-1 through S-10

Frequency	Information to be Recorded
Upon	A. Records of maintenance conducted on engines (40 CFR 60 Subpart IIII)

Occurrence	B. Time, duration, and fuel firing mode for each engine startup C. Time, duration, and fuel firing mode for each engine shutdown D. Time, duration and reason for each period of operation in Diesel Mode E. For each bulk delivery of diesel fuel received, certification from the supplier that the diesel fuel meets or exceeds CARB Diesel specifications F. For each bulk delivery of diesel fuel received, the higher heating value (HHV) and sulfur content of the fuel G. Fuel Mode – each operating minute shall be designated as either "Natural Gas" or "Diesel Mode"
At least one electronic reading every 15 minutes	A. NOx (ppmvd @15% O2) B. CO (ppmvd @15% O2) C. O2 (%) D. Exhaust gas temperature as SCR inlet (˚F) E. Exhaust gas temperature at OC inlet (˚F) F. Engine load (%)
Hourly (for each engine)	A. NOx (ppmvd @15% O2) and lb/hr, on a ~~rolling 3~~1 hour average B. CO (ppmvd @15% O2) and lb/hr, on a rolling 3 hour average C. ROC (ppmvd @15% O2) and lb/hr, on a rolling 3 hour average D. NH3 (ppmvd @15% O2) and lb/hr, on a rolling 3 hour average E. SOx (ppmvd @15% O2) and lb/hr, on a rolling 3 hour average F. Natural gas fuel consumption (MMBtu HHV, ~~3-hr rolling~~hourly average) G. Diesel fuel consumption during Diesel Mode (MMBtu HHV, ~~3-hr rolling~~ hourly average) H. Volumetric proportion of natural gas to diesel pilot injection when operating in Natural Gas Mode

Frequency	Information to be Recorded
Daily	A. NOx (lbs/day, total for all engines) B. CO (lbs/day, total for all engines) C. ROC (lbs/day, total for all engines) D. SOx (lbs/day, total for all engines) E. PM (lbs/day, total for all engines) F. Diesel Particulate Matter (lbs/day, total for all engines) G. Natural gas fuel consumption (MMBtu HHV, for each engine and total for all engines) H. Diesel pilot fuel consumption (MMBtu HHV, all engines combined) I. Diesel fuel consumption during Diesel Mode (MMBtu HHV and gallons, for each engine and total for all engines) J. Engine load (% load on a 24 hour average for each engine and total for all engines) K. Hours of operation (each engine and total for all engines as a sum of operating minutes) L. ~~Quantity of fuel combusted (therms and gallons for each engine and total for all engines)~~
Monthly	A. Sulfur content of natural gas (gr/100scf, monthly fuel testing) B. Natural gas sulfur content (gr/100scf, 12 month rolling average)
Quarterly (combined total for all engines)	A. NOx (tons) B. CO (tons) C. SOx (tons) D. ROC(tons) E. PM (tons) F. Diesel Particulate Matter (tons) G. Natural gas fuel consumption (MMBtu HHV) H. Diesel pilot fuel consumption (MMBtu HHV) I. Diesel fuel consumption during Diesel Mode (MMBtu HHV and gallons) J. Sulfur content of natural gas (gr/100scf, 12 month rolling average) K. Hours of operation (for each fuel mode) L. ~~Quantity of fuel combusted (therms, gallons)~~
Annually (combined total for all engines)	A. NOx (tons) B. CO (tons) C. SOx (tons) D. ROC(tons) E. PM (tons) F. Diesel Particulate Matter (tons) G. Natural gas fuel consumption (MMBtu HHV) H. Diesel pilot fuel consumption (MMBtu HHV) I I. Diesel fuel consumption during Diesel Mode (MMBtu HHV and gallons) J. Sulfur content of natural gas (gr/100scf, annual average) K. Hours of operation (for each fuel mode)

	L. ~~Quantity of fuel combusted (therms, gallons)~~

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

AQ-152. For each Quarter, the Permittee shall submit a written report to the APCO detailing the following items for the operation of the CEMS. The report shall conform to the requirements of NCUAQMD Rules and Regulations Appendix B, Section 2.2, and shall be submitted within 30 days of the end of the quarter.

a. Time intervals;

b. Date and magnitude of excess emissions;

c. Nature and cause of excess (if known);

d. Corrective actions taken and preventive measures adopted;

e. Averaging period used for data reporting shall correspond to the averaging period for each respective emission standard;

f. Applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and

g. A negative declaration when no excess emissions occurred.

Verification: The project owner shall submit to the CPM and APCO quarterly monitoring reports that include updates to the semi-annual monitoring results (**AQ-SC9**).

AQ-153. The Permittee shall provide notification and record keeping as required pursuant to 40 CFR, Part 60, Subpart A, 60.7.

Verification: No verification needed.

AQ-154. The Permittee shall annually prepare and submit a comprehensive facility wide emission inventory report for all criteria pollutants and toxic air contaminants emitted from the facility. The inventory and report shall be prepared in accordance with the most recent version of the CAPCOA / CARB reference document Emission Inventory Criteria Guidelines. The inventory report shall be submitted to the NCUAQMD APCO no later than March 1st of the following calendar year. The inventory report is subject to NCUAQMD APCO approval. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to the CPM and APCO the annual operational reports that include monitoring and compliance results (**AQSC9** and **AQ-20**).

AQ-155. The Permittee shall submit the health risk assessment protocol to the NCUAQMD APCO for review no later than 9 months after the Commissioning Period for the reciprocating engines S-1 through S-10 has concluded. The protocol shall be based upon CARB and California Office of Health and Hazard Assessment guidance documents. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to both the District and CPM for approval the health risk assessment protocol within 9 months after the commissioning period.

AQ-156. No later than ~~14~~ 3 months after the ~~Commissioning Period for reciprocating engines S-1 through S-10 has concluded~~health risk assessment protocol required by

Condition AQ-155 has been approved by the NCUAQMD APCO, the Permittee shall submit to the NCUAQMD APCO a revised health risk assessment. The health risk assessment shall be prepared pursuant to thean NCUAQMD APCO approved protocol. based upon CARB and California Office of Health and Hazard Assessment guidance documents.

[NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to both the District and CPM the revised health risk assessment within 14 3 months after the commissioning periodhealth risk assessment protocol has been approved by the APCO.

AQ-157. Not later than 24 hours after determining that diesel mode operation is to occur as a result of an expected Natural Gas Curtailment, the permittee shall notify the APCO by telephone, email, electronic page, or facsimile. The notification shall include, but not be limited to, the following [NCUAQMD Rule 102 §5.0]:

a. The anticipated start time and duration of operation in diesel mode under the Natural Gas Curtailment; and

b. The anticipated quantity of Diesel fuel expected to be burned under the Natural Gas Curtailment.

Verification: The project owner shall submit to both the District and CPM the notification within 24 hours after determining that diesel mode operation is to occur.

AQ-158. Not later than 24 hours following the end of a period of any diesel mode operation, the permittee shall notify the APCO by email or facsimile of the following [NCUAQMD Rule 102 §5.0] :

a. The actual start time and end time of the period of diesel mode operation;

b. The identification of the Reciprocating engines that were operated and the average load at which each reciprocating engine was operated on Diesel fuel during the diesel mode operating period; and

c. The actual quantity of Diesel fuel consumed during the diesel mode operation.

Verification: The project owner shall submit to both the District and CPM the notification within 24 hours after the end of diesel mode operation.

TESTING & COMPLIANCE MONITORING

AQ-159. The Permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F.

Verification: No verification needed.

AQ-160. The Permittee shall monitor and record exhaust gas temperature at the inlet and at the outlet of the oxidation catalyst. [40 CFR 63 Subpart ZZZZ]

Verification: A summary of significant operation and maintenance events and monitoring records required (**AQ-151**) shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-161. Not less than thirty days prior to the date of any source test required by this Permit, the Permittee shall provide the NCUAQMD APCO with written notice of the planned date of the test and a copy of the source test protocol.

Verification: The project owner shall submit the proposed protocol for the source tests 30 days prior to the proposed source test date to both the District and CPM for approval.

AQ-162. Source test results shall be summarized in a written report and submitted to the NCUAQMD APCO directly from the independent source testing firm on the same day, the same time, and in the same manner as submitted to Permittee. Source Test results shall be submitted to the NCUAQMD APCO no later than 60 days after the testing is completed.

Verification: The project owner shall submit source test results no later than 60 days following the source test date to both the District and CPM.

AQ-163. The Permittee shall demonstrate compliance with all the emission limits identified in this Permit ~~during~~ prior to the end of the Commissioning Period of each of the reciprocating engines S-1 through S-10 using the following methods. Testing shall be conducted both while the engines are operated in Natural Gas Mode and while operated in Diesel Mode. All compliance tests shall be conducted at 50%, 75%, and 95% or greater of the operating capacity of each reciprocating engine. Alternative test methods may be approved by the APCO.

a. Particulate Matter – CARB Method 5 (front and back half) or EPA Methods 201a and 202
b. Diesel Particulate Matter – CARB Method 5 (front half)
c. Visible Emissions
    i. Permittee shall perform a “Visible Emission Evaluation” (VEE) concurrent with particulate matter testing. A CARB certified contractor shall perform such an evaluation.
d. Ammonia – Bay Area Air Quality Management District (~~NCUAQMD~~ BAAQMD) Method ST-1B
e. Reactive Organic Gases – CARB Method 100
f. Nitrogen Oxides – CARB Method 100
g. Carbon Monoxide – CARB Method 100 & ASTM D6522-00 [NESHAP ZZZZ]
h. Oxygen – CARB Method 100 & ASTM D6522-00 [NESHAP ZZZZ]
    i. Oxygen shall be measured at the inlet and outlet of the oxidation catalyst
    ii. Oxygen measurements shall be made at the same time as the CO measurements
    iii. Pressure drop measurements across the catalyst shall be made at the same time as the CO measurements
i. Natural Gas Fuel Sulfur Content – ASTM D3246
j. Liquid Fuel Sulfur Content – ASTM D5453-93

Verification: The project owner shall submit the proposed protocol for the source tests 30 days prior to the proposed source test date to both the District and CPM for approval. The project owner shall notify the District and CPM no later than 7 days prior to the proposed source test date and time. The project owner shall submit source test results no later than 60 days following the source test date to both the District and CPM.

AQ-164. The Permittee shall demonstrate compliance with all the emission limits identified in this Permit for the reciprocating engines S-1 through S-10 once per calendar year unless indicated below, using the following methods. Except as provided in Condition AQ-~~#123~~166, testing shall be conducted while the engines are operated in Natural Gas Mode. All compliance tests shall be conducted at an operating capacity of 50%, 75%, or 95% or greater during the testing of each reciprocating engine. Alternative test methods may be approved by the APCO. [NCUAQMD Rule 102 §5.0]

a. Particulate Matter – CARB Method 5 (front and back half) or EPA Methods 201a and 202

~~b. Diesel Particulate Matter – CARB Method 5 (front half)~~

b. Visible Emissions -Permittee shall perform a "Visible Emission Evaluation" (VEE) concurrent with particulate matter testing. A CARB certified contractor shall perform such an evaluation.

c. Ammonia – Bay Area Air Quality Management NCUAQMD Method ST-1B

d. Reactive Organic Gases – CARB Method 100

e. Nitrogen Oxides – CARB Method 100

f. Carbon Monoxide – CARB Method 100

g. Oxygen – CARB Method 100

i. Oxygen shall be measured at the inlet and outlet of the oxidation catalyst

ii. Oxygen measurements shall be made at the same time as the CO measurements

iii. Pressure drop measurements across the catalyst shall be made at the same time as the CO measurements

h. Natural Gas Fuel Sulfur Content – ASTM D3246

Verification: The project owner shall submit the proposed protocol for the source tests 30 days prior to the proposed source test date to both the District and CPM for approval. The project owner shall notify the District and CPM no later than 7 days prior to the proposed source test date and time. The project owner shall submit source test results no later than 60 days following the source test date to both the District and CPM.

~~j. Liquid Fuel Sulfur Content – ASTM D5453-93~~

AQ-165. The engines shall be tested on a rotating basis with all of the engines to be tested in natural gas mode each year and all engines tested at the three different load values at least once every three years; and that each engine is tested at a different load each year. Each engine shall be tested, at the following loads (50%, 75%, ≥95%) or under conditions determined by the APCO to most challenge the emission control equipment. The APCO may waive some or all of the testing requirements if the results of previous compliance tests have demonstrated compliance with permitted emission limits by a sufficient margin. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with condition **AQ-16~~2~~4**.

AQ-166. Prior to the end of the commissioning period, the Permittee shall conduct District-approved source testing on four of the reciprocating engines S-1 through S-10 to determine the corrected ammonia (NH_3) emission concentration to demonstrate

compliance with Conditions AQ-100 and AQ-102. The source tests shall determine the correlation between measured parameters, which may include but need not be limited to the heat input rates of the engines, the ammonia injection rates, and/or NOx concentrations upstream and downstream of the SCR catalyst, and the corresponding NH_3 ammonia concentration at the exhaust stack. Each test shall be conducted over the expected operating range of the engines (including, but not limited to, minimum, 75% and 95% or greater loads) to establish the range of ammonia injection rates necessary to achieve NOx emission reductions while maintaining ammonia slip levels. Continuing compliance with Conditions AQ-100 and AQ-102 shall be demonstrated through calculations of corrected ammonia concentrations based upon the source test correlations and continuous records of ammonia injection rates.

Verification: The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with Condition **AQ-161**. The project owner shall submit to the CPM and APCO the annual operational reports that include monitoring and compliance results (**AQSC9** and **AQ-20**).

~~166.~~AQ-167. Permittee shall demonstrate compliance with permitted emission limits for Engines S-1 through S-10 while operating in Diesel Mode once every three years or following each 200 hours of operation of an individual engine in Diesel mode whichever is sooner. Compliance shall be demonstrated as indicated below using the following methods. All compliance tests shall be conducted while an engine is operated in Diesel mode at 50%, 75% or 95% or greater operating capacity of each engine; or under conditions determined by the APCO to most challenge the emission control equipment. Alternative test methods may be approved by the APCO [NCUAQMD Rule 102 §5.0]:

a. Particulate Matter -CARB Method 5 (front and back half), or EPA Methods 201a and 202.
b. Diesel Particulate Matter – CARB Method 5 (front half only)
c. Visible Emissions -U.S. EPA Method 9
d. Ammonia – Bay Area Air Quality Management NCUAQMD Method ST-1B
e. Reactive Organic Gases – ARB Method 100
f. Nitrogen Oxides --ARB Method 100
g. Carbon Monoxide – ARB Method 100
h. CO shall be measured at the inlet and outlet of the oxidation catalyst.
i. Oxygen – ARB Method 100
    i. Oxygen shall be measured at the inlet and outlet of the oxidation catalyst.
    ii. Oxygen measurements shall be made at the same time as the CO measurements.
j. Liquid Fuel Sulfur Content – ASTM D5453-93

Verification: The project owner shall submit the proposed protocol for the source tests 30 days prior to the proposed source test date to both the District and CPM for approval. The project owner shall notify the District and CPM no later than 7 days prior to the proposed source test date and time. The project owner shall submit source test results no later than 60 days following the source test date to both the District and CPM.

~~167.~~AQ-168. The engines shall be tested at various loads (50%, 75%, ≥95%) on a rotating basis, with one-third of the engines to be tested in diesel mode in each year; and tested at

each of the three loads. The APCO may waive some or all of the testing requirements if the results of previous compliance tests have demonstrated compliance with permitted emission limits by a sufficient margin. The engines shall be tested on a rotating basis with all engines tested at the three different load values at least once every nine years; and that each engine is tested at a different load each rotation. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with condition **AQ-16~~16~~**.

~~168.~~AQ-169. The Permittee shall demonstrate compliance with the hourly, daily, and annual ROC emission limits through the use of valid CO CEM data and the ROC/CO relationship determined by annual CO and ROC source tests; and APCO approved emission factors and methodology. [40 CFR 63 Subpart ZZZZ; NCUAQMD Rule 102 §5.0]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

~~169.~~AQ-170. The Permittee shall demonstrate compliance with the hourly, daily, and annual SOx emission limits through the use of valid fuel use records, natural gas sulfur content, diesel fuel sulfur content, mass balance calculations; and APCO approved emission factors and methodology. The natural gas sulfur content shall be determined on a monthly basis using ASTM D3246. [NCUAQMD Rule 102 §5.0, PSD]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

~~170.~~AQ-171. The Permittee shall demonstrate compliance with the hourly, daily, and annual PM emission limits, and the diesel particulate matter emission limits, through the use of valid fuel use records, source tests, and APCO approved emission factors and methodology. [NCUAQMD Rule 102 §5.0, PSD]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

~~171.~~AQ-172. Relative accuracy test audits (RATAs) shall be performed on each CEMS at least once every twelve months, in accordance with the requirements of 40 CFR 60, Appendix B. Calibration Gas Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The NCUAQMD shall be notified in writing at least 30 days in advance of the scheduled date of the audits. Audit reports shall be submitted along with quarterly compliance reports to the NCUAQMD within 60 days after the testing was performed.

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

LOCAL ENFORCEABLE ONLY, EQUIPMENT SPECIFIC REQUIREMENTS

FUEL USAGE

~~172.~~AQ-173. The Emergency IC Diesel Generators S-11 and S-12 shall use one of the following fuels:

a. CARB Diesel Fuel, or

b. An alternative diesel fuel that meets the requirements of the Verification Procedure (as codified in CCR Title 13 Sections 2700-2710), or

c. CARB Diesel Fuel used with fuel additives that meets the requirements of the Verification Procedure (as codified in CCR Title 13 Sections 2700-2710), or

d. Any combination of a) through d) above.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.

EMISSIONS

~~173.~~AQ-174. The Permittee shall not discharge diesel particulate matter from reciprocating engines S-1 through S-10 while operating in Diesel Mode such that emissions of Diesel Particulate Matter exceed 0.15 g/bhp-hr. [CCR Title 17 §93115]

Verification: The project owner shall submit the results of source tests to both the District and CPM in accordance with condition **AQ-16~~2~~6**.

OPERATIONAL CONDITIONS

~~174.~~AQ-175. While operating the reciprocating engines S-1 through S-10 in Diesel Mode, the Permittee shall fire the engines for no more than 50 hours per year for each engine for Maintenance and Testing. [CCR Title 17, §93115]

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

~~175.~~AQ-176. The Emergency IC Diesel Generators S-11 and S-12 are authorized the following maximum allowable annual hours of operation as listed in Table ~~8~~6.0 below [17 CCR §93115] :

Table ~~6~~8.0 Hours of Operation for Emergency IC Diesel Generators S-11 & S-12

	Non-Emergency Use	
Emergency Use	**Emission Testing to show compliance**	**Maintenance & Testing**
Not Limited by the ATCM	Not Limited by the ATCM	50 hours/year

Verification: A summary of significant operation and maintenance events and monitoring records required shall be included in the semi-annual operational report (**AQ-SC9**).

AMBIENT MONITORING

~~176.~~AQ-177. ~~No later than 180 days after construction of the equipment authorized pursuant to this permit begins, and concurrent with the commencement of operation, t~~The Permittee shall provide full funding for the purchase and installation of a new monitoring station (Shelter; CO, NOx, PM10/PM2.5, and other sampling equipment as determined by the APCO) to be installed at a location approved by the APCO. The funding shall include all costs associated with the purchase, installation, operation and maintenance (including personnel costs) of the monitoring station for an initial period of not less than five (5) years. PG&E shall reimburse the District for costs incurred within 30 days of receiving an invoice

from the District. At the conclusion of that period, the APCO may extend the operation of the site if deemed in the best interest of the District, and PG&E will continue to fund all costs associated with its continued operation. The District shall manage the procurement, operation and maintenance of the site, and District staff will be responsible for collecting, securing, and quality assuring all data. [District Rule 102 §5.0]

Verification: The project owner shall certify providing the District full funding for the ambient air quality monitoring station. A copy of ~~the letter certifying funding~~each payment submitted by the project owner in response to a District invoice shall be submitted to the CPM within 15 days of issuance.

~~177.~~AQ-178. ~~No later than 180 days after construction of the equipment authorized pursuant to this permit begins, and concurrent with the commencement of operation, t~~The Permittee shall provide full funding for the purchase and installation of a new meteorological monitoring station to be installed at a location approved by the APCO. The funding shall include all costs associated with the purchase, installation, operation and maintenance (including personnel costs) of the meteorological monitoring station for an initial period of not less than five (5) years. PG&E shall reimburse the District for costs incurred within 30 days of receiving an invoice from the District. At the conclusion of that period, the APCO may extend the operation of the site if deemed in the best interest of the District, and PG&E will continue to fund all costs associated with its continued operation. The District shall manage the procurement, operation and maintenance of the site, and District staff will be responsible for collecting, securing, and quality assuring all data. The data collected at the station shall meet the requirements of EPA-454/R-99-005 “Meteorological Monitoring Guidance for Regulatory Modeling Applications” February 2000. [District Rule 102 §5.0]

Verification: The project owner shall certify providing the District full funding for the meteorological station. A copy of each payment submitted by the project owner in response to a District invoice~~the letter certifying funding~~ shall be submitted to the CPM within 15 days of issuance.

ATTACHMENT 2

Application to the NCUAQMD for Modifications to the Authority to Construct/PSD Permit

Pacific Gas and Electric Company®

Humboldt Bay Generating Station
1000 King Salmon Ave.
Eureka, CA 95503-6859

HBGS09-L-0019

April 6, 2009

Richard L. Martin Jr., APCO
North Coast Unified Air Quality Management District
2300 Myrtle Avenue
Eureka, CA 95501

RE: Application for a Modification to Pacific Gas and Electric Company's Humboldt Bay Generating Station Authority to Construct (ATC 440-1)

Dear Mr. Martin:

Enclosed is the application for a modification to the Authority to Construct permit for PG&E's Humboldt Bay Generating Station (HBGS, formerly HBRP) facility. The purpose of this application is to change some of the permit conditions to allow the facility to be commissioned and operated effectively and efficiently.

As discussed previously with you and your staff, the permit condition changes we are proposing consist of the following types of changes to the permit conditions:

- Clarify what type of permit PG&E holds for HBGS, and include provisions for permit extension/renewal;
- Revise operating and emissions limitations applicable during the commissioning period;
- Revise conditions applicable to project operation; and
- Correct typographic errors and inconsistencies.

These changes are proposed to enhance PG&E's ability to comply with the permit conditions and to improve the consistency and enforceability of the permit. The proposed changes will make the permit conditions more consistent with the ambient air quality analyses that were performed during the original permit review. None of the requested amendments involve changes to maximum permitted emissions limits, revisions to ambient air quality modeling analyses, or new operating scenarios.

As you know, PG&E expects to initiate commissioning of the new HBGS generating units on or about March 15, 2010. Although the new generating units can be commissioned and operated under the existing permit conditions, the amendments proposed in this application will significantly improve the efficiency of the commissioning phase of the project. To that end, we would be pleased to assist the District staff in any way necessary in expediting the processing of this amendment request.

If you need any further documents or have any question regarding this permit application, please contact me or Nancy Matthews of Sierra Research at (916) 444-6666.

Respectfully,

Dena Parish
Environmental Compliance Manager
Humboldt Bay Generating Station
1000 King Salmon Ave.
Eureka, CA 95503
(707) 444-6568

Enclosures

cc: Randal S. Livingston, PG&E (without attachment)
Joe Sutton, PG&E
Linus Farias, PG&E
Nancy Matthews, Sierra Research

sierra research

Application to the North Coast Unified Air Quality Management District for Modifications to the Authority to Construct for the Humboldt Bay Generating Station Eureka, California

prepared for:

Pacific Gas & Electric Company

April 2009

prepared by:

Sierra Research, Inc.
1801 J Street
Sacramento, California 95811
(916) 444-6666

North Coast Unified Air Quality Management District
2300 Myrtle Avenue
Eureka, CA 95501
(707) 443-3093

FACILITY SUMMARY APPLICATION FOR AUTHORITY TO CONSTRUCT PERMIT FORM 1300

This form must be accompanied by one or more 13XX series form(s)

Section I – Company Information

Legal name of owner/operator: Pacific Gas & Electric Company

Company mailing address: 1000 King Salmon Avenue, Eureka, CA 95503

Permit mailing address, if different from company mailing address

Contact person	Title	
Dena Parish	Environmental Compliance Manager	
Contact person's phone number	**Contact person's fax number**	**Contact person's email address**
(707) - 444-6858	( ) -	dyp2 @ pge.com

Are you the owner of the equipment under this application? ☑ yes ☐ no
If no, enter the legal name and owner: _____

Section II – Facility Information

Facility name: Humboldt Bay Generating Station

Facility address: 1000 King Salmon Avenue, Eureka, CA 95503

Type of business at this address	Primary Standard Industrial Code (SIC) for this facility	Number of employees at this facility:
Power Plant	4 9 1 1 (Internet search: http://www.osha.gov/oshstats/sicser.html)	44

Section III – Facility Location

Detailed driving directions from nearest California town (attach roadmap if necessary):

Facility is 3 (distance) miles south west (direction) of Eureka (nearest town)

Status of land at facility (check one): ☑ private ☐ Indian ☐ government

Name of nearest Class 1 area to the facility (see map attached): Redwood National Park

Is your facility boundary within 10 km of the boundary of nearest Class 1 area? (see map) ☐ yes ☑ no

Distance to the nearest: occupied residence or business 2000 ft K-12 school 2100 ft

Is emission generating equipment within 1000 feet of the outer boundary of a school? ☐ yes ☑ no

• If yes, complete for all public or private schools, grade K-12, within a ¼ mile radius of facility property:

School name(s): _____ Phone no(s): _____ Address(es) _____

Section IV – Facility Status

This application is for (see instructions):

☐ New construction ☑ Modification ☐ Change of location ☐ Change of permittee
☐ Existing equipment without a permit ☐ Existing equipment with expired permit

Estimated construction start date 12 / 01 / 08 Estimated construction completion date: 07 / 01 / 10

Does this facility have an AQMD permit? ☑ yes ☐ no	If yes, the permit number is: ATC 440-1
Does this facility have a Title V permit? ☑ yes ☐ no	If yes, the permit number is: NCU 059-12 (HBPP)

Is this a "major source" under Title V of the federal Clean Air Act? (AQMD Regulation 5, Rule 300) ☑ yes ☐ no ☐ unsure

Is this source subject to a federal NSPS or NESHAP/MACT? (AQMD Regulation 1, Rule 490 or 492) ☑ yes ☐ no ☐ unsure

• If yes, which one(s)? Standards for Compression Ignition Engines (Subpart IIII); RICE MACT (Subpart ZZZZ)

Is this a significant net increase in emissions? (AQMD Regulation 1, Rule 220(b)) ☐ yes ☑ no ☐ unsure

If yes or unsure to the above three questions, contact the AQMD to see if a pre-application meeting is required.

Is this application in response to a Notice of Noncompliance (NON)? ☐ yes ☑ no If yes, NON date: tracking#

Does this facility emit any substance listed pursuant to Section 44321 of the Health and Safety Code? ☑ yes ☐ no
If yes, fill out Section VIII. (These substances are listed in the California OEHHA Air Toxic Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, August 2003, Appendix A and A-II. Internet site for this publication is: http://www.oehha.ca.gov/air/hot_spots/pdf/HRAguidefinal.pdf)

AQMD USE ONLY	TRACKING #	SIC/SCC CODES	PERMIT REVIEW	ENFORCEMENT REVIEW
		/		

FEE SCHEDULE:	CHECK/MONEY ORDER	AMOUNT
$	#	$

Section V - Other Information

For this project, has a California Environmental Quality Act (CEQA) document been required by another governmental agency? ☐ no ☑ yes, for agency (Provide name): California Energy Commission

Are there any trade secrets asked by this application that you don't want to reveal? ☐ yes ☑ no
(If yes, attach documentation to describe and support your claim)

This question must be answered for all applications for new construction or significant modifications. Are all major sources under same ownership in California in compliance with Federal, state, and local air pollution control rules? ☐ Yes ☐ No n/a

Check The Supplemental Series 13XX Form(S) Submitted With This 1300 Form:

- ☑ 1301 ● Internal Combustion Equipment
- ☐ 1302 ● External Combustion Equipment
- ☐ 1303 ● Particulate Matter (Pm10) Control Equipment
- ☐ 1304 ● Volatile Organic Compound (VOC) Control Equipment
- ☐ 1305 ● Scrubber
- ☐ 1306 ● Fuel Dispensing And Storage
- ☐ 1309 ● Aggregate Plant
- ☐ 1310 ● Quarry
- ☐ 1311 ● Hot Mix Asphalt Plant

Section VI – All Stationary Emission Sources (not required for gas stations)

Unit No.	Source Description (For aggregate plants include all crushers, screens, and conveyors)	Manufacturer Model No.	Serial No.	Date of Manufacture (MM/DD/YY)	Nameplate Rating or Capacity
1	Wärtsilä Reciprocating Engine	18V50DF	tbd	tbd	16,638 kW
2	Wärtsilä Reciprocating Engine	18V50DF	tbd	tbd	16,638 kW
3	Wärtsilä Reciprocating Engine	18V50DF	tbd	tbd	16,638 kW
4	Wärtsilä Reciprocating Engine	18V50DF	tbd	tbd	16,638 kW
5	Wärtsilä Reciprocating Engine	18V50DF	tbd	tbd	16,638 kW
6	Wärtsilä Reciprocating Engine	18V50DF	tbd	tbd	16,638 kW
7	Wärtsilä Reciprocating Engine	18V50DF	tbd	tbd	16,638 kW
8	Wärtsilä Reciprocating Engine	18V50DF	tbd	tbd	16,638 kW
9	Wärtsilä Reciprocating Engine	18V50DF	tbd	tbd	16,638 kW
10	Wärtsilä Reciprocating Engine	18V50DF	tbd	tbd	16,638 kW
11	Cummins Emergency Generator	DFEG	tbd	tbd	350 kW
12	Clarke/John Deere Diesel Fire Pump	JU6H-UF50	tbd	tbd	157 kW

Section VI - Certification

I hereby certify that all information and data contained in this application and all information submitted with this application are true and as accurate as possible, to the best of my knowledge and professional expertise and experience.

Signed this 6 day of April, 2009,
Upon my oath or affirmation, before a notary of the state of California.

Signature of responsible official of firm:

Title of responsible official of firm:
Vice President - Power Generation

Type or print name of responsible official of firm:	Responsible official's phone no.	Date signed:
Randal S. Livingston	(415) 973 - 6950	4 / 6 / 09

I hereby certify that all information and data contained in this application and all information submitted with this application are true and as accurate as possible, to the best of my knowledge and professional expertise and experience.

Signed this 6th day of April, 2009,
Upon my oath or affirmation, before a notary of the state of California.

Signature of preparer, if prepared by person other than responsible official of firm:

Title of preparer:
Senior Engineer

Type or print name of preparer, if prepared by person other than responsible official of firm:	Preparer's telephone number	Date signed
Nancy Matthews	(916) 444 - 6666	/

Scribed and sworn before me on this 6th day of April, 2009,
My authorization as a notary of the state of California expires on the 16th day of May, 2010.

Notary's signature: Elizabeth J. Diamond **Notary's printed name** ELIZABETH J. DIAMOND 04/06/09

PC01
ELIZABETH J. DIAMOND
COMM. #1660814
NOTARY PUBLIC-CALIFORNIA
SAN FRANCISCO COUNTY
My Comm. Expires May 16, 2010
PC01

Certification

I hereby certify that all information and data contained in this application and all information submitted with this application are true and as accurate as possible, to the best of my knowledge and professional expertise and experience.

Signed this 7th day of April, 2009,

Upon my oath or affirmation, before a notary of the state of California.

Signature of preparer, if prepared by person other than responsible official of firm:

Nancy Matthews

Title of preparer:

Senior Engineer

Type or print name of preparer, if prepared by person other than responsible official of firm:	Preparer's telephone number	Date signed:
Nancy Matthews	(916) 444-6666	4/7/09

Scribed and sworn before me on this 7th day of April, 2009.

My authorization as a notary in the state of California expires on the 11th day of September, 2011.

Notary's signature: Karen L. Rodgers

Notary's printed name: Karen L. Rodgers

KAREN L. RODGERS
Commission # 1767065
Notary Public - California
Sacramento County
MyComm. Expires Sep 11, 2011

Section VII - Stack Exit and Fugitive Emission - Potential to Emit Rates

		Emission Rates for Criteria Pollutants							Estimation Method	Stack Exit Conditions (NA for Fugitives)			
		PM	PM10	NOx	CO	VOC	SOx	Lead	Manufacturer's Data	Orientation (H=Horizo V=Vertical)	Height Above Ground (ft)	Flow Rate (acfm)	Inside Diam. Or LxW (ft)
		lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	Stack Test USEPA				
Stack No.	Unit No.	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	AP-42	Rain Caps (Y or N)	Temp. (F)	Velocity (ft/s)	
		10.8	10.8	164	25.5	17.2	0.4	--		V	75	121502	5.31
1	1	16.1	16.1	17.4	17.1	18.9	0.44	--	Manufacturer's Data	N	728	102	
		10.8	10.8	164	25.5	17.2	0.4	--		V	75	121502	5.31
2	2	16.1	16.1	17.4	17.1	18.9	0.44	--	Manufacturer's Data	N	728	102	
		10.8	10.8	164	25.5	17.2	0.4	--		V	75	121502	5.31
3	3	16.1	16.1	17.4	17.1	18.9	0.44	--	Manufacturer's Data	N	728	102	
		10.8	10.8	164	25.5	17.2	0.4	--		V	75	121502	5.31
4	4	16.1	16.1	17.4	17.1	18.9	0.44	--	Manufacturer's Data	N	728	102	
		10.8	10.8	164	25.5	17.2	0.4	--		V	75	121502	5.31
5	5	16.1	16.1	17.4	17.1	18.9	0.44	--	Manufacturer's Data	N	728	102	
		10.8	10.8	164	25.5	17.2	0.4	--		V	75	121502	5.31
6	6	16.1	16.1	17.4	17.1	18.9	0.44	--	Manufacturer's Data	N	728	102	
		10.8	10.8	164	25.5	17.2	0.4	--		V	75	121502	5.31
7	7	16.1	16.1	17.4	17.1	18.9	0.44	--	Manufacturer's Data	N	728	102	
		10.8	10.8	164	25.5	17.2	0.4	--		V	75	121502	5.31
8	8	16.1	16.1	17.4	17.1	18.9	0.44	--	Manufacturer's Data	N	728	102	
		10.8	10.8	164	25.5	17.2	0.4	--		V	75	121502	5.31
9	9	16.1	16.1	17.4	17.1	18.9	0.44	--	Manufacturer's Data	N	728	102	
		10.8	10.8	164	25.5	17.2	0.4	--		V	75	121502	5.31
10	10	16.1	16.1	17.4	17.1	18.9	0.44	--	Manufacturer's Data	N	728	102	
		0.05	0.05	4.5	0.6	0.06	0.01	--		V	4.65	3855	0.75
11	11	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	--	Manufacturer's Data	N	810	145.43	
		0.06	0.06	2.27	0.27	0.23	0.0026	--		V	40	1204	0.417
12	12	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	--	Manufacturer's Data	N	1050	147.16	
		108.1	108.1	834.5	255.4	171.8	4	--					
TOTALS		119.8	119.8	179.1	172.7	190.8	4.4	--					

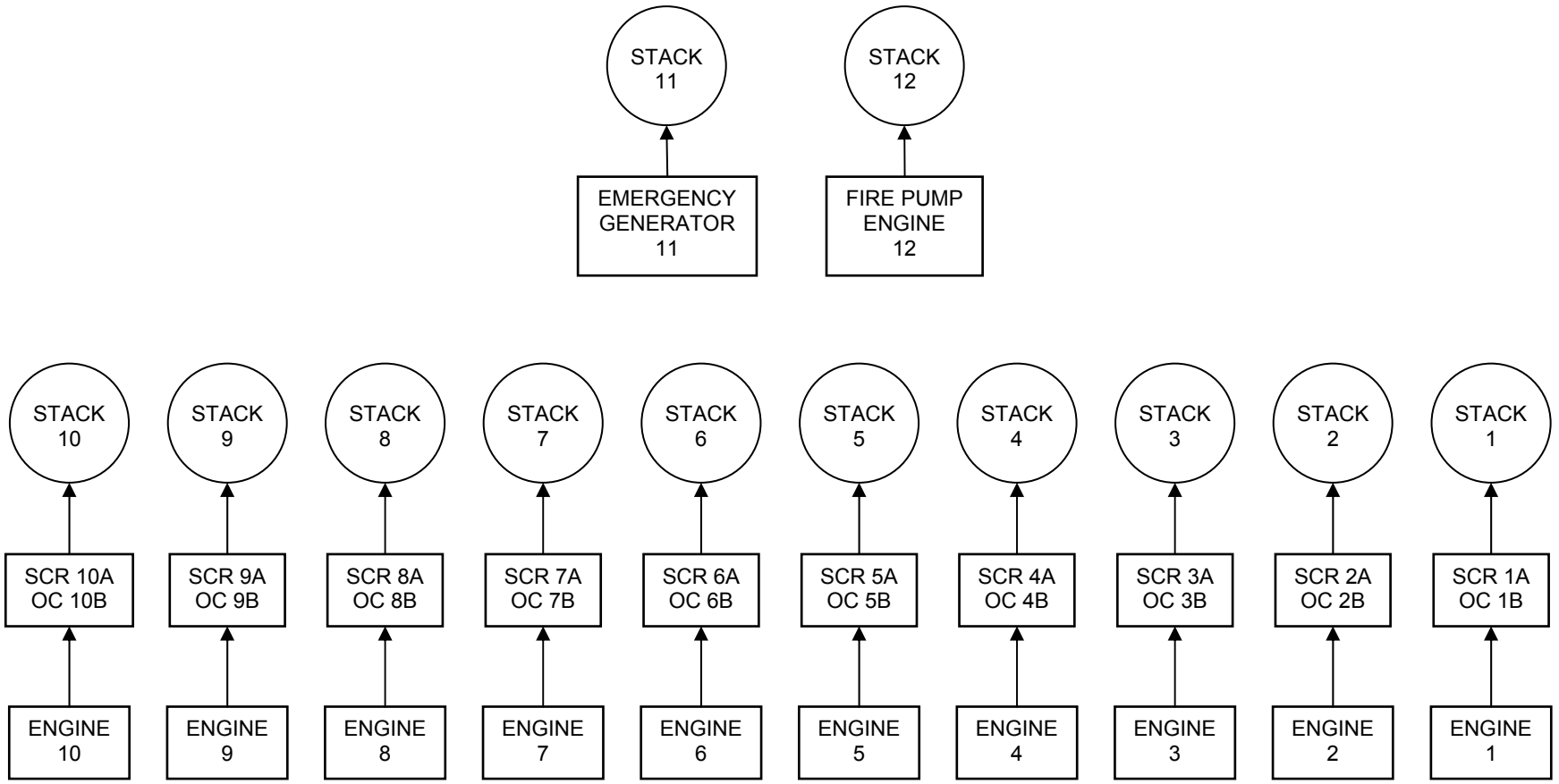
Section VIII - Emission Rates for Substances that may be Toxic Air Contaminants

	Stack # / Unit #	Stack # / Unit #	Stack # / Unit #	Stack # / Unit #	Stack # / Unit #	Stack # / Unit #	Stack # / Unit #	Stack # / Unit #	Stack # / Unit #	Stack # / Unit #	Stack # / Unit #	Stack # / Unit #	TOTALS
	1 / 1	2 / 2	3 / 3	4 / 4	5 / 5	6 / 6	7 / 7	8 / 8	9 / 9	10 / 10	11 / 11	12 / 12	
Name of TAC	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr
Ammonia	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11			21.1
	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.28			62.8
Propylene	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76			7.6
	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45			24.5
Acetaldehyde	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07			0.7
	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24			2.4
Acrolein	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01			0.1
	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03			0.3
Benzene	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03			0.3
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			1.0
1,3-Butadiene	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05			0.5
	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17			1.7
Diesel Particulate Matter	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	5.56	0.25	0.0062	55.9
	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.0062	0.0016	2.8
Ethylbenzene	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01			0.1
	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03			0.3
Formaldehyde	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33			3.3
	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07			10.7
Hexane	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16			1.6
	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52			5.2
Naphthalene	0.0036	0.0036	0.0036	0.0036	0.0036	0.0036	0.0036	0.0036	0.0036	0.0036			0.036
	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01			0.1
PAHs	0.000039	0.000039	0.000039	0.000039	0.000039	0.000039	0.000039	0.000039	0.000039	0.000039			0.00039
	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012			0.0012
Toluene	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03			0.3
	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11			1.1
Xylene	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09			0.9
	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29			2.9

Section IX: Emissions Control Equipment					
Unit No.	Controlling Emissions for Unit(s) no.	Control Equipment Description	Controlled Pollutant(s)	% Control by Weight	Estimation Method
1-A	1	SCR	NOx	~95%	Wärtsilä guarantee
1-B	1	Oxidation Catalyst	CO	>70%	Wärtsilä guarantee
2-A	2	SCR	NOx	~95%	Wärtsilä guarantee
2-B	2	Oxidation Catalyst	CO	>70%	Wärtsilä guarantee
3-A	3	SCR	NOx	~95%	Wärtsilä guarantee
3-B	3	Oxidation Catalyst	CO	>70%	Wärtsilä guarantee
4-A	4	SCR	NOx	~95%	Wärtsilä guarantee
4-B	4	Oxidation Catalyst	CO	>70%	Wärtsilä guarantee
5-A	5	SCR	NOx	~95%	Wärtsilä guarantee
5-B	5	Oxidation Catalyst	CO	>70%	Wärtsilä guarantee
6-A	6	SCR	NOx	~95%	Wärtsilä guarantee
6-B	6	Oxidation Catalyst	CO	>70%	Wärtsilä guarantee
7-A	7	SCR	NOx	~95%	Wärtsilä guarantee
7-B	7	Oxidation Catalyst	CO	>70%	Wärtsilä guarantee
8-A	8	SCR	NOx	~95%	Wärtsilä guarantee
8-B	8	Oxidation Catalyst	CO	>70%	Wärtsilä guarantee
9-A	9	SCR	NOx	~95%	Wärtsilä guarantee
9-B	9	Oxidation Catalyst	CO	>70%	Wärtsilä guarantee
10-A	10	SCR	NOx	~95%	Wärtsilä guarantee
10-B	10	Oxidation Catalyst	CO	>70%	Wärtsilä guarantee
11	11	none	n/a	n/a	n/a
12	12	none	n/a	n/a	n/a

Section X: Fuel Characteristics and Usage						
Unit No.	Fuel Type	Lower Heating Value	Hourly Usage	Annual Usage	% Sulfur	% Ash
1	Natural Gas	20,691 Btu/lb	143.9 MMBtu/hr	927723 MMBtu/yr	1 gr/100scf	0
1	CARB Diesel	18,483 Btu/lb	148.9 MMBtu/hr	20048 MMBtu/yr	15 ppm	0.01
2	Natural Gas	20,691 Btu/lb	143.9 MMBtu/hr	927723 MMBtu/yr	1 gr/100scf	0
2	CARB Diesel	18,483 Btu/lb	148.9 MMBtu/hr	20048 MMBtu/yr	15 ppm	0.01
3	Natural Gas	20,691 Btu/lb	143.9 MMBtu/hr	927723 MMBtu/yr	1 gr/100scf	0
3	CARB Diesel	18,483 Btu/lb	148.9 MMBtu/hr	20048 MMBtu/yr	15 ppm	0.01
4	Natural Gas	20,691 Btu/lb	143.9 MMBtu/hr	927723 MMBtu/yr	1 gr/100scf	0
4	CARB Diesel	18,483 Btu/lb	148.9 MMBtu/hr	20048 MMBtu/yr	15 ppm	0.01
5	Natural Gas	20,691 Btu/lb	143.9 MMBtu/hr	927723 MMBtu/yr	1 gr/100scf	0
5	CARB Diesel	18,483 Btu/lb	148.9 MMBtu/hr	20048 MMBtu/yr	15 ppm	0.01
6	Natural Gas	20,691 Btu/lb	143.9 MMBtu/hr	927723 MMBtu/yr	1 gr/100scf	0
6	CARB Diesel	18,483 Btu/lb	148.9 MMBtu/hr	20048 MMBtu/yr	15 ppm	0.01
7	Natural Gas	20,691 Btu/lb	143.9 MMBtu/hr	927723 MMBtu/yr	1 gr/100scf	0
7	CARB Diesel	18,483 Btu/lb	148.9 MMBtu/hr	20048 MMBtu/yr	15 ppm	0.01
8	Natural Gas	20,691 Btu/lb	143.9 MMBtu/hr	927723 MMBtu/yr	1 gr/100scf	0
8	CARB Diesel	18,483 Btu/lb	148.9 MMBtu/hr	20048 MMBtu/yr	15 ppm	0.01
9	Natural Gas	20,691 Btu/lb	143.9 MMBtu/hr	927723 MMBtu/yr	1 gr/100scf	0
9	CARB Diesel	18,483 Btu/lb	148.9 MMBtu/hr	20048 MMBtu/yr	15 ppm	0.01
10	Natural Gas	20,691 Btu/lb	143.9 MMBtu/hr	927723 MMBtu/yr	1 gr/100scf	0
10	CARB Diesel	18,483 Btu/lb	148.9 MMBtu/hr	20048 MMBtu/yr	15 ppm	0.01
11	CARB Diesel	18,483 Btu/lb	3.3 MMBtu/hr	165 MMBtu/yr	15 ppm	0.01
12	CARB Diesel	18,483 Btu/lb	1.68 MMBtu/hr	84 MMBtu/yr	15 ppm	0.01

HBRP
Process Flow Diagram



ATTACHMENTS TO FORM 1300

The following attachments must be submitted with form 1300:

1. PLOT PLAN AND LOCATION INFORMATION

A drawing or sketch shall be submitted to scale and shall show at least the following:

a. A scale and indication of which direction is North;
b. The property owned, leased, or under direct control of the applicant and outlines and heights of all buildings on it. Identify property lines plainly;
c. Property location with respect to public and private streets, and all adjacent properties. Show surrounding property owners and uses within 600 feet radius of property. Identify all buildings (as residence, apartment house, machine shop, warehouse, etc.) specifying height of each building (number of stories).
d. Location and identification of the proposed equipment on the property and emission points.
e. Access and haul roads;
f. Areas with restricted public access with explanation of how restricted;
g. Distance and direction to the nearest residence;
h. Distance and direction to the nearest school property boundary;
i. Identify by name schools which have their outer property boundaries located within 1000 feet of the equipment;
j. If the source is in a remote location provide a map such as a 7.5 minute topographic quadrangle showing 1) indication of which direction is North, 2) a scale, and 3) topographic features of the area.

2. PROCESS FLOW DIAGRAM

Provide a process flow sheet and/or block diagram indicating the individual equipment, all emission points and types of control applied to those points. Use a numbering system that cross references with attachment 1.

3. WRITTEN DESCRIPTION OF THE FACILITY OPERATIONS

Provide a written description of the routine operations of the facility. Include a description of how each piece of equipment will be operated, how controls will be used, and the fate of both products and waste generated. For modifications, explain how the changes will affect the existing process.

4. EMISSIONS CALCULATIONS (not required for gasoline stations)

Provide all calculations used to determine both the hourly and annual uncontrolled and controlled emission rates. Reference where the emission factors were obtained. If identical units are being permitted and will be subject to the same operating conditions, submit calculations for only one unit and note what other units the calculations represent. Calculate emissions based on the maximum number of hours per day, days per week, days per month, and weeks per year the equipment/process is to be operated. Also provide normal operating hours.

5. EMISSIONS ESTIMATES DOCUMENTATION (not required for gasoline stations)

Provide all information used to determine emissions including the following:

a. If manufacturer data used, include specification sheets for emission units and control equipment;
b. If test data used, a complete copy of the test report. If the test data are for an emissions unit other that the one being permitted, the emission units must be identical. Test data may not be used if any difference in operating conditions of the unit being permitted and the unit represented in the test report significantly affect emission rates;
c. If AP-42 is used, reference the section and date located at the bottom of the page. Include a copy of the page containing the emission factors, and clearly mark the factors used in the calculations;
d. If a USEPA, CARB document, or other material is referenced, include a complete copy; and
e. If computer models are used to estimate emissions, include an input summary (if available) and a detailed report, and a disk containing the input file(s) used to run the model.

6. AIR QUALITY IMPACT

For any new or modified source subject to new source review (AQMD Regulation 1, Rule 220(b)), provide an analysis of the air quality impact (including air quality dispersion modeling and risk assessment).

7. NSR/PSD APPLICABILITY

For any new or modified source subject to new source review (AQMD Regulation 1, Rule 220(b)) use the procedures for Determining the Net Emissions Change at a Source as specified by Table A-5 (Page A.45) of the USEPA New Source Review Workshop Manual to determine if the source is subject to PSD review. If PSD review is required, submit a top-down BACT analysis.

8. REGULATIONS APPLICABILITY (not required for gasoline stations)

Provide a discussion demonstrating compliance with each air-related local, state and federal regulation that you are aware would normally be applicable to your source. If such a regulation does not apply to your facility explain why. For example 40 CFR 60 Subpart OOO for crushers, 40 CFR 60 Subpart D for fossil-fuel fired steam generators, etc.

9. GENERAL PERMITTING INFORMATION

Further information or clarification concerning permits can be obtained by writing or calling:

North Coast Unified Air Quality Management District
2300 Myrtle Avenue
Eureka, CA 95501
(707) 443-3093

North Coast Unified Air
Quality Management District
2300 Myrtle Avenue
Eureka, CA 95501
(707) 443-3093

INTERNAL COMBUSTION ENGINE FORM 1301

Form 1300 must also accompany all submittals.

Section I - Equipment Information

1. Engine Function (check all that apply):
   a. ☐ Emergency generator
   b. ☐ Non-emergency generator
   c. ☐ Electrical Generator
   d. ☐ Compressor Driver
   e. ☐ Cogeneration (describe on a separate sheet of paper)
   f. ☐ Pump Driver
   g. ☐ Rental
   h. ☐ Portable
   i. ☐ Fire Pump
   i. ☑ Other (specify): Reciprocating Engine

2. Is the engine portable? ☐ yes ☑ no If yes, describe frequency and purpose: _____

3. Cycle Type: a. ☐ Two Cycle b. ☑ Four Cycle

4. Combustion Type: a. ☑ Lean Burn b. ☐ Rich Burn

5. Fuel type: Natural Gas with Diesel Pilot/Diesel Backup

6. Aspiration Type:
   a. ☐ Turbocharged
   b. ☑ Turbocharged/Aftercooled
   c. ☐ Naturally Aspirated
   d. ☐ Timing Retarded ≥ 4° (relative to standard timing)

7. Air to Fuel Ratio: Variable Does engine have an air/fuel ratio controller? ☑ yes ☐ no

Section II - Operation Information

8. Maximum operating schedule: hours/day 24 days/week 7 weeks/year 52 hours/year 8760
   Average operating schedule: hours/day N/A days/week N/A weeks/year N/A hours/year N/A

Section III - Other Information

9. Is electrical grid power available at the engine location? ☑ Yes ☐ No

10. Is natural gas available at the engine location? ☑ Yes ☐ No

Section IV- Title V Information: *Fill out if AQMD has identified your facility as a Title V facility*

The requested application involves a(n): (check all that apply)

- **a. ☐ Administrative Permit Amendment**
- **b. ☐ Minor Permit Modification**
- **c. ☑ Significant Permit Modification**
- **d. ☐ Non-Title V Permit Processing (Available until initial Title V permit is issued)**
- **e. ☐ Permit Shield**
- **f. ☐ Alternative Operating Scenarios**
- **g. ☐ Voluntary Emission Cap**
- **i. ☐ Other (specify):_____**

IMPORTANT, PLEASE NOTE: Stationary diesel-fired engines must meet a particulate (PM10) emission rate of 0.1 g/bhp-hr or less and must use only CARB diesel (<150 ppm sulfur) or very-low CARB diesel (<15 ppm sulfur).

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Quality Management District
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   f. ☐ Pump Driver
   g. ☐ Rental
   h. ☐ Portable
   i. ☐ Fire Pump
   i. ☑ Other (specify): Reciprocating Engine

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   c. ☐ Naturally Aspirated
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   b. ☐ Non-emergency generator
   c. ☐ Electrical Generator
   d. ☐ Compressor Driver
   e. ☐ Cogeneration (describe on a separate sheet of paper)
   f. ☐ Pump Driver
   g. ☐ Rental
   h. ☐ Portable
   i. ☐ Fire Pump
   i. ☑ Other (specify): Reciprocating Engine

2. Is the engine portable? ☐ yes ☑ no If yes, describe frequency and purpose: _____

3. Cycle Type: a. ☐ Two Cycle b. ☑ Four Cycle

4. Combustion Type: a. ☑ Lean Burn b. ☐ Rich Burn

5. Fuel type: Natural Gas with Diesel Pilot/Diesel Backup

6. Aspiration Type:
   a. ☐ Turbocharged
   b. ☑ Turbocharged/Aftercooled
   c. ☐ Naturally Aspirated
   d. ☐ Timing Retarded ≥ 4° (relative to standard timing)

7. Air to Fuel Ratio: Variable Does engine have an air/fuel ratio controller? ☑ yes ☐ no

Section II - Operation Information

8. Maximum operating schedule: hours/day 24 days/week 7 weeks/year 52 hours/year 8760
   Average operating schedule: hours/day N/A days/week N/A weeks/year N/A hours/year N/A

Section III - Other Information

9. Is electrical grid power available at the engine location? ☑ Yes ☐ No

10. Is natural gas available at the engine location? ☑ Yes ☐ No

Section IV- Title V Information: *Fill out if AQMD has identified your facility as a Title V facility*

The requested application involves a(n): (check all that apply)

- **a. ☐ Administrative Permit Amendment**
- **b. ☐ Minor Permit Modification**
- **c. ☑ Significant Permit Modification**
- **d. ☐ Non-Title V Permit Processing (Available until initial Title V permit is issued)**
- **e. ☐ Permit Shield**
- **f. ☐ Alternative Operating Scenarios**
- **g. ☐ Voluntary Emission Cap**
- **i. ☐ Other (specify):_____**

IMPORTANT, PLEASE NOTE: Stationary diesel-fired engines must meet a particulate (PM10) emission rate of 0.1 g/bhp-hr or less and must use only CARB diesel (<150 ppm sulfur) or very-low CARB diesel (<15 ppm sulfur).

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Quality Management District
2300 Myrtle Avenue
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(707) 443-3093

INTERNAL COMBUSTION ENGINE FORM 1301

Form 1300 must also accompany all submittals.

Section I - Equipment Information

1. Engine Function (check all that apply):
   a. ☐ Emergency generator
   b. ☐ Non-emergency generator
   c. ☐ Electrical Generator
   d. ☐ Compressor Driver
   e. ☐ Cogeneration (describe on a separate sheet of paper)
   f. ☐ Pump Driver
   g. ☐ Rental
   h. ☐ Portable
   i. ☐ Fire Pump
   i. ☑ Other (specify): Reciprocating Engine

2. Is the engine portable? ☐ yes ☑ no If yes, describe frequency and purpose: _____

3. Cycle Type: a. ☐ Two Cycle b. ☑ Four Cycle

4. Combustion Type: a. ☑ Lean Burn b. ☐ Rich Burn

5. Fuel type: Natural Gas with Diesel Pilot/Diesel Backup

6. Aspiration Type:
   a. ☐ Turbocharged
   b. ☑ Turbocharged/Aftercooled
   c. ☐ Naturally Aspirated
   d. ☐ Timing Retarded ≥ 4° (relative to standard timing)

7. Air to Fuel Ratio: Variable Does engine have an air/fuel ratio controller? ☑ yes ☐ no

Section II - Operation Information

8. Maximum operating schedule: hours/day 24 days/week 7 weeks/year 52 hours/year 8760
   Average operating schedule: hours/day N/A days/week N/A weeks/year N/A hours/year N/A

Section III - Other Information

9. Is electrical grid power available at the engine location? ☑ Yes ☐ No

10. Is natural gas available at the engine location? ☑ Yes ☐ No

Section IV- Title V Information: *Fill out if AQMD has identified your facility as a Title V facility*

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- **f. ☐ Alternative Operating Scenarios**
- **g. ☐ Voluntary Emission Cap**
- **i. ☐ Other (specify):_____**

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   e. ☐ Cogeneration (describe on a separate sheet of paper)
   f. ☐ Pump Driver
   g. ☐ Rental
   h. ☐ Portable
   i. ☐ Fire Pump
   i. ☑ Other (specify): Reciprocating Engine

2. Is the engine portable? ☐ yes ☑ no If yes, describe frequency and purpose: _____

3. Cycle Type: a. ☐ Two Cycle b. ☑ Four Cycle

4. Combustion Type: a. ☑ Lean Burn b. ☐ Rich Burn

5. Fuel type: Natural Gas with Diesel Pilot/Diesel Backup

6. Aspiration Type:
   a. ☐ Turbocharged
   b. ☑ Turbocharged/Aftercooled
   c. ☐ Naturally Aspirated
   d. ☐ Timing Retarded ≥ 4° (relative to standard timing)

7. Air to Fuel Ratio: Variable Does engine have an air/fuel ratio controller? ☑ yes ☐ no

Section II - Operation Information

8. Maximum operating schedule: hours/day 24 days/week 7 weeks/year 52 hours/year 8760
   Average operating schedule: hours/day N/A days/week N/A weeks/year N/A hours/year N/A

Section III - Other Information

9. Is electrical grid power available at the engine location? ☑ Yes ☐ No

10. Is natural gas available at the engine location? ☑ Yes ☐ No

Section IV- Title V Information: *Fill out if AQMD has identified your facility as a Title V facility*

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- **f. ☐ Alternative Operating Scenarios**
- **g. ☐ Voluntary Emission Cap**
- **i. ☐ Other (specify):_____**

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   b. ☐ Non-emergency generator
   c. ☐ Electrical Generator
   d. ☐ Compressor Driver
   e. ☐ Cogeneration (describe on a separate sheet of paper)
   f. ☐ Pump Driver
   g. ☐ Rental
   h. ☐ Portable
   i. ☐ Fire Pump
   i. ☑ Other (specify): Reciprocating Engine

2. Is the engine portable? ☐ yes ☑ no If yes, describe frequency and purpose: _____

3. Cycle Type: a. ☐ Two Cycle b. ☑ Four Cycle

4. Combustion Type: a. ☑ Lean Burn b. ☐ Rich Burn

5. Fuel type: Natural Gas with Diesel Pilot/Diesel Backup

6. Aspiration Type:
   a. ☐ Turbocharged
   b. ☑ Turbocharged/Aftercooled
   c. ☐ Naturally Aspirated
   d. ☐ Timing Retarded $\geq 4^{o}$ (relative to standard timing)

7. Air to Fuel Ratio: Variable Does engine have an air/fuel ratio controller? ☑ yes ☐ no

Section II - Operation Information

8. Maximum operating schedule: hours/day 24 days/week 7 weeks/year 52 hours/year 8760
   Average operating schedule: hours/day N/A days/week N/A weeks/year N/A hours/year N/A

Section III - Other Information

9. Is electrical grid power available at the engine location? ☑ Yes ☐ No

10. Is natural gas available at the engine location? ☑ Yes ☐ No

Section IV- Title V Information: *Fill out if AQMD has identified your facility as a Title V facility*

The requested application involves a(n): (check all that apply)

- **a. ☐ Administrative Permit Amendment**
- **b. ☐ Minor Permit Modification**
- **c. ☑ Significant Permit Modification**
- **d. ☐ Non-Title V Permit Processing (Available until initial Title V permit is issued)**
- **e. ☐ Permit Shield**
- **f. ☐ Alternative Operating Scenarios**
- **g. ☐ Voluntary Emission Cap**
- **i. ☐ Other (specify):_____**

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1. Engine Function (check all that apply):
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   b. ☐ Non-emergency generator
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   d. ☐ Compressor Driver
   e. ☐ Cogeneration (describe on a separate sheet of paper)
   f. ☐ Pump Driver
   g. ☐ Rental
   h. ☐ Portable
   i. ☐ Fire Pump
   i. ☑ Other (specify): Reciprocating Engine

2. Is the engine portable? ☐ yes ☑ no If yes, describe frequency and purpose: _____

3. Cycle Type: a. ☐ Two Cycle b. ☑ Four Cycle

4. Combustion Type: a. ☑ Lean Burn b. ☐ Rich Burn

5. Fuel type: Natural Gas with Diesel Pilot/Diesel Backup

6. Aspiration Type:
   a. ☐ Turbocharged
   b. ☑ Turbocharged/Aftercooled
   c. ☐ Naturally Aspirated
   d. ☐ Timing Retarded ≥ 4° (relative to standard timing)

7. Air to Fuel Ratio: Variable Does engine have an air/fuel ratio controller? ☑ yes ☐ no

Section II - Operation Information

8. Maximum operating schedule: hours/day 24 days/week 7 weeks/year 52 hours/year 8760
   Average operating schedule: hours/day N/A days/week N/A weeks/year N/A hours/year N/A

Section III - Other Information

9. Is electrical grid power available at the engine location? ☑ Yes ☐ No

10. Is natural gas available at the engine location? ☑ Yes ☐ No

Section IV- Title V Information: *Fill out if AQMD has identified your facility as a Title V facility*

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- **f. ☐ Alternative Operating Scenarios**
- **g. ☐ Voluntary Emission Cap**
- **i. ☐ Other (specify):_____**

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1. Engine Function (check all that apply):
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   e. ☐ Cogeneration (describe on a separate sheet of paper)
   f. ☐ Pump Driver
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   h. ☐ Portable
   i. ☐ Fire Pump
   i. ☑ Other (specify): Reciprocating Engine

2. Is the engine portable? ☐ yes ☑ no If yes, describe frequency and purpose: _____

3. Cycle Type: a. ☐ Two Cycle b. ☑ Four Cycle

4. Combustion Type: a. ☑ Lean Burn b. ☐ Rich Burn

5. Fuel type: Natural Gas with Diesel Pilot/Diesel Backup

6. Aspiration Type:
   a. ☐ Turbocharged
   b. ☑ Turbocharged/Aftercooled
   c. ☐ Naturally Aspirated
   d. ☐ Timing Retarded ≥ 4° (relative to standard timing)

7. Air to Fuel Ratio: Variable Does engine have an air/fuel ratio controller? ☑ yes ☐ no

Section II - Operation Information

8. Maximum operating schedule: hours/day 24 days/week 7 weeks/year 52 hours/year 8760
   Average operating schedule: hours/day N/A days/week N/A weeks/year N/A hours/year N/A

Section III - Other Information

9. Is electrical grid power available at the engine location? ☑ Yes ☐ No

10. Is natural gas available at the engine location? ☑ Yes ☐ No

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- **g. ☐ Voluntary Emission Cap**
- **i. ☐ Other (specify):_____**

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Section I - Equipment Information

1. Engine Function (check all that apply):
   a. ☐ Emergency generator
   b. ☐ Non-emergency generator
   c. ☐ Electrical Generator
   d. ☐ Compressor Driver
   e. ☐ Cogeneration (describe on a separate sheet of paper)
   f. ☐ Pump Driver
   g. ☐ Rental
   h. ☐ Portable
   i. ☐ Fire Pump
   i. ☑ Other (specify): Reciprocating Engine

2. Is the engine portable? ☐ yes ☑ no If yes, describe frequency and purpose: _____

3. Cycle Type: a. ☐ Two Cycle b. ☑ Four Cycle

4. Combustion Type: a. ☑ Lean Burn b. ☐ Rich Burn

5. Fuel type: Natural Gas with Diesel Pilot/Diesel Backup

6. Aspiration Type:
   a. ☐ Turbocharged
   b. ☑ Turbocharged/Aftercooled
   c. ☐ Naturally Aspirated
   d. ☐ Timing Retarded ≥ 4° (relative to standard timing)

7. Air to Fuel Ratio: Variable Does engine have an air/fuel ratio controller? ☑ yes ☐ no

Section II - Operation Information

8. Maximum operating schedule: hours/day 24 days/week 7 weeks/year 52 hours/year 8760
   Average operating schedule: hours/day N/A days/week N/A weeks/year N/A hours/year N/A

Section III - Other Information

9. Is electrical grid power available at the engine location? ☑ Yes ☐ No

10. Is natural gas available at the engine location? ☑ Yes ☐ No

Section IV- Title V Information: *Fill out if AQMD has identified your facility as a Title V facility*

The requested application involves a(n): (check all that apply)

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- **e. ☐ Permit Shield**
- **f. ☐ Alternative Operating Scenarios**
- **g. ☐ Voluntary Emission Cap**
- **i. ☐ Other (specify):_____**

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1. Engine Function (check all that apply):
   a. ☐ Emergency generator
   b. ☐ Non-emergency generator
   c. ☐ Electrical Generator
   d. ☐ Compressor Driver
   e. ☐ Cogeneration (describe on a separate sheet of paper)
   f. ☐ Pump Driver
   g. ☐ Rental
   h. ☐ Portable
   i. ☐ Fire Pump
   i. ☑ Other (specify): Reciprocating Engine

2. Is the engine portable? ☐ yes ☑ no If yes, describe frequency and purpose: _____

3. Cycle Type: a. ☐ Two Cycle b. ☑ Four Cycle

4. Combustion Type: a. ☑ Lean Burn b. ☐ Rich Burn

5. Fuel type: Natural Gas with Diesel Pilot/Diesel Backup

6. Aspiration Type:
   a. ☐ Turbocharged
   b. ☑ Turbocharged/Aftercooled
   c. ☐ Naturally Aspirated
   d. ☐ Timing Retarded ≥ 4° (relative to standard timing)

7. Air to Fuel Ratio: Variable Does engine have an air/fuel ratio controller? ☑ yes ☐ no

Section II - Operation Information

8. Maximum operating schedule: hours/day 24 days/week 7 weeks/year 52 hours/year 8760
   Average operating schedule: hours/day N/A days/week N/A weeks/year N/A hours/year N/A

Section III - Other Information

9. Is electrical grid power available at the engine location? ☑ Yes ☐ No

10. Is natural gas available at the engine location? ☑ Yes ☐ No

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- **i. ☐ Other (specify):_____**

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   - b. ☐ Non-emergency generator
   - c. ☐ Electrical Generator
   - d. ☐ Compressor Driver
   - e. ☐ Cogeneration (describe on a separate sheet of paper)
   - f. ☐ Pump Driver
   - g. ☐ Rental
   - h. ☐ Portable
   - i. ☐ Fire Pump
   - i. ☐ Other (specify): _____

2. Is the engine portable? ☐ yes ☑ no If yes, describe frequency and purpose: _____

3. Cycle Type: a. ☐ Two Cycle b. ☑ Four Cycle

4. Combustion Type: a. ☑ Lean Burn b. ☐ Rich Burn

5. Fuel type: CARB Diesel

6. Aspiration Type:
   - a. ☑ Turbocharged
   - b. ☐ Turbocharged/Aftercooled
   - c. ☐ Naturally Aspirated
   - d. ☐ Timing Retarded ≥ 4° (relative to standard timing)

7. Air to Fuel Ratio: 17:1 Does engine have an air/fuel ratio controller? ☑ yes ☐ no

Section II - Operation Information

8. Maximum operating schedule: hours/day 24 days/week 7 weeks/year 52 hours/year 50
   Average operating schedule: hours/day 1 days/week 1 weeks/year 50 hours/year 50

Section III - Other Information

9. Is electrical grid power available at the engine location? ☑ Yes ☐ No

10. Is natural gas available at the engine location? ☑ Yes ☐ No

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The requested application involves a(n): (check all that apply)

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Diesel Generator Set

Model DFEG 60 Hz
EPA Emissions

350 kW, 438 kVA Standby
320 kW, 400 kVA Prime

Description

The Cummins Power Generation DF-series commercial generator set is a fully integrated power generation system providing optimum performance, reliability, and versatility for stationary standby or prime power applications.

A primary feature of the DF GenSet is strong motor-starting capability and fast recovery from transient load changes. The torque-matched system includes a heavy-duty Cummins 4-cycle diesel engine, an AC alternator with high motor-starting kVA capacity, and an electronic voltage regulator with three-phase sensing for precise regulation under steady-state or transient loads. The DF GenSet accepts 100% of the nameplate standby rating in one step, in compliance with NFPA 110 requirements.

The standard PowerCommand® digital electronic control is an integrated system that combines engine and alternator controls for high reliability and optimum GenSet performance.

Optional weather-protective enclosures and coolant heaters shield the generator set from extreme operating conditions. Environmental concerns are addressed by low exhaust emission engines, sound-attenuated enclosures, exhaust silencers, and dual-wall fuel tanks. A wide range of options, accessories, and services are available, allowing configuration to your specific power generation needs.

Every production unit is factory tested at rated load and power factor. This testing includes demonstration of rated power and single-step rated load pickup. Cummins Power Generation manufacturing facilities are registered to ISO9001 quality standards, emphasizing our commitment to high quality in the design, manufacture, and support of our products. The generator set is CSA certified and is available as UL2200 Listed. The PowerCommand control is UL508 Listed.

All Cummins Power Generation systems are backed by a comprehensive warranty program and supported by a worldwide network of 170 distributors and service branches to assist with warranty, service, parts, and planned maintenance support.

Features

UL Listed Generator Set - The complete generator set assembly is available Listed to UL 2200.

Low Exhaust Emissions - Engine certified to U.S. EPA Nonroad Source Emission Standards, 40 CFR 89, Tier 2.

Cummins Heavy-Duty Engine - Rugged 4-cycle industrial diesel delivers reliable power, low emissions, and fast response to load changes.

Alternator - Several alternator sizes offer selectable motor starting capability with low reactance 2/3 pitch windings; low waveform distortion with non-linear loads, fault clearing short-circuit capability, and class H insulation. The alternator electrical insulation system is UL1446 Recognized.

Permanent Magnet Generator (PMG) - Offers enhanced motor starting and fault clearing short circuit capability.

Control System - The PowerCommand electronic control is standard equipment and provides total genset system integration, including automatic remote starting/stopping, precise frequency and voltage regulation, alarm and status message display, AmpSentry™ protection, output metering, auto-shutdown at fault detection, and NFPA 110 compliance. PowerCommand control is Listed to UL508.

Cooling System - Provides reliable running at the rated power level, at up to 50°C ambient temperature.

Integral Vibration Isolation - Robust skid base supports the engine, alternator, and radiator on isolators, minimizing transmitted vibration.

E-Coat Finish - Dual electro-deposition paint system provides high resistance to scratches, corrosion, or fading.

Enclosures - Optional weather-protective and sound-attenuated enclosures are available.

Fuel Tanks - Dual wall sub-base fuel tanks are also offered.

Certifications - Generator sets are designed, manufactured, tested, and certified to relevant UL, NFPA, ISO, IEC, and CSA standards.

Warranty and Service - Backed by a comprehensive warranty and worldwide distributor network.

Generator Set

The general specifications provide representative configuration details. Consult the outline drawing for installation design.

Specifications – General

See outline drawing 500-3326 for installation design specifications.

Unit Width, in (mm)	60.0 (1524)
Unit Height, in (mm)	71.3 (1812)
Unit Length, in (mm)	152.1 (3864)
Unit Dry Weight, lb (kg)	8500 (3856)
Unit Wet Weight, lb (kg)	8800 (3992)
Rated Speed, rpm	1800
Voltage Regulation, No Load to Full Load	±0.5%
Random Voltage Variation	±0.25%
Frequency Regulation	Isochronous
Random Frequency Variation	±0.25%
Radio Frequency Interference	IEC 801.2, Level 4 Electrostatic Discharge IEC 801.3, Level 3 Radiated Susceptibility

Cooling	**Standby**	**Prime**
Standard Set-Mounted Radiator Cooling (Dwg. 500-3326)		
Set Coolant Capacity, US Gal (L)	15.3 (57.9)	15.3 (57.9)
Total Heat Rejected from Cooling System, BTU/min (MJ/min)	11300.0 (12.0)	10650.0 (11.3)
Heat Radiated to Room, BTU/min (MJ/min)	3485.0 (3.7)	3320.0 (3.5)

Air		
Combustion Air, scfm (m^3/min)	1145.0 (32.4)	1100.0 (31.1)
Alternator Cooling Air, scfm (m^3/min)	2190.0 (62.0)	2190.0 (62.0)
Radiator Cooling Air, scfm (m^3/min)	25000.0 (707.5)	25000.0 (707.5)
Max. Static Restriction, in H_2O (Pa)	0.5 (124.5)	0.5 (124.5)

Rating Definitions

Standby Rating based on: Applicable for supplying emergency power for the duration of normal power interruption. No sustained overload capability is available for this rating. (Equivalent to Fuel Stop Power in accordance with ISO3046, AS2789, DIN6271 and BS5514). Nominally rated.

Prime (Unlimited Running Time) Rating based on: Applicable for supplying power in lieu of commercially purchased power. Prime power is the maximum power available at a variable load for an unlimited number of hours. A 10% overload capability is available for limited time. (Equivalent to Prime Power in accordance with ISO8528 and Overload Power in accordance with ISO3046, AS2789, DIN6271, and BS5514). This rating is not applicable to all generator set models.

Site Derating Factors

Genset may be operated up to 3650 m (11900 ft) and 40°C (104°F) without power deration. For sustained operation above these conditions, derate by 1.8% per 305 m (1000 ft) and 10% per 10°C (5.6% per 10°F).

Engine

Cummins heavy duty diesel engines use advanced combustion technology for reliable and stable power, low emissions, and fast response to sudden load changes.

Electronic governing provides precise speed regulation, especially useful for applications requiring constant (isochronous) frequency regulation such as Uninterruptible Power Supply (UPS) systems, non-linear loads, or sensitive electronic loads. Optional coolant heaters are recommended for all emergency standby installations or for any application requiring fast load acceptance after start-up.

Note: Features included with the engine: battery charging alternator, fuel/water separator, shutdown low coolant and bypass oil filtration.

Specifications – Engine

Base Engine	Cummins Model QSX15-G9 Nonroad 2, Turbo-charged with air-to-air charge air cooling, diesel-fueled
Displacement in^3 (L)	912.0 (14.9)
Overspeed Limit, rpm	2150 ±50
Regenerative Power, kW	52.00
Cylinder Block Configuration	Cast iron with replaceable wet liners, In-Line 6 cylinder
Battery Capacity	900 amps minimum at ambient temperature of 32°F (0°C)
Battery Charging Alternator	35 amps
Starting Voltage	24-volt, negative ground
Lube Oil Filter Types	Single spin-on combination element with full flow and bypass filtration
Standard Cooling System	104^o F (40^o C) ambient radiator

Power Output	**Standby**	**Prime**
Gross Engine Power Output, bhp (kWm)	755.0 (563.0)	680.0 (507.3)
BMEP at Rated Load, psi (kPa)	249.0 (1716.8)	229.0 (1578.9)
Bore, in. (mm)	5.39 (136.9)	5.39 (136.9)
Stroke, in. (mm)	6.65 (168.9)	6.65 (168.9)
Piston Speed, ft/min (m/s)	1995.0 (10.1)	1995.0 (10.1)
Compression Ratio	17.0:1	17.0:1
Lube Oil Capacity, qt. (L)	88.0 (83.3)	88.0 (83.3)
Fuel Flow		
Fuel Flow at Rated Load, US Gal/hr (L/hr)	112.0 (423.9)	112.0 (423.9)
Maximum Inlet Restriction, in. Hg (mm Hg)	5.0 (127.0)	5.0 (127.0)
Maximum Return Restriction, in. Hg (mm Hg)	6.5 (165.1)	6.5 (165.1)
Air Cleaner		
Maximum Air Cleaner Restriction, in. H_2O (kPa)	25.0 (6.2)	25.0 (6.2)
Exhaust		
Exhaust Flow at Rated Load, cfm (m^3/min)	2600.0 (73.6)	2505.0 (70.9)
Exhaust Temperature,^{o}F (^{o}C)	810.0 (432.2)	805.0 (429.4)
Max Back Pressure, in. H_2O (kPa)	41.0 (10.2)	41.0 (10.2)

Fuel System	Full Authority Electronic (FAE) Cummins HPI-TP

Fuel Consumption		**Standby**				**Prime**			
60 Hz Ratings, kW (kVA)		**350 (438)**				**320 (400)**			
	Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
	US Gal/hr	9.0	14.3	19.4	24.1	8.5	13.4	18.1	22.1
	L/hr	34	54	73	91	32	51	69	84

Alternator

Single-bearing alternators couple directly to the engine flywheel with flexible discs for drivetrain reliability and durability. No gear reducers or speed changers are used. Two-thirds pitch windings eliminate third-order harmonic content of the AC voltage waveform and provide the standardization desired for paralleling of generator sets.

A Permanent Magnet Generator (PMG) excitation system limits voltage dip during transient load application, sustains 3-phase short circuit current at approximately three times rated for up to 10 seconds, and is resistant to harmful effects of harmonics generated by non-linear loads. The alternator delivers excellent performance in applications containing large motors or sensitive electronics.

Various alternator sizes are available to meet individual application needs. Alternator sizes are differentiated by maximum winding temperature rise at the generator set standby or prime rating when operated in a 40^{o}C ambient environment. Available temperature rises range from 80^{o}C to 150^{o}C. Not all temperature rise selections are available on all models. Lower temperature rise is accomplished using larger alternators at lower current density. Lower temperature rise alternators have high motor starting kVA, lower voltage dip upon load application, and they are generally recommended to limit voltage distortion and heating due to harmonics induced by non-linear loads.

Alternator Application Notes

Alternator Space Heater - is recommended to inhibit condensation.

Available Output Voltages

Three Phase

[ ] 110/190

[ ] 110/220

[ ] 115/200

[ ] 115/230

[ ] 120/208

[ ] 127/220

[ ] 139/240

[ ] 220/380

[ ] 230/400

[ ] 240/416

[ ] 255/440

[ ] 277/480

[ ] 347/600

Specifications – Alternator

Design	Brushless, 4-pole, drip-proof revolving field
Stator	2/3 pitch
Rotor	Direct-coupled by flexible disc
Insulation System	Class H per NEMA MG1-1.65 and BS2757
Standard Temperature Rise	125(degree)C standby
Exciter Type	Permanent Magnet Generator (PMG)
Phase Rotation	A (U), B (V), C (W)
Alternator Cooling	Direct-drive centrifugal blower
AC Waveform Total Harmonic Distortion	<5% total no load to full linear load <3% for any single harmonic
Telephone Influence Factor (TIF)	<50 per NEMA MG1-22.43.
Telephone Harmonic Factor (THF)	<3

Three Phase Table[1]		**105° C**	**105° C**	**125° C**	**125° C**	**125° C**	**125° C**	**125° C**	**150° C**	**150° C**	**150° C**	**150° C**	
Feature Code		B259	B301	B258	B252	B414	B246	B300	B426	B413	B424	B419	
Alternator Data Sheet Number		306	305	305	305	306	305	305	305	305	305	305	
Voltage Ranges		110/190 Thru 139/240 220/380 Thru 277/480	347/600	110/190 Thru 139/240 220/380 Thru 277/480	120/208 Thru 139/240 240/416 Thru 277/480	120/208 Thru 139/240 240/416 Thru 277/480	277/480	347/600	110/190 Thru 139/240 220/380 Thru 277/480	120/208 Thru 139/240 240/416 Thru 277/480	277/480	347/600	
Surge kW		512	515	509	512	514	515	515	509	512	515	515	
Motor Starting kVA (at 90% sustained voltage)	PMG	1896	1749	1749	1749	1896	1749	1749	1749	1749	1749	1749	

Full Load Current - Amps at Standby Rating	110/190	120/208	110/220	115/230	139/240	220/380	230/400	240/416	255/440	277/480	347/600
	1329	1214	1148	1098	1052	665	631	607	574	526	421

Notes:

1. Single Phase Capability: Single phase power can be taken from a three phase generator set at up to 40% of the generator set nameplate kW rating at unity power factor.

Control System

PowerCommand (2100) Control

PowerCommand (3200) Control

PowerCommand Control with AmpSentry™ Protection

- The PowerCommand Control is an integrated generator set control system providing governing, voltage regulation, engine protection, and operator interface functions.
- PowerCommand Controls include integral AmpSentry protection. AmpSentry provides a full range of alternator protection functions that are matched to the alternator provided.
- Controls provided include Battery monitoring and testing features, and Smart-Starting control system.
- InPower PC-based service tool available for detailed diagnostics
- Available with Echelon LonWorks network interface
- NEMA 3R enclosure (2100 only)
- Suitable for operation in ambient temperatures from –40C to +70C, and altitudes to 13,000 feet (5000 meters)
- Prototype tested; UL, CSA, and CE compliant

AmpSentry AC Protection

- Overcurrent and short circuit shutdown
- Overcurrent warning
- Single & 3-phase fault regulation
- Over and under voltage shutdown
- Over and under frequency shutdown
- Overload warning with alarm contact
- Reverse power and reverse Var
- Excitation fault (2100 only)

Engine Protection

- Overspeed shutdown
- Low oil pressure warning and shutdown
- High coolant temperature warning and shutdown
- High oil temperature warning
- Low coolant level warning or shutdown
- Low coolant temperature warning
- High and low battery voltage
- Weak battery
- Dead battery
- Fail to start (overcrank) shutdown
- Fail to crank shutdown
- Redundant start disconnect
- Cranking lockout
- Sensor failure indication

Operator Interface

- OFF/MANUAL/AUTO mode switch
- MANUAL RUN/STOP switch
- Panel lamp/reset switch
- Emergency Stop switch
- Alpha-numeric display with pushbutton access, for viewing engine and alternator data and providing setup, controls, and adjustments
- LED lamps indicating genset running, not in auto, common warning, common shutdown
- (5) configurable LED lamps (2100 only)
- LED Bargraph AC data display
- Panel Lighting with switch and timer

Alternator Data

- Line to Line and Line to Neutral AC volts
- 3-phase AC current
- Frequency
- Total and individual phase kW and kVA

Engine Data

- DC voltage
- Lube oil pressure
- Coolant temperature
- Lube oil temperature
- FAE engine data (varies with engine)

Other Data

- Genset model data
- Start attempts, Starts, running hours
- KW hours (total and since reset)
- Fault history
- Load Profile (Hours less than 30% and hours more than 90% load)
- System Data Display (optional with network and other PowerCommand gensets or transfer switches)

Governing

- Integrated digital electronic isochronous governor
- Temperature dynamic governing
- Smart idle speed mode
- Glow plug control (some models)

Voltage Regulation

- Integrated digital electronic voltage regulator
- 3-phase line to neutral sensing
- PMG Control Interface
- Single and three phase fault regulation
- Configurable Torque Matching

Control Functions

- Data logging on faults
- Fault simulation (requires InPower)
- Time delay start and cooldown
- Cycle cranking
- (4) Configurable inputs
- (4) Configurable outputs (2100 only)

Options

- ❑ Open Transition Power Transfer Control
- ❑ Fast Closed Transition Power Transfer Control (3200 Control)
- ❑ Ramping Closed Transition Power Transfer (3200 Control)
- ❑ Paralleling (3200 Control)
- ❑ Key-type mode switch
- ❑ Ground fault module
- ❑ Exhaust Temperature Monitor
- ❑ Echelon LonWorks interface
- ❑ Digital input and output module(s) (loose)
- ❑ Remote Annunciator (loose)
- ❑ (8) configurable network inputs and (16) outputs

Generator Set Options

Engine

[ ] 208/240/480 V thermostatically controlled coolant heater for ambient above 40°F (4.5°C)
[ ] 208/240/480 V thermostatically controlled coolant heater for ambient below 40°F (4.5°C)
[ ] 120 V 300 W lube oil heater
[ ] Heavy-duty air cleaner with safety element

Cooling System

[ ] 125°F (50°C) ambient radiator

Fuel System

[ ] 300 Gal (1136 L) Sub-base tank
[ ] 400 Gal (1514 L) Sub-base tank
[ ] 500 Gal (1893 L) Sub-base tank
[ ] 600 Gal (2271 L) Sub-base tank
[ ] 660 Gal (2498 L) Sub-base tank
[ ] 850 Gal (3218 L) Sub-base tank
[ ] 1700 Gal (6435 L) Sub-base tank

Alternator

[ ] 80°C rise alternator
[ ] 105°C rise alternator
[ ] 150°C rise alternator
[ ] 120/240 V, 300 W anti-condensation heater

Control Panel

[ ] 120/240 V, 150 W control anti-condensation space heater
[ ] Ground fault alarm
[ ] Paralleling configuration
[ ] Power transfer control
[ ] Remote fault signal package
[ ] Run relay package

Exhaust System

[ ] Critical grade exhaust silencer
[ ] Exhaust packages
[ ] Industrial grade exhaust silencer
[ ] Residential grade exhaust silencer

Generator Set

[ ] AC entrance box
[ ] Batteries
[ ] Battery charger
[ ] Export box packaging
[ ] UL2200 Listed
[ ] Main line circuit breaker
[ ] Paralleling accessories
[ ] Remote annunciator panel
[ ] Sound-attenuated enclosure (2 levels) with internal silencers
[ ] Spring isolators
[ ] Weather-protective enclosure with internal silencer
[ ] 2 year prime power warranty
[ ] 2 year standby warranty
[ ] 5 year basic power warranty
[ ] 10 year major components warranty

Available Products and Services

A wide range of products and services is available to match your power generation system requirements. Cummins Power Generation products and services include:

Diesel and Spark-Ignited Generator Sets

Transfer Switches

Bypass Switches

Parallel Load Transfer Equipment

Digital Paralleling Switchgear

PowerCommand Network and Software

Distributor Application Support

Planned Maintenance Agreements

Warranty

All components and subsystems are covered by an express limited one-year warranty. Other optional and extended factory warranties and local distributor maintenance agreements are available. Contact your distributor/dealer for more information.

Certifications

ISO9001 - This generator set was designed and manufactured in facilities certified to ISO9001.

CSA - This generator set is CSA certified to product class 4215-01.

PTS - The Prototype Test Support (PTS) program verifies the performance integrity of the generator set design. Products bearing the PTS symbol have been subjected to demanding tests in accordance to NFPA 110 to verify the design integrity and performance under both normal and abnormal operating conditions including short circuit, endurance, temperature rise, torsional vibration, and transient response, including full load pickup.

UL - The generator set is available Listed to UL 2200, Stationary Engine Generator Assemblies. The PowerCommand control is Listed to UL 508 - Category NITW7 for U.S. and Canadian usage.

See your distributor for more information

Cummins Power Generation
1400 73rd Avenue N.E.
Minneapolis, MN 55432
763.574.5000
Fax: 763.574.5298
www.cumminspower.com

Important: Backfeed to a utility system can cause electrocution and/or property damage. Do not connect generator sets to any building electrical system except through an approved device or after building main switch is open.

North Coast Unified Air
Quality Management District
2300 Myrtle Avenue
Eureka, CA 95501
(707) 443-3093

INTERNAL COMBUSTION ENGINE FORM 1301

Form 1300 must also accompany all submittals.

Section I - Equipment Information

1. Engine Function (check all that apply):
   a. ☐ Emergency generator
   b. ☐ Non-emergency generator
   c. ☐ Electrical Generator
   d. ☐ Compressor Driver
   e. ☐ Cogeneration (describe on a separate sheet of paper)
   f. ☐ Pump Driver
   g. ☐ Rental
   h. ☐ Portable
   i. ☑ Fire Pump
   i. ☐ Other (specify): _____

2. Is the engine portable? ☐ yes ☑ no If yes, describe frequency and purpose: _____

3. Cycle Type: a. ☐ Two Cycle b. ☑ Four Cycle

4. Combustion Type: a. ☑ Lean Burn b. ☐ Rich Burn

5. Fuel type: CARB Diesel

6. Aspiration Type:
   a. ☑ Turbocharged
   b. ☐ Turbocharged/Aftercooled
   c. ☐ Naturally Aspirated
   d. ☐ Timing Retarded ≥ 4° (relative to standard timing)

7. Air to Fuel Ratio: 17:1 Does engine have an air/fuel ratio controller? ☐ yes ☑ no

Section II - Operation Information

8. Maximum operating schedule: hours/day 24 days/week 7 weeks/year 52 hours/year 50
   Average operating schedule: hours/day 1 days/week 1 weeks/year 50 hours/year 50

Section III - Other Information

9. Is electrical grid power available at the engine location? ☑ Yes ☐ No

10. Is natural gas available at the engine location? ☑ Yes ☐ No

Section IV- Title V Information: *Fill out if AQMD has identified your facility as a Title V facility*

The requested application involves a(n): (check all that apply)

- **a. ☐ Administrative Permit Amendment**
- **b. ☐ Minor Permit Modification**
- **c. ☑ Significant Permit Modification**
- **d. ☐ Non-Title V Permit Processing (Available until initial Title V permit is issued)**
- **e. ☐ Permit Shield**
- **f. ☐ Alternative Operating Scenarios**
- **g. ☐ Voluntary Emission Cap**
- **i. ☐ Other (specify):_____**

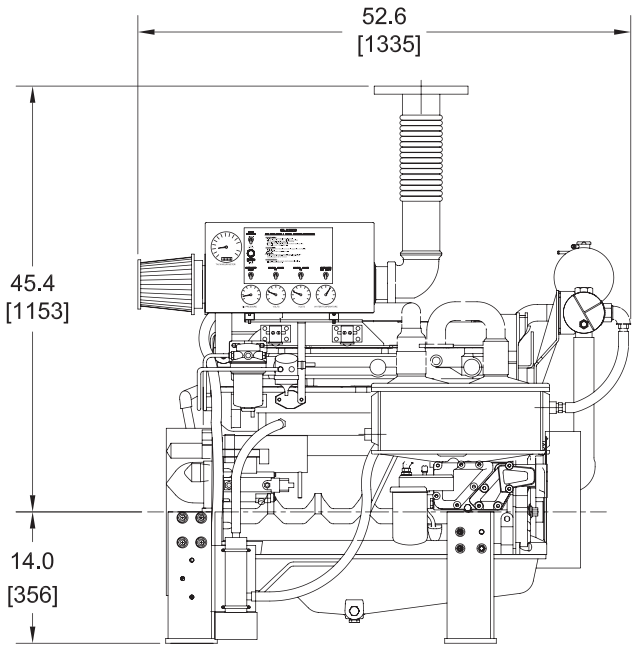
IMPORTANT, PLEASE NOTE: Stationary diesel-fired engines must meet a particulate (PM10) emission rate of 0.1 g/bhp-hr or less and must use only CARB diesel (<150 ppm sulfur) or very-low CARB diesel (<15 ppm sulfur).

CLARKE
FIRE PUMP DRIVERS

MODELS

JU6H-UFD0
JU6H-UFD2
JU6H-UF30
JU6H-UF32
JU6H-UFG8
JU6H-UFM8
JU6H-UFM0
JU6H-UFM2
JU6H-UF58
JU6H-UF50
JU6H-UF52
JU6H-UF68
JU6H-UF60
JU6H-UF62

FM-UL-cUL Approved Ratings BHP/*kW*										
JU6H MODEL	OPERATING SPEED									
	1470		1760		2100		2350		2600	
UFD0			110	*82*	144	*107*	148	*110*		
UFD2							148	*110*	148	*110*
UF30	94	*70*	140	*104*	160	*119*	160	*119*		
UF32							160	*119*	160	*119*
UFG8	130	*97*	149	*111*						
UFM8	136	*101*	175	*131*						
UFM0			175	*131*	207	*154*	200	*149*		
UFM2							200	*149*	200	*149*
UF58	138	*103*	183	*137*						
UF50			183	*137*	210	*157*	210	*157*		
UF52							210	*157*	210	*157*
UF68	175	*131*	200	*149*						
UF60			200	*149*	240	*179*	240	*179*		
UF62							240	*179*	240	*179*



JU6H-UF60
OVERALL WIDTH
31.7
[805.7]

Engine Equipment

Equipment	Standard	Optional
Air Cleaner	Direct Mounted, Washable, Indoor Service	Disposable, Drip proof, Indoor Service Outdoor Type
Alternator	12V-DC, 42 Amps; w/Belt Guard	24V-DC, 40 Amps; w/Belt Guard
Exhaust Protection	Metal Guards on Manifolds & Turbocharger	
Coupling	Falk Coupling, Engine Half UF30/32, - 1070T10; UFG8/M8/M0/M2, UF50/52/58 & UF60/62/68, - 1080T10	Drive Shaft & Guard, SC2130 Drive Shaft System
Exhaust Flex Connection		SS Flex, 150# Flange
Flywheel Housing	S.A.E. #3	
Flywheel Power Take Off	11.5" S.A.E. Industrial Flywheel Connection	
Fuel Connections	Fire Resistant Flexible Supply & Return Lines	
Fuel Filter	Primary Filter w/priming pump	
Fuel Injection System	Stanadyne Direct Injection	
Engine Heater	120V-AC, 1500 Watt	240V-AC, 1500 Watt
Governor, Speed	Constant Speed, Mechanical	
Heat Exchanger	Tube & Shell Type, 60 PSI w/NPTF Connections	
Instrument Panel	English & Metric, Tachometer, Hourmeter, Water Temperature, Oil Pressure & Two (2) Voltmeters	

Equipment	Standard	Optional
Junction Box	Integral with Instrument Panel; For DC Wiring Interconnection to Engine Controller	
Lube Oil Cooler	Engine Water Cooled, Plate Type	
Lube Oil Filter	Full Flow w/By-Pass Valve	
Lube Oil Pump	Gear Driven, Gear Type	
Manual Start Controls	On Instrument Panel	
Overspeed Control	Electronic w/Reset & Test on Instrument Panel	
Raw Water Solenoid Operation	Automatic from Engine Controller & from Instrument Panel	
Run-Stop Control	On Instrument Panel w/Control Position Warning Light	
Run Solenoid	12V-DC Energized to Run	24V-DC Energized to Run 12V-DC Energized to Stop 24V-DC Energized to Stop
Starters	Two (2) 12V-DC	Two (2) 24V-DC
Throttle Control	Adjustable Speed Control, Tamper Proof	
Water Pump	Poly-Vee Belt Drive w/Guard	

UL LISTED 513Y c UL

meets NFPA-20 Requirements

FM approved 1333

CLARKE
FIRE PUMP DRIVERS

MODELS

JU6H-UFD0
JU6H-UFD2
JU6H-UF30
JU6H-UF32
JU6H-UFG8
JU6H-UFM8
JU6H-UFM0
JU6H-UFM2
JU6H-UF58
JU6H-UF50
JU6H-UF52
JU6H-UF68
JU6H-UF60
JU6H-UF62

Specifications

Item	JU6H Models			
	UF30/32	UFG8/M8/M0/M2	UF50/52/58	UF60/62/68
Number of Cylinders	6			
Aspiration	T			TRWA
Rotation*	Clockwise (CW)			
Weight - lb (kg)	1657 (750)			1693 (766)
Compression Ratio	17.0:1			
Displacement - cu. in. (l)	414 (6.8)			
Engine Type	4 Stroke Cycle - Inline Construction			
Bore & Stroke - in. (mm)	4.19 x 5.00 (106 x 127)			
Installation Drawing	D - 536 - US		D - 538 - UK	
Wiring Diagram	C07575 (DC Engine Wiring)		C07651 (AC Heater Wiring)	
Engine Series	John Deere 6068 Series			

Abbreviations: CW – Clockwise T – Turbocharged TRWA - Turbocharged with Raw Water Aftercooling

*Rotation viewed from Heat Exchanger / Front of engine

Engine intended for Indoor use or inside weatherproof enclosure only

† ENGINE RATINGS BASELINES

Engines are rated at standard SAE conditions of 29.61 in. (7521 mm) Hg barometer and 77˚F (25˚C) inlet air temperature [approximates 300 ft. (91.4 m) above sea level] by the testing laboratory (*see SAE Standard J 1349*).

A deduction of 3 percent from engine horsepower rating at standard SAE conditions shall be made for diesel engines for each 1000 ft. (305 m) altitude above 300 ft. (91.4 m).

A deduction of 1 percent from engine horsepower rating as corrected to standard SAE conditions shall be made for diesel engines for every 10˚F (5.6˚C) above 77˚F (25˚C) ambient temperature.

Note: Engines certified at any speed between 1470 & 2600 RPM.

CERTIFIED POWER AT ANY SPEED

Although FM-UL Certified BHP ratings are shown at specific speeds, Clarke engines can be applied at any intermediate speed. To determine the intermediate certified power, make a linear interpolation from the Clarke FM-UL certified power curve. Contact Clarke or your Pump OEM representative to obtain details.

CLARKE

www.clarkefire.com

Fire Protection Products

CLARKE Fire Protection Products, Inc.
3133 E. Kemper Rd.
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C13556 4/05

Printed in U.S.A.

JU6H-UF50

FIRE PUMP DRIVER

EMISSION DATA

FOR

CALIFORNIA ATCM TIER 2

6 *Cylinders*
Four *Cycle*
Lean *Burn*
Turbocharged

15 PPM SULFUR #2 DIESEL FUEL (3b)								
RPM	BHP (1)	FUEL GAL/HR (L/HR)	GRAMS / HP / HR			% O_2	EXHAUST	
			NMHC+NOx	CO	PM (2)		°F (°C)	CFM (m^3/min)
1760	183	10.7 (41)	4.90	0.49	0.13	5.2	1140 (616)	924 (26)
2100	210	12.3 (47)	4.90	0.59	0.14	7.6	1050 (566)	1204 (34)
2350	210	12.9 (49)	4.90	0.56	0.13	8.9	990 (532)	1359 (38)

6068T Base Model Engine Manufactured by John Deere Co.

Notes:

1) *Engines are rated at standard conditions of 29.61in. (7521 mm) Hg barometer and 77°F (25° C) inlet air temperature. (SAE J1349)*

2) *PM is a measure of total particulate matter, including* PM_{10}.

3) *These emission values:*
   a) *are dependent on CUSTOMER PURCHASED special option C131329 on the engine*
   b) *are dependent on the use of fuel with the following properties;*
      i) *maximum 15 parts per million (PPM) sulfur content*
      ii) *maximum 10% by volume aromatic hydrocarbon content*
      iii) *minimum lubricity level of a maximum wear scar diameter of 520 microns based on ASTM D6079 or D6079-02*
   c) *have been determined using a calculation method found valid by CARB*
   d) *see disclaimer on reverse side*

CLARKE

FIRE PROTECTION PRODUCTS
3133 EAST KEMPER ROAD
CINCINNATI, OH 45241

Disclaimer

1. Stationary diesel-fueled compression ignition engines installed in California after January 1, 2005 are subject to California's Airborne Toxic Control Measure for Stationary Compression Ignition Engines (the "ATCM"), Cal. Code Regs. Title 17, Section 93115. The California Air Resources Board ("CARB") has reviewed the emissions estimation methodology provided by Clarke Fire Protection Products, Inc. ("Clarke") and has concluded that Clarke has used a valid methodology for estimating the emissions from engines supplied by Clarke and that the engines presumptively comply with the ATCM's emissions standards. Clarke's methodology used existing emissions test data associated with similar engines to estimate the emissions produced by the emergency fire pump engines supplied by Clarke.

2. The reverse side of this document shows the estimated emissions from this model engine supplied by Clarke using Clarke's methodology.

3. CARB's determination is not binding on the local air districts, which have primary jurisdiction for implementing and enforcing the ATCM. Actual test data in the field or other information established by the local air districts or CARB that show actual emissions from an engine supplied by Clarke in excess of the ATCM limitations could indicate a violation of the ATCM and subject the seller, owner and operator of the engine to penalties under California law. Although Clarke believes that the engines supplied by Clarke comply with the ATCM based on the available data and methodology accepted by CARB, for the foregoing reasons, Clarke cannot, and does not, guarantee that its engines will comply with the ATCM emission regulations.

4. CLARKE MAKES NO WARRANTIES OR GUARANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT THE ENGINES SUPPLIED BY CLARKE WILL COMPLY WITH THE ATCM. CLARKE ALSO EXPRESSLY DISCLAIMS THAT THE ENGINES SUPPLIED BY CLARKE WILL, IN FACT, COMPLY WITH THE ATCM. IN NO EVENT SHALL CLARKE BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THESE TERMS AND CONDITIONS OR THE ENGINES SUPPLIED BY CLARKE OR FOR INDEMNIFICATION OF BUYER ON ACCOUNT OF ANY CLAIM ASSERTED AGAINST BUYER, OR FOR ANY OTHER DAMAGE OF ANY KIND, WHETHER DIRECT OR INDIRECT, IF THE ENGINES SUPPLIED BY CLARKE DO NOT COMPLY WITH THE ATCM.

APPLICATION TO THE
NORTH COAST UNIFIED AIR QUALITY MANAGEMENT DISTRICT
FOR MODIFICATIONS TO THE AUTHORITY TO CONSTRUCT
FOR THE HUMBOLDT BAY GENERATING STATION
EUREKA, CALIFORNIA

Prepared for:

Pacific Gas & Electric Company

April 2009

Prepared by:

Sierra Research, Inc.
1801 J Street
Sacramento, CA 95811
(916) 444-6666

SUMMARY

Pacific Gas & Electric Company (PG&E) obtained an Authority to Construct/Prevention of Significant Deterioration Permit (ATC) and Final Determination of Compliance (FDOC) for the Humboldt Bay Generating Station (HBGS, formerly the Humboldt Bay Repowering Project, or HBRP) from the North Coast Unified Air Quality Management District (NCUAQMD or District) in April 2008 and received a license for the project from the California Energy Commission in September 2008. Since receiving the FDOC and license for HBGS, PG&E has worked with Wärtsilä, the manufacturer of the new power plant generating equipment, to develop construction, commissioning, and other operation- and compliance-related schedules and procedures for the facility. As a result of these more detailed development procedures, PG&E has determined that changes to some of the permit conditions are needed to allow the facility to be commissioned and operated effectively and efficiently. With this application, PG&E is proposing to make the following types of changes to the conditions:

- Clarify what type of permit PG&E holds for HBGS, and include provisions for permit extension/renewal;
- Revise operating and emissions limitations applicable during the commissioning period;
- Revise conditions applicable to project operation; and
- Correct typographic errors and inconsistencies.

These changes are proposed to enhance PG&E's ability to comply with the permit conditions and to improve the consistency and enforceability of the permit. The proposed changes will make the permit conditions more consistent with the ambient air quality analyses that were performed during the original permit review. None of the requested amendments involve changes to maximum permitted emissions limits, revisions to ambient air quality modeling analyses, or new operating scenarios.

This application support document discusses the proposed modifications, demonstrates the project's continued compliance with all applicable rules and regulations, and provides proposed revisions to the permit conditions. No emissions increases are being proposed in this application.

APPLICATION TO THE
NORTH COAST UNIFIED AIR QUALITY MANAGEMENT DISTRICT
FOR MODIFICATIONS TO THE AUTHORITY TO CONSTRUCT
FOR HUMBOLDT BAY GENERATING STATION
EUREKA, CALIFORNIA

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PART I. PROJECT DESCRIPTION

A. Applicant's Name and Business Description

Name: Pacific Gas & Electric Company

Address: 1000 King Salmon Avenue
Eureka, CA 95501

Contact: Dena Parish, Environmental Compliance Manager
(707) 444-6858

Mailing Address for Permits:

Same as above, with copy to:

Sierra Research
1801 J Street
Sacramento, CA 95811

General Business Description: Electric generation

Responsible Official:

Randal S. Livingston, Vice President, Power Generation
Pacific Gas & Electric Company

Air Quality Consultants:

Sierra Research
1801 J Street
Sacramento, CA 95811
Contact: Nancy Matthews
(916) 444-6666

Type of Use Entitlement: PG&E owns and operates the project.

Estimated Construction Date: Construction of the permitted units is underway, in accordance with the existing Authority to Construct.

B. Type of Application

This is an application for modification to an existing Authority to Construct/PSD Permit and Final Determination of Compliance.

C. Description of the Proposed Project

The Humboldt Bay Generating Station (HBGS, formerly Humboldt Bay Repowering Project, or HBRP) is permitted to consist of the following equipment:

- Ten Wärtsilä 18V50DF 16.3 MW lean-burn reciprocating engines, equipped with selective catalytic reduction (SCR) systems, oxidation catalysts, and associated support equipment including continuous emissions monitors;
- One Diesel-fired emergency generator; and
- One Diesel-fired fire pump engine.

PG&E proposes to make several changes to the HBGS permit, as follows:

- Clarify what type of permit PG&E holds for HBGS, and include provisions for permit extension/renewal;
- Clarify definitions of "operational minute" and "operational mode transfer";
- Revise procedure for monitoring ammonia slip to make it consistent with the SCR and ammonia injection system design;
- Revise operating and emissions limitations applicable to the commissioning period to make them consistent with modeled operating scenarios in original permit application;
- Clarify that some operating limitations are not applicable during the commissioning period;
- Add provisions for alternative compliance plans to conditions related to daily $PM_{2.5}$ emissions limits;
- Revise conditions related to compliance with daily PM_{10} limit during Diesel Mode operation;
- Clarify procedure for submittal of revised screening health risk assessment;
- Clarify funding procedures for meteorological and ambient monitoring stations; and
- Correct typographic errors and inconsistencies.

These changes are proposed to enhance PG&E's ability to comply with the permit conditions and to improve the consistency and enforceability of the permit. None of the changes involve changes to maximum permitted emissions limits, ambient air quality modeling, or operating scenarios.

D. Description of the Proposed Revisions

This section of the application presents a detailed description of the nature of and the need for each proposed change. Proposed amendments to permit conditions are provided in Part III.

1. Clarify the Type of Permit and Provide Mechanism for Renewal/Extension

The cover page of the permit states that it is a Title V Operating Permit; however, the District staff has indicated that the permit is not a Title V Operating Permit.[1] In addition, based on the current construction schedule, the permit will expire before commissioning is completed, but the permit does not include a mechanism for renewing or extending the ATC/PSD preconstruction permit. Amendments to address these issues are described further below.

Table 1 below shows the overall permitting/licensing, construction and operation schedule for the project. Construction and operation dates shown are preliminary and subject to change as construction progresses; however, these dates represent PG&E's best estimates at this time.

Table 1
HBGS Preliminary Construction and Operation Milestones

Milestone	Expected Date
Receive Authority to Construct/FDOC from NCUAQMD	4/15/08 (actual)
Receive CEC approval and license	9/24/08 (actual)
Receive authorization to commence construction from CEC	10/10/08 (actual)
Commence construction, CEC Phase I (site clearing, access road construction)	10/13/08 (actual)
Commence construction, CEC Phase II (ATC construction)	2/23/09 (actual)
Begin engine hall foundation	3/4/09 (actual)
Wärtsilä engines arrive at Fields Landing	7/15/09
Receive SCR systems onsite	8/26/09
Place Wärtsilä first engine on foundation	8/26/09
Place last Wärtsilä engine on foundation	9/10/09
First start of Diesel fire pump	1/20/10
First Wärtsilä engine ready to start/Beginning of commissioning period	3/15/10
Begin emissions testing	5/24/10
Complete emissions testing/End of commissioning period	7/6/10

[1] District staff has determined, and PG&E agrees, that an amended Title V Permit to Operate must be issued for the Humboldt Bay Power Plant (HBPP) facility prior to startup of the HBGS units. To that end, PG&E submitted an application for a significant modification to the existing Title V Permit to Operate for HBPP on February 6, 2009.

The permit was issued on April 14, 2008; however, the CEC license for the project was not received until late September 2008. Preconstruction site clearing activities, which could not be undertaken prior to receiving the CEC license, commenced in mid-October 2008, immediately following receipt of the CEC's approval to commence construction. Construction of the units as authorized under the ATC, which could not begin until the site clearing activities were completed, began in late February 2009. The construction and commissioning phase of project development are expected to be completed in July 2010; however, without amendment or extension, the permit will expire on October 12, 2009. While the construction and commissioning activities authorized under the ATC are expected to be completed within 18 months from the time these activities began, the delay in commencement of Phase II construction from April 2008, when the permit was issued, until February 2009, when Phase I construction was completed, means that the overall period between issuance of the ATC and completion of commissioning will exceed the 18-month/545-day period for which the permit is valid.

Condition 2: The condition says, "This permit shall be valid for a period not to exceed 545 days from the date of issuance. Upon completion of the construction and commissioning phase for the internal reciprocating engines, the Permittee shall submit a Title V Permit to Operate application to the APCO."

As discussed above, the permit was issued on April 14, 2008, while the construction and commissioning phase of the project is not expected to be completed until July 2010. Without a provision for renewal, the permit would expire in mid-October 2009, long before completion of construction and first fire of the first engine. The ATC/PSD permit will need to be renewed prior to expiration to allow PG&E to complete construction and commissioning. The proposed revisions to Condition 2 would allow the APCO to renew the permit prior to expiration.

Changes are also proposed to clarify that an amended Title V Permit to Operate for the existing facility must be issued that includes the new units before the new units can be operated.

Condition 69: The condition says, "This Permit…shall only become effective after a Final Determination of Compliance has been issued by the APCO…" However, this permit is the FDOC. The proposed revisions to Condition 69 clarify the status of the permit and its relationship to the license issued by the CEC.

Condition 70: Like Condition 2, this condition indicates that the authorization to install and construct new equipment under this permit expires not more than 545 days after the date of issue. Consistent with the proposed revisions to Condition 2, the proposed revisions to Condition 70 would also allow the APCO to renew the ATC/PSD permit before it expires.

Various Conditions: Numerous conditions in the ATC/PSD permit refer to "this Title V permit."[2] Since the ATC/PSD permit is not a Title V permit, these references should be revised or deleted.

2. Clarify the Definitions for "Operational Minute" and "Operational Mode Transfer"

"Operational Minute" and "Operational Mode Transfer" are defined as follows:

> Operational Minute: a 60 second period when the engines are being fired. Each Operational Minute shall be designated as either "Natural Gas Mode" or "Diesel Mode."
>
> Operational Mode Transfer: the switching of fuel mode while operating at engine loads greater than 50%. If the units are operated in Diesel Mode for one Operating Minute or more during any Clock Hour, the entire hour shall be considered as operation in Diesel Mode for purposes of determining compliance with emission limits. The sum of Operational Minutes shall be used for determining compliance with hours of operational limitations.

PG&E is proposing amendments to these definitions to clarify their applicability and consistency with other, related conditions. For example, Conditions 100 and 102 include hourly emissions limits that apply separately to Natural Gas Mode and Diesel Mode operation. The definition of "Operational Mode Transfer" was written to provide guidance on how to determine compliance with the hourly emissions limits in Conditions 100 and 102 during a clock hour when the engine changes from one mode of operation to the other. It is our understanding that this condition was intended to provide that during a clock hour when an engine changes from one operating mode to the other, the less stringent hourly Diesel Mode emissions limits of Condition 102 will apply. The proposed amendments would clarify that the conditions do not relate to how time in Diesel mode operation is counted toward the limitations on hours of Diesel Mode operation in Conditions 135 and 138. For determining compliance with Conditions 135 and 138, engine hours are determined by summing the actual number of minutes each engine operates on 100% Diesel fuel and dividing the sum by 60. We believe these definitions would be clearer if revised as shown in Part III of this Application.

3. Revise the Procedure for Monitoring Ammonia Slip

Condition 87 specifies the procedure that must be used for monitoring ammonia slip. As Wärtsilä has done more detailed engineering design work on the emission control systems, it has become evident that the existing monitoring requirement is not technically compatible with the catalyst and sensor configuration that will be used.

[2] See, for example, Conditions 11, 12, 13, 14, 15, 17, 18, 19, 34 and 35.

Condition 87 requires the applicant to demonstrate compliance with the ammonia slip limit as follows:

> The Permittee shall demonstrate compliance with the ammonia slip limit by using the following calculation procedure: The ammonia emission concentration shall be verified by the continuous recording of the ratio of the ammonia injection rate to the NOx inlet rate into the SCR control system (molar ratio).

This compliance procedure requires upstream NOx monitoring. However, PG&E plans to use a feed back, rather than a feed-forward, ammonia control system, and this type of system does not include the upstream NOx monitor that would be needed to measure the inlet NOx concentration.

PG&E proposes to control ammonia injection rates and ammonia slip levels by developing correlations between the ammonia injection rates and the NOx concentrations monitored at the stack. The correlations would be verified for each engine during any source test. The new approach is similar to the approach used by other districts, including the BAAQMD, for ammonia slip monitoring conditions in permits where SCR systems are used. The proposed changes to Condition 87 would allow this monitoring procedure to be used to demonstrate compliance with the ammonia slip limit.

4. <u>Revise Limitations on Emissions and Operations During the Commissioning Period</u>

New electrical generation facilities must go through initial commissioning phases before becoming commercially available to generate electricity. During this period, initial firing causes greater emissions than those that occur during normal operations because of the need to tune the engines, conduct numerous startups and shutdowns, operate under low loads, and conduct testing before emission control systems are functioning or fine-tuned for optimum performance.

Conditions 118, 119, and 120 limit the operations of and emissions from the Wärtsilä engines during the commissioning period. PG&E is requesting some revisions to these limitations to make the limits consistent with the required commissioning procedures for the engines and with other emissions limitations in the permit. These revisions reflect more realistic assumptions regarding the time required for commissioning activities, but do not result in increases in maximum hourly, daily or annual emissions upon which ambient air quality analyses were based. Proposed revisions to these conditions are shown in Part III of this Application.

The commissioning period generally includes three phases of operations: uncontrolled operation, partially controlled operation, and compliance testing/CEMS certification. Although a detailed site-specific commissioning plan has not yet been prepared for the Wärtsilä engines,[3] additional information has been provided by Wärtsilä regarding general commissioning procedures. This general information, which is consistent with the information that was used as the basis for the commissioning emissions estimates provided in the original permit application, indicates that the following procedure will be followed for each engine.

- Start and run each engine, no emissions controls;
- Install SCR catalyst and oxidation catalyst on each engine;
- Tune each engine and adjust emission control system performance across engine loads;
- Tune and adjust each group of five engines;
- Perform final tuning and adjustment on all ten engines; and
- Perform compliance testing and CEMS certification.

Only one engine will operate at a time without emission control systems installed. Following the installation of the emission control systems, the systems must be tuned and adjusted across all operating loads and multiple engines may be operated simultaneously. During this period, the emission control systems will not be fully effective in achieving controlled emission levels until the tuning and adjustments are complete. Engines will be tuned individually, and then in two groups of five. Finally, operational testing will be performed for all ten engines to check operation of the engine controls and dispatch systems. Once all operational testing and adjustments are completed, the emission control systems will be fully operational and compliance testing and CEMS certification will occur.

Commissioning Conditions: Condition 118

Condition 118 of the ATC reads as follows:

> When one or more of the reciprocating engines S-1 through S-10 are undergoing Commissioning Activities without an SCR system and oxidation catalyst installed, the Permittee shall not:
>
> a. Fire more than five uncontrolled reciprocating engines simultaneously.

[3] Condition #123 requires submittal of a detailed commissioning plan to the District at least four weeks prior to the first operation of the first Wärtsilä reciprocating engine. Since first fire is over a year away, preparation of a detailed commissioning plan has not yet begun.

b. Operate the uncontrolled engines such that their combined hours of operation exceed 90 engine-hours during any Calendar Day.

c. Operate the uncontrolled engines such that their combined hours of operation while in the "alignment phase" exceed 13 engine-hours during any Calendar Day.

As discussed above, only one engine at a time will be in operation without its SCR system and oxidation catalyst installed. Therefore, conditions 118(a) and 118(b) will be easily satisfied. Further, the "alignment phase" will take place after the emissions controls are installed, so uncontrolled engines will not be operated in the "alignment phase" at all.

In the original application, the "alignment phase" was analyzed because that commissioning activity was expected to have the highest potential NOx and CO impacts of all commissioning activities. Emission rates during this phase were shown in Table 8.1B-8 of the AFC under "Crankshaft and generator coupling adjustments." In Table 8.1B-9, which shows the emission rates and stack parameters used in modeling commissioning activities, this phase of commissioning activities was referred to as "alignment phase." The modeling analysis assumed that 5 engines operated in the "alignment phase" for 4 hours per day, for a total of 20 engine-hours. Therefore, the 13 engine-hour per day limitation in Condition 188(c) does not correspond to the modeling scenario for the "alignment phase." Further, the modeled impacts during commissioning that are shown in Table 8.1B-8 indicate that the "alignment phase" was the operating phase that was expected to produce the highest 1-hour average NO_2 and CO impacts. Those impacts are limited by the hourly emissions limits during commissioning in Condition 119 (Table 5.9), and compliance with those limits will be assured by the requirement to operate the CEMS during the commissioning period. Because these are one-hour average impacts, compliance with these limits is determined on an hourly basis and there is no need to limit the number of daily engine-hours for this operating phase.

The operating limitation in Condition 119(c) is not consistent with the emissions and modeling analyses in the AFC. Further, compliance with the emissions limits that this condition was intended to enforce will be continuously monitored using the CEMS. Therefore, we are proposing to delete Condition 118(c).

Commissioning Conditions: Condition 119

Although the SCR and oxidation catalyst systems will be installed and operational within a few days of first fire of each engine, each engine must be tuned and adjusted across its operating load to adjust ignition and valve timing, ammonia injection timing and quantities, and other parameters that affect emissions and performance. Therefore, compliance with the permitted emission limits in Conditions 99 through 104 cannot be consistently achieved until after final tuning and adjustment of all ten engines, approximately 10 to 12 weeks after first fire of the first engine.

Condition 119 provides hourly and daily emission limitations for each pollutant during the commissioning period. However, the condition qualifies these limits as being applicable "while any of the engines are being operated without an SCR system and oxidation catalyst." Because the engines will not consistently operate in compliance with permitted emission limits even after the emissions control systems are installed, the commissioning period emission limits should apply throughout the commissioning period, not just to operation without the SCR and oxidation catalyst systems installed.

As discussed above, in the application for the ATC, the applicant estimated emissions during various phases of commissioning activities and modeled ambient impacts based on those emission rates. The resulting emission limits are shown in Table 5.9 of the ATC. However, compliance with the 1-hour average NO_2 standard has been demonstrated at an hourly NOx emission rate of 392 lb/hr (during startup; see Condition 92), a higher hourly emission rate than the 323.3 lb/hr limit in Condition 119. To minimize the number of different hourly limits and to streamline and simplify compliance, PG&E requests that the hourly NOx emission limit of 323.3 lb/hr in Table 5.9 be changed to 392 lb/hr to be consistent with the limit in Condition 92. This change is necessary to avoid any confusion when an engine startup occurs prior to the end of the commissioning period, in which event NOx emissions may be higher than 323.3 lbs/hr, but less than 392 lbs/hr.

Commissioning Conditions: Condition 120

Condition 120 requires the Wärtsilä engines to comply with the final, controlled emissions limits of Conditions 99 through 105 after 4 hours of steady-state operation of the SCR system and oxidation catalyst have occurred. However, as discussed above, there is an extensive series of testing and adjustment activities that must take place for each engine and for groups of engines following installation of the emissions control systems. An engine may operate in compliance with its final, controlled emissions limitations at one load on one fuel for 4 hours, but may still require testing and adjustment at other loads before it can achieve compliance under all operating conditions. We believe that the overall annual emissions limits of Condition 105, Table 5.6 will provide adequate incentive for PG&E to minimize the amount of time each engine operates at elevated emission rates. Because all emissions during the commissioning period accrue toward the annual limits in Table 5.6, each hour of engine operation at elevated emission rates during commissioning effectively reduces the allowable number of annual hours of operation. PG&E and Wärtsilä will determine when the engines are ready for commercial operation based on the results of the functional checks and operational tests, and on reviews of the NOx and CO emissions data monitored by the CEMS. We understand that the District believes there needs to be some objective measure to ensure that the engines operate in compliance with their permit limitations as quickly as possible; at this time, however, without a detailed commissioning plan and schedule, it is not possible to establish an objective criterion or set of criteria that would automatically trigger the end of the commissioning period, and we have not identified any

similar definitions for any other power plant recently permitted in California. Our proposed amendments to Condition 120 would eliminate the 4-hour criterion and instead use the beginning of compliance testing as the standard for determining when the engines must begin complying with their final, controlled emissions limits.

Compliance Testing at the End of the Commissioning Period: Condition 163

Condition 163 requires compliance testing at the end of the commissioning period to demonstrate that the engines can operate in compliance with permitted emissions limits. PG&E proposes to change the wording of the condition slightly to clarify that the purpose of the testing is to demonstrate compliance with emission limits applicable to controlled operation, and that these initial compliance tests must occur before the end of the commissioning period.

5. Add Exceptions for the Commissioning Period to Various Operational Conditions

The ATC conditions include limitations on opacity, startup and shutdown hours, part-load operation and other activities that apply during normal equipment operation; however, these limitations cannot be complied with consistently during commissioning activities. For example, many of the commissioning activities involve low-load operation and/or multiple daily startups and shutdowns that are required as part of the engine functional testing and adjustment processes. Therefore, PG&E is requesting amendments to these conditions to indicate that the Wärtsilä engines are exempt from these limits during commissioning activities or, in the case of Condition 135, that the annual engine-hours limits exclude commissioning activities. Specific changes to each permit condition are shown in Part III of this Application.

- Condition 91: Limits opacity of exhaust plume to Ringelmann 1 (20% opacity), except during startup or shutdown, when it is limited to Ringelmann 2 (40% opacity), for a total of more than 3 minutes in any hour.
- Condition 92: Limits startups in Diesel Mode to two per hour.
- Condition 134: Limits daily startup and shutdown hours to 30 engine-hours per day.
- Condition 135: Limits annual startup and shutdown hours to 3,650 engine-hours per year, of which only 500 engine-hours per year may be on Diesel fuel.
- Condition 136: Prohibits operation of any of the Wärtsilä engines below 50% load except during startup and shutdown periods.
- Condition 137: Limits operation of all engines at loads below 75% to 80 engine-hours per day.
- Condition 140: Prohibits operation of the Wärtsilä engines if the oxidation catalyst inlet temperature is outside of the acceptable operating range (450 to 1350 deg F).
- Condition 141: Prohibits operation of the Wärtsilä engines if the oxidation catalysts are not achieving 70% control of CO emissions.

6. Add Provision for Alternative Compliance Plan for Compliance with $PM_{2.5}$ Limits

Condition 96 (Table 4.1) and Condition 98 (Table 4.3) include daily limits on MMBtu and gallons of fuel, respectively, that may be used by all 10 engines during Diesel firing. These daily limits are equivalent to 85% of the maximum daily potential fuel use, "to ensure compliance with the PM2.5 standard" (per table notes). These fuel use limits were calculated from the daily PM_{10} emission rates in Conditions 101 and 104 and the hourly PM_{10} lb/MMBtu emission rates in Conditions 100 and 103.

In actuality, the hourly PM_{10} emission rates from the engines are expected to be lower than the rates shown in Conditions 100 and 103, meaning that the engines would be able to use more fuel than allowed under Conditions 96 and 98 and still be in compliance with the daily emission limits in Conditions 101 and 104. We propose that Conditions 96 and 98 be amended to include provisions to allow the fuel use limits to be changed administratively by the APCO if PG&E can demonstrate that the higher fuel use limits, combined with lower emission limits, will ensure continued compliance with the daily PM_{10} emission limits in Conditions 101 and 104. Specific language to implement these provisions is proposed in Part III.

7. Revise Conditions Related to Compliance with Daily PM_{10} Limit During Diesel Mode Operation

Condition 104 contains daily emissions limits applicable to the engines during Diesel mode operation, including a PM_{10} limit of 1542 lb/day. The condition includes a limit on the number of engine-hours per day of Diesel mode operation, as well as provisions for developing an alternative compliance demonstration method that would allow the daily engine-hour limit to be changed based on the results of the initial performance testing. However, the condition requires the applicant to use the highest PM emission rates identified during the performance testing as the new permitted emission limits for all engines, and requires compliance with the daily facility-wide PM emission limit to be calculated using a single hourly PM emission rate.

PG&E is requesting changes to this condition that would preserve the ability to develop an alternative compliance demonstration method based on the initial performance testing, while (1) eliminating the daily engine-hour limit and replacing it with a procedure for calculating daily PM emissions based on Operating Minutes, and (2) eliminating the requirement to use the highest PM emission rates as new limits and giving the APCO flexibility to consider other approaches to demonstrating compliance with the daily emissions limit.

Eliminate Requirement to Use Highest PM Emission Rate as New Permit Limit

Although the 10 engines to be installed and operated at HBGS will be identical, we expect that the emissions test results will exhibit normal statistical variation and all results will not be identical. Standard practice in developing emissions limits based on test results is to include a compliance margin, and the size of the compliance margin is based on the variability in the test results. We propose to eliminate the requirement to use the highest PM emission rate identified during testing for all engines, because this approach does not allow for any compliance margin in setting the new PM emission limit. Eliminating this requirement will allow PG&E to propose PM emission limits for the engines that are best supported by the test data.

An example based on actual test data from 4 identical combustion units will help to illustrate the procedure PG&E is likely to use to determine what emissions limits to propose, and to explain why the current procedure is problematic. The results of triplicate tests on the 4 units are shown below, along with averages and standard deviations for the individual units and for all 4 units. The emission rates are shown in units of pounds per hour.

Table 2
Example Source Performance Test Results

	Test Results				Standard Deviation	95% Confidence Level	99% Confidence Level
	Run 1	Run 2	Run 3	Average			
Unit 1	3.47	2.46	1.45	2.46	1.01	3.60	3.96
Unit 2	1.92	3.22	2.75	2.63	0.66	3.37	3.61
Unit 3	2.96	1.80	2.74	2.50	0.62	3.20	3.42
Unit 4	2.91	1.46	2.88	2.42	0.83	3.35	3.65
Average, all units				2.50	0.68	3.38	3.66

If the highest average test result were to become the limit for all units, the limit would be 2.63 lb/hr; however, this limit would provide virtually no compliance margin for the engines, since 8 of the 12 individual test results are higher than the highest average. If the highest individual test result were to become the limit for all units, the limit would be 3.47 lb/hr. This is outside the 95% confidence interval for Unit 1, however, meaning that with a limit of 3.47 lb/hr, the owner could not be sure that the test results for that engine would demonstrate compliance 95% of the time. The final emission limit must provide enough of a compliance margin that PG&E can be confident that every engine will comply with the limit at all times.

Depending upon the variability in the test results, PG&E may propose two PM emission limits for the engines while operating in Diesel mode: one limit that would apply to each individual

engine, and one limit that would apply to the average emissions from all the engines. For the example test results shown above, these proposed limits would probably be 4.0 lb/hr (rounded from 3.96 lb/hr) for any individual engine and 3.6 lb/hr for the average of all tested engines. The proposed amendments would allow PG&E to propose, and the APCO to consider, this approach to setting hourly limits if the test data support it.

Revise Procedure for Calculating Compliance with the Daily Emission Limit

The ATC requires PG&E to calculate daily facility-wide PM emissions as a function of the engine hourly emission rate times the number of hours of operation per day. However, it is unlikely that Diesel Mode operation will occur in discrete hours, and in fact the definitions section of the permit includes a definition for "Operating Minutes" so that Diesel Mode operation can be more accurately monitored and recorded. Therefore, we believe it would be more appropriate to calculate daily facility-wide PM emissions on the basis of Operating Minutes, rather than operating hours. PM emission rates in pounds per minute are calculated by dividing the permitted pound per hour emission rates by 60, as follows:

Diesel Mode Operation: 10.8 lb/hr ÷60 min/hr = 0.180 lb/min

Natural Gas Mode Operation: 3.6 lb/hr ÷60 min/hr = 0.060 lb/min

The proposed revisions to this condition would replace the requirement to calculate daily PM emissions using hourly emission rates with the requirement to calculate daily PM emissions using these equivalent emission rates based on minutes until alternative limits, based on performance test data, are approved by the APCO.

The ATC requires PG&E to test emissions from the Wärtsilä engines at three load points: 50%, 75%, and 100%. PG&E expects that the PM emissions from the engines will vary as a function of load, and that emission rates may be more appropriately expressed in terms of pounds per unit of heat input (lb/MMBtu) or per unit of fuel burned (lb/1000 gallons) than as constant pounds per hour across all loads. If the initial performance test data support the development of PM emission factors on this basis, we would like to be able to propose PM emission limits on other than a lb/hr basis. The proposed amendments to Condition 104 would provide this flexibility. However, as in the original condition, there would be no changes to the PM emission limits unless and until the proposed changes were approved by the APCO.

8. <u>Clarify Timing Requirements for Submitting Revised HRA Protocol and Health Risk Assessment</u>

Condition 155 requires submittal of an HRA protocol no later than 9 months after the end of the commissioning period; Condition 156 requires submittal of a revised health risk assessment "pursuant to an NCUAQMD APCO approved protocol" no later than 14 months after the end of the commissioning period. If the District does not approve the protocol or because of workload issues is not able to provide approval of the protocol in a timely manner, PG&E would not be

able to comply with Condition 156. We propose revising Condition 156 to require the submittal of the revised HRA "no later than 3 months following approval of the protocol." This proposed amendment would ensure that agency delays would not cause PG&E to violate a permit condition.

9. Clarify Timing for Requirements Related to Ambient and Meteorological Monitoring Stations

Conditions 176 and 177 require PG&E to provide full funding to the District for ambient and meteorological monitoring station equipment "[n]o later than 180 days after construction of the equipment authorized pursuant to this permit begins, and concurrent with the commencement of operation…" However, as discussed earlier in this application, commencement of operation will not occur within 180 days after commencement of construction, so PG&E cannot comply with the timing requirements as written. In addition, the conditions are unclear regarding whether PG&E must provide funding in advance or will reimburse District for expenditures.

After further discussion between PG&E and the District, our understanding is that the District will not require funding for the monitoring stations upfront, but will invoice PG&E for equipment, installation, and operating costs as the stations are installed and operated. The proposed amendments would implement this approach to reimbursement for the monitoring stations.

10. Miscellaneous Cleanup Amendments

In reviewing the permit and compiling this request for amendments, we have identified several typographical errors, minor inconsistencies, and erroneous references in the permit. We would like to take this opportunity to correct these discrepancies for clarity and consistency. It is important to make these conditions internally consistent to avoid potential noncompliance. The proposed corrections are listed below, and revisions are included in Part III of this Application.

- Correct reference in Condition 74. This condition refers to fuel specifications "…in Tables 1.3 and 1.4…" However, Table 1.3 is part of Condition 73 and is not relevant to this condition.
- Clarify reference in Condition 81. This condition requires the existing permit units at the Humboldt Bay Power Plant to be shut down following the successful commissioning of the new generating units, to provide offsets for the emissions increases resulting from the new units. The condition says, "The Permittee shall permanently shut down the existing facility and all emission units permitted under Title V Permit To Operate NCU 059-12…" However, the Title V Permit to Operate for the existing facility is NCU-020, not NCU 059-12. NCU 059-12 is the Permit to Operate that was issued under Regulation I. Further, the Title V Permit to Operate for the facility as a whole will be amended to include the new generating units before those new units commence operation. Therefore, PG&E cannot "permanently shut down…all emission units permitted under [the] Title V Permit to Operate" because that would require shutting down the new as well as the existing units.
- Correct the annual SO_2 emissions limit in Condition 105 (Table 5.6). These annual emission limits were calculated by the District staff based on 1,000 hours per year of Diesel firing, while annual SO_2 emissions in the permit application were based on 500 hours per year of Diesel mode operation. Because SOx emissions are higher during natural gas firing than during Diesel firing, the annual SOx limit in the permit is slightly lower than it was in the application (now 4.3 tpy, compared with our original proposal, 4.4 tpy). We request that the District change the annual SO_2 emissions limit back to 4.4 tpy.
- Correct typographic error in Condition 122. The reference to Condition #107 should be to Condition #105.
- Correct typographic error in Condition 138(b). The condition should read, "For NOT more than 50 hours per year for maintenance and testing per engine…"
- Make the averaging period for the hourly recordkeeping requirement for NOx ppmc and lb/hr in Condition 151, Table 7.0 consistent with the averaging period for the corresponding emissions limit. The recordkeeping requirement is on a 3-hour rolling average basis, but NOx limits are 1-hour average limits.
- Correct typographic errors in Condition 164.
    - The reference to Condition #123 should be to #166.
    - Eliminate references to DPM and Liquid Fuel sulfur content test methods, as condition requires testing of engines in Natural Gas Mode.
- Eliminate requirement to maintain record of therms of gas fuel combusted from Condition 151, Table 7.0, as there is no permit limit related to volume of natural gas combusted.

PART II. DEMONSTRATION OF REGULATORY COMPLIANCE

This section summarizes the applicable federal, state, and District rules and regulations and describes how the proposed modifications will comply with these requirements.

A. California Health & Safety Code §42301.6

The District's Final Determination of Compliance (FDOC) determined that the public noticing requirements of H&SC §42301.6 do not apply to the HBGS project, based on the distances between the Wärtsilä engine exhaust stacks and the nearest elementary school. The proposed amendments do not change the locations of the exhaust stacks and therefore the District's determination is not affected.

B. Offsets Requirements (NCUAQMD Rule 110, Sections 1.2 and 5.2)

These rules require the evaluation of emissions from existing and new sources to determine whether the project requires offsets and PSD review. The proposed amendments do not change any of the permitted emission limits or the potential to emit for the new equipment. Therefore, the conclusions in the FDOC regarding PSD and offset requirements are not affected.

C. Best Available Control Technology (BACT)

The original application provided BACT analyses for NOx, ROC, CO and PM_{10}. No changes to emissions or operating conditions are being proposed that would affect the District's evaluation of BACT for the generating equipment.

D. Ambient Air Quality Standards

The applicant demonstrated through ambient air quality modeling that the proposed project would not interfere with the attainment or maintenance of state and federal ambient air quality standards, and the District's FDOC concurred with that demonstration. The proposed amendments will not change any emission limits or operating conditions that formed the basis for the modeling analyses, and so the conclusions of the FDOC are not affected.

E. Prevention of Significant Deterioration

The District evaluated the compliance of the proposed project with the requirements of the PSD program and concluded that the project would comply with PSD requirements. No changes are being proposed that would affect annual facility emissions or modeled ambient impacts; therefore the proposed amendments will not affect the District's determination of compliance with PSD requirements.

F. District Prohibitory Rules

1. NCUAQMD Rule 104.2, Visible Emissions

The proposed amendments will not change the requirement that the engines comply with the 40% opacity limitation during all engine operations.

2. NCUAQMD Rule 104.3.4.1, PM Emissions from General Combustion Sources

The proposed amendments will not change the maximum permitted PM emissions from the engines, and will not change the District's conclusion that the project will comply with this rule.

3. NCUAQMD Rule 104.5, Sulfur Oxide Emissions

The proposed amendments will not change the maximum permitted SOx emissions from the engines, and will not change the District's conclusion that the project will comply with this rule.

4. NCUAQMD Rule 104 §11, New Source Performance Standards

40 CFR 60 Subpart IIII, Stationary CI Internal Combustion Engines

The proposed amendments would not affect the compliance of the engines with the requirements of this NSPS.

5. NCUAQMD Rule 104 §12, National Emissions Standards for Hazardous Air Pollutants

40 CFR 63 Subpart ZZZZ, Stationary RICE

The proposed amendments would not affect the compliance of the engines with the requirements of this NESHAP.

6. NCUAQMD Rule 300, Airborne Toxic Control Measures

Air Toxics Control Measure for Stationary Compression-Ignition Engines (17 CCR §93115)

The proposed amendments would not affect the compliance of the engines with the requirements of the applicable ATCM.

PART III: PROPOSED AMENDMENTS TO PERMIT CONDITIONS

DEFINITIONS

As used in this Permit, the terms shall have the meaning set out herein.

a. Acfm: actual cubic feet per minute

b. Alternative Liquid Fuel: An alternative diesel fuel or CARB Diesel Fuel with fuel additives that meets the requirements of the California Air Resources Board Verification Procedure, as codified in Title 13, CCR, sections 2700-2710

c. APCO: the NCUAQMD Air Pollution Control Officer

d. Calendar Day: Any continuous 24-hour period beginning at 12:00 AM or 0000 hours

e. California Air Resources Board (CARB) Diesel Fuel: Any diesel fuel that is commonly or commercially known, sold, or represented by the supplier as diesel fuel No. 1-D or No. 2-D, pursuant to the specifications in ASTM D975-81, "Standard Specification for Diesel Fuel Oils," as modified in May 1982, which is incorporated herein by reference, and that meets the specifications defined in Title 13 CCR, sections 2281, 2282 and 2284

f. CAM Plan: Compliance Assurance Monitoring Plan, as defined in 40 CFR 64

g. CARB: the California Air Resources Board

h. CEC CPM: California Energy Commission Compliance Program Manager

i. CEMS: Continuous Emissions Monitoring System

j. CFR: the Code of Federal Regulations

k. Commencement of Onsite Construction: the commencement of a program of significant and continuous construction at the Facility or modification of the emissions unit(s) subject to this Permit

l. Commissioning Activities: All testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the owner's engineer to ensure safe and reliable steady state operation of the reciprocating engines and associated electrical delivery systems

m. Commissioning Period: For each reciprocating engine considered separately, the time period that commences when a Reciprocating Engine is first fired. The period shall terminate when each individual reciprocating engine has successfully completed both performance and compliance testing. The commissioning period shall not exceed 180 days under any circumstances.

n. COMS: Continuous Opacity Monitor

o. Corrected Concentration: The concentration of any pollutant (generally NOx, CO, ROC, or NH3) corrected to a standard stack gas oxygen concentration. For emission points S-1 through S-12, the standard stack gas oxygen concentration is 15% O2 by volume on a dry basis

p. Diesel Mode: the firing of reciprocating engines S-1 through S-10 on CARB diesel, when the heat input from liquid fuel exceeds 0.8 MMBtu/hr, and when the engine operates under the theoretical Diesel cycle.

q. Diesel Particulate Matter (DPM): filterable particulate matter (PM) measured using EPA method 5

r. Diesel Particulate Matter ATCM Emergency Use: shall only pertain to engines S-11 and S-12 and shall mean providing electrical power or mechanical work during any of the following events and subject to the following conditions:

i. The failure of loss of all or part of normal electrical power service or normal gas supply to the facility which is demonstrated by the Permittee to the NCUAQMD APCO's satisfaction to have been beyond the reasonable control of the Permittee.

ii. The failure of the facility's internal power distribution system which is demonstrated by the owner or operator to the NCUAQMD APCO's satisfaction to have been beyond the reasonable control of the Permittee.

iii. The pumping of water for fire suppression or protection.

s. NCUAQMD: North Coast Unified Air Quality Management ~~NCUAQMD (~~District~~)~~

t. Dscfm: dry standard cubic feet per minute

u. Emergency: operation arising from a sudden and reasonably unforeseeable event beyond the control of the permittee (e.g., an act of God) which causes the excess of a limitation under this permit and requires immediate and corrective action. An "emergency" does not include noncompliance as a result of improperly designed or installed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

v. EPA: the United States Environmental Protection Agency

w. Facility: the site of the Humboldt Bay ~~Repowering Project~~Generating Station at HBPP

x. Firing Hours: Period of time during which fuel is flowing to a unit, measured in minutes divided by 60

y. HBRP: Humboldt Bay ~~Repowering Project~~Generating Station

z. HBPP: Existing Humboldt Bay Power Plant and applicable NCUAQMD permits.

aa. Heat Input: the energy (heat) input of the fuel combusted at the higher heating value (HHV) of the fuel

bb. HHV: Higher Heating Value

cc. Hr: one hour – a standard measurement of time

dd. H2S: Hydrogen Sulfide

ee. Lb: pound – an English unit of measurement of weight and mass being equivalent to 7000 grains, 16 ounces, and 0.453 kilograms

ff. Maintenance and Testing: Operation of the reciprocating engines to (a) evaluate the ability of an engine or its supported equipment to perform during an emergency; or (b) facilitate the training of personnel on emergency activities; or (c) perform emissions testing, maintenance and operational testing, or safety-related testing as required by any government agency or by the manufacturer as a requirement of any law, regulation, rule, ordinance, standard, or contract

gg. MMBtu: million British thermal units

hh. Natural Gas: any mixture of gaseous hydrocarbons containing at least 80 percent methane by volume as determined by Standard Method ASTM D1945-64

ii. Natural Gas Curtailment: A reduction in the natural gas supply available to the Facility as specified below.

i. Curtailment directed by a regulatory agency, or automatically implemented by PG&E in accordance with procedures approved by a regulatory agency; and

ii. Curtailment cannot be related to fuel pricing (i.e., units will not be switched to Diesel fuel operation simply because gas prices are higher than Diesel prices).

jj. Natural Gas Mode: the firing of natural gas and CARB diesel or alternative liquid fuel in the engines where the diesel fuel or alternative liquid fuel is used solely for pilot injection, and the engine operates under the theoretical Otto cycle

~~kk.NCUAQMD: North Coast Unified Air Quality Management NCUAQMD~~

~~ll.~~kk. NFPA: National Fire Protection Association

~~mm.~~ll. Normal Operations: the operation of the Wärtsilä reciprocating engines identified in this permit, when firing in natural gas mode with diesel pilot injection, when not in startup, shutdown or malfunction mode

~~nn.~~mm. Notice: unless otherwise stated, shall be in writing, sent postage prepaid, to the APCO and include all information required. Notice shall be sent to the APCO at the following address: 2300 Myrtle Ave., Eureka, CA 95501

~~oo.~~nn. Operational Minute: a 60 second period when the engines are being fired. Each Operational Minute shall be designated as either “Natural Gas Mode” or “Diesel Mode”. The sum of the Operational Minutes in each mode shall be used for determining compliance with hours of operation limitations.

~~pp.~~oo. Operational Mode Transfer: the switching of fuel mode while operating at engine loads greater than 50%. ~~If the units are operated in Diesel Mode for one Operating Minute or more during any Clock Hour, the entire hour shall be considered as operation in Diesel Mode for purposes of determining compliance with emission limits. The sum of the Operational Minutes shall be used for determining compliance with hours of operation limitations~~

~~qq.~~pp. O2: Oxygen

~~rr.~~qq. Permittee: the owner or operator identified on the Permit title page (PG&E)

~~ss.~~rr. PM: Particulate Matter

~~tt.~~ss. Ppmvd: parts per million, volumetric dry

~~uu.~~tt. Responsible Official: person(s) who have direct supervisorial authority or control to affect operations of the equipment authorized pursuant to this Permit, and who have the ability to certify that a source complies with all applicable federal requirements and federally enforceable permit conditions as generally defined in NCUAQMD Rule 101 §1.245

~~vv.~~uu. Rolling 3-hour Period: Any consecutive three-hour period, not including start-up or shut-down periods

~~ww.~~vv. ROC: reactive organic ~~carbon~~ compound consistent with NCUAQMD Rule 101 §1.2934 and HSC

~~xx.~~ww. Quarter: calendar quarter, consisting of the following Q1 -January through March; Q2 -April through June; Q3 -July through September; Q4 -October through December

~~yy.~~xx. Shutdown Period: The 30 minute period immediately prior to the termination of fuel flow to the reciprocating engine.

~~zz.~~yy. SO2: Sulfur Dioxide

~~aaa.~~zz. Startup Period: The lesser of the first 60 minutes of continuous fuel flow to the reciprocating engine after fuel flow is initiated or the period of time from reciprocating engine fuel flow initiation until the reciprocating engine achieves two

consecutive valid 15-minute average CEM data points in compliance with the emission concentration limits of conditions #100 and #102.

~~bbb.~~aaa. VEE: Visible Emissions Evaluation

~~ccc.~~bbb. Year: Any consecutive twelve-month period of time

FEDERALLY ENFORCEABLE GENERAL REQUIREMENTS

TITLE V PERMIT MODIFICATIONS AND RENEWAL

1. This Permit shall serve as the Prevention of Significant Deterioration preconstruction permit for the sources identified herein, and is issued pursuant to 40 CFR Part 70 and Regulation V of the Rules and Regulations of the North Coast Unified Air Quality Management District.

   [NCUAQMD Reg 5 Rule 405(b)] [NCUAQMD Reg V Rule 502 Section 2.3~~2~~ (5/19/05)] [40 CFR 70.5(a)(1)(iii)]

2. This permit shall be valid for a period not to exceed 545 days from the date of issuance unless renewed by the APCO for good cause shown. ~~Upon completion of the construction and the commissioning phase for the internal reciprocating engines~~Prior to commencing operation of any of the equipment authorized under this Permit, the Permittee shall ~~submit~~ obtain a Title V Permit to Operate ~~application to~~from the Air Pollution Control Officer.

   [NCUAQMD Reg 5 Rule 405(b)] [NCUAQMD Reg V Rule 502 Section 2.~~2~~ 3(5/19/05)] [40 CFR 70.5(a)(1)(iii)]

3. If modifications to the Title V P~~p~~ermit to Operate are necessary, the Permittee of the Title V source permitted herein shall submit to the Air Pollution Control Officer a complete Title V permit application for either an Administrative, Minor, or Significant Title V permit modification. The application shall not be submitted prior to receiving any required preconstruction permit from the NCUAQMD. [NCUAQMD Reg 5 Rule 405(c)]

   [NCUAQMD Reg V Rule 502 Section 2.3 (5/19/05)] [40 CFR 70.5(a)(1)(ii)]

4. The Permittee shall submit to the Air Pollution Control Officer timely updates to the Title V application as new requirements become applicable to the source, and in no event less than quarterly (i.e., every three months).

   [40 CFR 70.5(b)]

5. A Permittee's responsible official shall promptly provide additional information in writing to the Air Pollution Control Officer upon discovery of submittal of any inaccurate information as part of the application or as a supplement thereto; or of any additional relevant facts previously omitted which are needed for accurate analysis of the application; and including inaccurate information known, or which should have been known or should be known, by the Permittee(s).

   [NCUAQMD Reg 5 Rule 420(c)] [NCUAQMD Reg V Rule 502 Sections 5.1, 5.3, 5.4 (5/19/05)] [40 CFR 70.5(a)(2) and (b)]

6. Upon written request of the Air Pollution Control Officer, the Permittee's responsible official shall supplement any complete application with additional information within the time frame specified by the Air Pollution Control Officer.

   [NCUAQMD Reg 5 Rule 420(b)] [NCUAQMD Reg V Rule 502 Section 5.2 (5/19/05)] [40 CFR 70.5(a)(2) and (b)]

7. PSD preconstruction permit expiration terminates the Permittee's right to operate the stationary sources itemized in this permit unless a timely and complete Title V permit application has been submitted, in which case the existing PSD preconstruction permit will remain in effect until the Title V permit has been issued or denied. In order to be considered timely, a complete Title V permit application must be submitted prior to the expiration of the PSD preconstruction permit.

   [NCUAQMD Reg 5 Rule 400(b)(c) and (d)] [NCUAQMD Reg V Rule 502 Sections 1.2, 1.3, and 1.4] [40 CFR 70.7(b) and (e)(2) (v)]

8. When submitting an application for a permit pursuant to Regulation 5, the Permittee's responsible official shall include the following information: A certification by a responsible official of all reports and other documents submitted for permit application; compliance progress reports at least every 6 months for, and submitted no later than 30 days after, the periods January 1st through June 30th and July 1st through December 31st of each year; statements on compliance status with any applicable enhanced monitoring; and annual compliance plans, no later than January 30th of each year, which shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

   [NCUAQMD Reg 5 Rule 415(m)] [NCUAQMD Reg V Rule 502 Section 4.13 (5/19/05)] [40 CFR 70.5(c)(9) and (d)]

9. With the exception of acid rain units subject to Title IV of the Clean Air Act and solid waste incinerators subject to section 129(e) of the Clean Air Act, each permit issued pursuant to NCUAQMD Regulation 5 to operate for any source shall include a condition for a fixed term not to exceed five years from the time of issuance. A permit to operate for an acid rain unit shall have a fixed permit term of five years. A permit to operate for a solid waste incinerator shall have a permit term of 12 years; however, the permit shall be reviewed at least every five years.

   [NCUAQMD Reg 5 Rule 660] [NCUAQMD Reg V Rule 504 Section 11 (5/19/05)] [40 CFR 70.6(a)(2)]

COMPLIANCE

10. The Permittee shall comply with all conditions of the Authority to Construct /PSD ~~Title V~~ permit. [NCUAQMD Reg 5 Rule 610(g) (1)] [NCUAQMD Reg V Rule 504 Section 2.7 (5/19/05)]

11. Compliance with the conditions of this Authority to Construct/PSD ~~Title V~~ permit shall be deemed compliance with all applicable requirements identified in the ~~Title V~~ permit. [40 CFR 70.6(f)]

12. The Permittee may not assert or use as a defense, expressly, impliedly, or by operation of law or past practice, in any enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Authority to Construct/PSD~~Title V~~ permit. [NCUAQMD Reg 5 Rule 610(g) (4)] [NCUAQMD Reg V Rule 504 Section 2.7.4 (5/19/05)]

13. ~~This~~ Once issued, the Title V permit may be modified, revoked, reopened, and reissued or terminated for cause. [NCUAQMD Reg 5 Rule 570(a) and (b)] [NCUAQMD Reg V Rule 503 Section 9 (5/19/05)]

14. The Permittee shall furnish to the Air Pollution Control Officer, within 10 (ten) days of the request, any information that the Air Pollution Control Officer may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with this Authority to Construct/PSD ~~Title V~~ permit. Upon request, the permittee shall also furnish to the Air Pollution Control Officer copies of records required to be kept by conditions of this permit. For information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality. [40 CFR 70.6(a)(6)(v)]

15. Noncompliance with any federally enforceable requirement in ~~this~~ the Title V permit is grounds for Title V permit termination, revocation and reissuance, modification, enforcement action, or denial of the Title V permit renewal application. [NCUAQMD Reg 5 Rule 610(g) (3)] [NCUAQMD Reg V Rule 504 Section 2.7.3 (5/19/05)]

16. A pending Title V permit action (e.g. a proposed permit revision) or notification of anticipated noncompliance does not stay any permit condition. [NCUAQMD Reg 5 Rule 610(g) (5)] [NCUAQMD Reg V Rule 504 Section 2.7.5 (5/19/05)]

17. This Authority to Construct/PSD~~Title V~~ permit does not convey any property rights of any sort or any exclusive privilege. [NCUAQMD Reg 5 Rule 610(g) (2)] [NCUAQMD Reg V Rule 504 Section 2.7.2 (5/19/05)]

18. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the Air Pollution Control Officer or an authorized representative to perform all of the following:
    A. Enter upon the stationary source's premises where this source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
    B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Title V permit;
    C. Inspect at reasonable times, the stationary source, equipment (including monitoring and air pollution control equipment), practices and operations regulated or required under this Authority to Construct/PSD~~Title V~~ permit; and
    D. As authorized by the Federal Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of ensuring compliance with the Authority to Construct/PSD~~Title V~~ permit conditions or applicable federal requirements.

[NCUAQMD Reg 5 Rule 610(e)] [NCUAQMD Reg V Rule 504 Section 2.5 (5/19/05)]

REPORTS AND RECORDKEEPING

19. Monitoring Reports

A. The Permittee shall submit to the Air Pollution Control Officer at least once every six months, unless required more frequently by an applicable requirement, reports of all required monitoring set out in this ~~Title V~~Authority to Construct/PSD permit.

B. The reporting periods for this permit shall be for the six month periods January 1st through June 30th and July 1st through December 31st. The reports shall be submitted by July 30th and January 30th of each year respectively.

C. Any and all instances of deviations from ~~Title V~~ permit conditions must be clearly identified in such reports. All required reports must be certified by the responsible official and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

[NCUAQMD Reg 5 Rules 460 and 625] [NCUAQMD Reg V Rule 502 Section 11 and Rule 504 Section 5 and (5/19/05)] [40 CFR 70.6(a)(3)(ii) and (iii)]

20. Compliance Reports

A. The Permittee shall submit to the Air Pollution Control Officer and to U.S. EPA (Air-3, U.S. EPA, Region IX) on an annual basis, unless required more frequently by additional applicable federal requirements, a certification of compliance by the Permittee's responsible official with all terms and conditions contained in the Authority to Construct/PSD~~Title V~~ permit, including emission limitations, standards and work practices.

B. The reporting period for this permit shall be January 1st through December 31st. The report shall be submitted by January 30th of each year. The initial report shall be for the period January 1st 2009 through December 31st 2009 and shall be submitted by March 1st 2010.

C. All required reports must be certified by the responsible official and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

D. The compliance certification shall include the following:

i. The identification of each term or condition of the Authority to Construct/PSD~~Title V~~ permit that is the basis of the certification.

ii. The method(s) used for determining the compliance status of the source, currently and over the reporting period, and whether such method(s) provides continuous or intermittent data.

iii. The status of compliance with the terms and conditions of the Authority to Construct/PSD~~Title V~~ permit for the period covered by the certification, based on the method designated in Section D (ii) of this condition.

iv. Such other facts as the Air Pollution Control Officer may require in order to determine the compliance status of the source.

v. A method for monitoring the compliance of the stationary source with its emissions limitations, standards and work practices.

[NCUAQMD Reg 5 Rule 650] [NCUAQMD Reg V Rule 504 Section 10 (5/19/05)] [40 CFR 70.6(b)(5)]

21. The Permittee shall report within 24 hours of detection any deviation from a federally enforceable ~~Title V~~ permit condition not attributable to an emergency. In order to fulfill the reporting requirement of this condition, the permittee shall notify the Air Pollution Control Officer by telephone followed by a written statement describing the nature of the deviation from the federally enforceable permit condition. [NCUAQMD Reg 5 Rule 625] [NCUAQMD Reg V Rule 504 Section 5 (5/19/05)] [40 CFR 70.6(a)(3)(iii)]

22. All monitoring data and support information required by a federally enforceable applicable requirement must be kept by the stationary source for a period of 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the federally enforceable applicable requirement in the ~~Title V~~ permit. [NCUAQMD Reg 5 Rules 455 and 615] [NCUAQMD Reg V Rule 502 Section 10 and Rule 504 Section 3 (5/19/05)] [40 CFR 70.6(a)(3)(ii)]

PUBLIC NUISANCE

23. The Permittee(s) shall not discharge such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. [NCUAQMD Reg 1 Rule 400(a)]

VISIBLE EMISSIONS

24. The owner, operator or Permittee of this ~~Title V~~ source shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is:

A. As dark or darker in shade as that designated No. 2 (6-minute average), on the Ringelmann Chart, as published by the United States Bureau of Mines, or

~~A.~~B. Of such opacity as to obscure a human observer's view, or a certified calibrated in-stack opacity monitoring system to a degree equal to or greater than No. 2 on the Ringelmann Chart.

[NCUAQMD Rule 410] [NCUAQMD Reg I Rule 104 Section 2 (5/19/05)]

PARTICULATE MATTER

25. A. General Combustion Sources

The Permittee of this ~~Title V~~ source shall not discharge particulate matter into the atmosphere from any combustion source in excess of 0.46 grams per standard

cubic meter (0.20 grains per standard cubic foot) of exhaust gas, calculated to 12 percent carbon dioxide; or in excess of the limitations of NSPS Rule 490, as applicable.

B. Steam Generating Units The Permittee of this ~~Title V~~ source shall not discharge particulate matter into the atmosphere from any steam generating unit, installed or modified after July 1, 1976, in excess of 0.23 grams per standard cubic meter (0.10 grains per standard cubic foot) of exhaust gas, calculated to 12 percent carbon dioxide; or in excess of the limitations of NSPS Rule 490.

C. Steam Generating Utility Power Plants Notwithstanding the limitations set out above, no steam generating power plants which produce electric power for sale to any public utility shall discharge particulate matter into the atmosphere in excess of 0.10 pounds per million BTU heat input or any other specific applicable permit limitation, whichever is the more restrictive emission condition.

D. Non-Combustion Sources The Permittee of this ~~Title V~~ source shall not discharge particulate matter into the atmosphere from any non-combustion source in excess of 0.46 grams per actual cubic meter (0.20 grains per cubic foot) of exhaust gas or in total quantities in excess of the maximum allowable process weight rate as follows:

TABLE I

ALLOWABLE RATE OF EMISSION BASED ON PROCESS WEIGHT RATE					
Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Kg/Hr	Lb/Hr	Lb/Hr	Kg/Hr	Lb/Hr
100	45	0.55	6,000	2,720	8.6
200	92	0.88	7,000	3,380	9.5
400	183	1.4	8,000	3,680	10.4
600	275	1.83	9,000	4,134	11.2
800	377	2.22	10,000	4,540	12.0
1,000	454	2.58	12,000	5,460	13.6
1,500	681	3.38	16,000	7,260	16.5
2,000	920	4.1	18,000	8,220	17.9
2,500	1,147	4.76	20,000	9,070	19.2
3,000	1,362	5.38	30,000	13,600	25.2
3,500	1,690	5.96	40,000	18,100	30.5
4,000	1,840	6.52	50,000	22,700	35.4
5,000	2,300	7.58	60,000	27,200	40.0

Where the process weight per hour is between two listed figures, such process weight and maximum allowable particulate emission per hour shall be interpolated linearly. The total process weight of all similar process operations located at a single plant or of similar multiple plants located on a single premise, shall be used for determining the maximum allowable particulate emission from the combination of such operations.

[NCUAQMD Rule 420] [NCUAQMD Reg I Rule 104 (5/19/05)]

26. The Permittee of this ~~Title V~~ source shall not handle, transport or store or allow open storage of materials in such a manner which allows or has the potential to allow unnecessary amounts of particulate matter to become airborne. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following:
    A. Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust.
    B. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Containment methods can be employed during sandblasting and other similar operations.
    C. Conduct agricultural practices in such a manner as to minimize the creation of airborne dust.
    D. The use of water or approved dust surfactants for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
    E. The application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts.
    F. The paving of roadways and their maintenance in a clean condition.
    G. The prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

[NCUAQMD Rule 430] [NCUAQMD Reg I Rule 104 Section 4 (5/19/05)]

SULFUR COMPOUNDS

27. The owner(s), operator(s) or Permittee(s) of this ~~Title V~~ source shall not discharge into the atmosphere from any single source of emissions whatsoever sulfur oxides, calculated as sulfur dioxide (SO2) in excess of 1,000 ppm; or in excess of the specific source emission limitations of Federal New Source Performance Standards, as applicable.

    [NCUAQMD Rule 440] [NCUAQMD Reg I Rule 104 Section 5 (5/19/05)]

OPEN BURNING

28. The Permittee of this ~~Title V~~ source shall not ignite or cause to be ignited or suffer, allow or maintain any open outdoor fire for the disposal of rubber, petroleum or plastic wastes, demolition debris, tires, tar paper, wood waste, asphalt shingles, linoleum,

cloth, household garbage or other combustible refuse; or for metal salvage or burning of motor vehicle bodies No other open burning shall occur without the owner, operator(s) or Permittee having first obtained a Coordinated Authorized Burn Permit from the Air Pollution Control Officer.

[NCUAQMD Reg 2 Rules 200 & 201]

EQUIPMENT BREAKDOWNS

29. The Permittee shall comply with the emergency provisions contained in all applicable federal requirements.

A. Within two weeks of an emergency event, the owner(s), operator(s) or Permittee's responsible official shall submit to the Air Pollution Control Officer a signed contemporaneous log or other relevant evidence which demonstrates that:

i. An emergency occurred.

ii. Identification of the cause(s) of the emergency.

iii. The facility was being properly operated at the time of the emergency.

iv. Identification of each and every step taken to minimize the emissions resulting from the emergency.

v. Within two working days of the emergency event, the permittee shall notify the Air Pollution Control Officer with a description of the emergency and any mitigating or corrective actions taken.

B. The Permittee has the burden of proof to establish that an emergency occurred in any enforcement proceeding.

[NCUAQMD Reg 5 Rule 450]

TITLE VI REQUIREMENTS (OZONE DEPLETING SUBSTANCES)

30. The Permittee of this ~~Title V~~ source allowing or causing the opening of appliances containing CFCs for maintenance, service, repair, or disposal must comply with the required practices set out in and pursuant to 40 CFR 82.156. [40 CFR 82 Subpart F]

31. Equipment used during the maintenance, service, repair, or disposal of appliances containing CFCs shall comply with the standards for recycling and recovery equipment set out in and pursuant to 40 CFR 82.158. [40 CFR 82 Subpart F]

32. The Permittee and its contractors and agents performing maintenance, service, repair or disposal of appliances containing CFCs must be certified by an approved technician certification program set out in and pursuant to 40 CFR 82.161. [40 CFR 82 Subpart F]

ASBESTOS

33. The Permittee of this ~~Title V~~ source shall comply with the standards of 40 CFR 61 Subpart M which regulates demolition and renovation activities pertaining to asbestos materials.

PAYMENT OF FEES

34. The Permittee of this ~~Title V~~ source shall pay an annual permit fee and other fees as required in accordance with NCUAQMD Rule 300. Failure to pay these fees by the dates due will result in immediate suspension of this ~~Title V Permit to Operate~~Authority to Construct/PSD effective on the date the fees were due, and on notification by the Air Pollution Control Officer of such suspension. Operation without an effective ~~Title V~~Authority to Construct/PSD permit subjects the owner(s), operator(s) and Permittee(s) to potential enforcement action and fee penalties by the NCUAQMD and the U.S. EPA pursuant to ~~Section 502(a) of the Clean Air Act as amended in 1990~~NCUAQMD Rule 411. [NCUAQMD Reg IV~~5~~ Rule ~~670~~411]

ACCIDENTAL RELEASES

35. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the Permittee(s) of this ~~Title V~~ permit shall register and submit to the U.S. EPA the required data related to the risk management plan (RMP) for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r) (3) of the CAA as amended in 68.130. The list of substances, threshold quantities and accident prevention regulations promulgated under Part 68 do not limit in any way the general duty provisions under Section 112(r)(1). [40 CFR Part 68]

36. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the Permittee shall comply with the requirements of 40 CFR Part 68 no later than the latest of the following dates as provided in 40 CFR 68.10(a):

    A. June 21, 1999,

    B. Three years after the date on which a regulated substance is first listed under 68.130, or

    C. The date on which a regulated substance is first present above a threshold quantity in a process.

    [40 CFR Part 68]

37. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the Permittee(s) shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68. [40 CFR Part 68]

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the Permittee(s) shall annually certify compliance with all applicable requirements of Section 112(r) as part of the annual compliance certification. This annual compliance certification shall be submitted and received no later than January 30th of each year. [40 CFR Part 68]

CONDITIONAL TRANSFER OF OWNERSHIP

39. In the event of any changes in control or ownership of these facilities, this permit together with its terms and conditions shall be binding on all subsequent owners and operators. The Permittee shall notify the succeeding owner and operator of the existence of this permit and its conditions by letter, a copy of which shall be forwarded to the NCUAQMD, and which shall identify the exact effective date of the transfer of ownership.

The new owner(s) and operator(s) of this ~~Title V~~ source shall notify the Air Pollution Control Officer within 30 (thirty) days of the transfer of ownership and which notification shall include a certification by the responsible party that the ~~Title V~~ facility operations are to be operated in the same operational parameters as set out herein, and as before the transfer of ownership.

Any permit or written authorization issued pursuant herein shall not be transferable, by operation of law or otherwise, from one location to another, or from one person to another, unless such transfer occurs as a condition of this permit or as a modification to the permit and with written notification to the Air Pollution Control Officer within 30 (thirty) days of transfer of ownership.

[NCUAQMD Rule 240]

SEVERABILITY

40. If any term or condition of this permit, for any reason, be adjudged by a court of competent jurisdiction to be invalid, such judgment shall not affect or invalidate the remainder of this permit. These permit conditions are enforceable individually and severally. [NCUAQMD Reg 5 Rule 610(h)] [40 CFR 60.6(b)(5)]

LOCAL ENFORCEABLE ONLY, GENERAL REQUIREMENTS

APPLICABILITY

41. The requirements outlined in this section are non-federally enforceable local permit requirements. [NCUAQMD Rule 102]

42. The Permittee of this ~~Title V~~ source shall not cause or permit the construction or modification of any new source of air contaminants or modifications to an existing source, either minor or major, without first having obtained an Authority to Construct (ATC) permit from the Air Pollution Control Officer.

43. This permit is effective only upon payment of the initial permit fees set out in NCUAQMD Rules and Regulations.

ADMINISTRATION

44. This Permit is issued pursuant to California Health and Safety Code Section 42300. Commencement of any act or operation authorized by this Permit shall be conclusively deemed to be acceptance of all terms and conditions contained herein.

45. The Permittee shall comply with all conditions of this permit. Any violation of any condition of this Permit is a violation of NCUAQMD Rules and Regulations, and California State Law. [NCUAQMD Rule 105 §1.0]

46. The Permit Conditions shall be liberally construed for the protection of the health, safety and welfare of the people of the NCUAQMD. [NCUAQMD Rule 100 §6.3; Rule 102 §5.0]

47. The NCUAQMD Rules and Regulations may be superseded or revised by the NCUAQMD Board with notice as required by state law. It is Permittee's responsibility to stay current with Rules and Regulations governing its business. The Permittee is therefore expected to comply with all applicable Rules and Regulations. [NCUAQMD Rule 100 §6.0; Rule 105 §1.0]

48. Permit requirements apply to the facility owner and/or operator(s) and any contractor(s) or subcontractor(s) performing any activity authorized under this Permit. Any person(s) including contractor(s), subcontractor(s), not in compliance with the applicable permit requirements are in violation of State and Local laws and subject to appropriate civil and criminal penalties. The facility owner and/operator, and all contractor(s) or subcontractor(s) are strictly liable for the actions and violations of their employee(s). A violation committed by a contractor(s) or subcontractor(s) shall be considered a violation by the facility owner(s) and/or operator(s), and is also a violation by the contractor(s) and/or any subcontractor(s). [NCUAQMD Rule 105 §5.0]

49. Changes in plans, specifications, and other representations proposed in the application documents shall not be made if they will increase the discharge of emissions or cause a change in the method of control of emissions or in the character of emissions. Any proposed changes, regardless of emissions consequence, shall be submitted as a modification to this Permit. No modification shall be made prior to issuance of a permit revision for such modification. [NCUAQMD Rule 102]

50. Knowing and willful misrepresentation of a material fact in the application for the Permit, or failure to comply with any condition of the Permit, or of the NCUAQMD Rules and Regulations, or any state or federal law, shall be grounds for revocation of this Permit. [NCUAQMD Rule 102]

51. Permittee shall not construct, erect, modify, operate, or use any equipment which conceals the emission of an air contaminant, which would otherwise constitute a violation of the limitations of this Permit. [NCUAQMD Rule 104 §1.2]

52. This Permit does not convey any property rights of any sort, or any exclusive privilege.

53. The "Right of Entry", as delineated in NCUAQMD Rule 109 §1.0 and California Health and Safety Code Section 41510 of Division 26, shall apply at all times. Failure to grant immediate access to NCUAQMD, CARB, or other authorized personnel shall be grounds for permit suspension or revocation.

54. The APCO reserves the right to amend this Permit in order to ensure compliance with all applicable Federal, State and Local laws, Rules and Regulations or to mitigate or abate any public nuisance. Such amendments may include requirements for additional

operating conditions, testing, data collection, reporting and other conditions deemed necessary by the APCO.

55. In the event that two or more conditions may apply, and such conditions both cannot apply without conflict, the condition(s) most protective of the environment and the public health and safety shall prevail. In the event that a condition(s) of the Permit and a requirement of a Federal, State or Local law, rule or regulation may also apply, and both cannot apply without conflict, the requirements most protective of the environment and the public health and safety shall prevail. [NCUAQMD Rule 100 §6.3; NCUAQMD Rule 102 §5.0]

56. If any provision or condition of this Permit is found invalid by a court of competent jurisdiction, such finding shall not affect the validity or enforcement of the remaining provisions. [NCUAQMD Rule 102 §5.0]

57. This Permit shall be posted in a conspicuous location at the site and shall be made available to NCUAQMD representatives upon request. [NCUAQMD Rule 102 §8.0]

58. The Permittee shall pay an annual permit fee and other fees as required in accordance with NCUAQMD Regulation IV. Failure to pay these fees will result in the forfeiture of this Permit. Operation without a permit subjects the source to potential enforcement action by the NCUAQMD. In the event of facility closure or change of ownership or responsibility, the new owner or operator shall be assessed and shall pay any unpaid fees. [NCUAQMD Regulation IV -Fees]

59. This Permit is not transferable from either one location to another, from one piece of equipment to another, or from one person to another, except as provided herein. In the event of any change in control or ownership of the subject facility, the Permittee shall notify the succeeding owner of this Permit and its conditions; and shall notify the NCUAQMD of the change in control or ownership within fifteen (15) days of that change. [NCUAQMD Rule 400 §5.0]

60. A request for Transfer of Ownership of this Permit shall be submitted to the APCO prior to commencing any operation of the subject equipment and/or operations by any owner(s) and/or operator(s) not otherwise identified in this Permit. Failure to file the Transfer of Ownership constitutes a separate and independent violation, and is cause for voiding this Permit. The burden of applying for a Transfer of Ownership is on the new owner(s) and/or operator(s). Any Permit transfer authorized pursuant to a transfer of ownership request shall contain the same conditions as this Permit. [NCUAQMD Rule 400 §5.0; Rule 102 §5.0]

61. For purposes of this Permit, the terms identified in the Definition Section shall have the meaning set out therein. [NCUAQMD Rule 102 §5.0]

EMISSIONS & OPERATION

62. This Permit does not authorize the emission of air contaminants in excess of those allowed by the Federal Clean Air Act, California Health and Safety Code or the Rules and Regulations of the NCUAQMD. This Permit shall not be considered as permission to violate existing laws, ordinances, regulation or statutes of other governmental agencies.

63. Permittee shall not discharge such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. [CH&S §41700; NCUAQMD Rule 104 §1.1]

64. Permittee shall not discharge into the atmosphere from any source whatsoever any air contaminant for a period or periods aggregating more than three (3) minutes in any one hour which is as dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines; or of such opacity as to obscure an observer's view to a degree equal to or greater than Ringelmann 2 or forty (40) percent opacity. [CH&S §41701; NCUAQMD Rule 104 §2.0]

65. The handling, transporting, or open storage of material in such a manner which allows unnecessary amounts of particulate matter to become airborne shall not be permitted. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne. [NCUAQMD Rule 104 §4.0]

66. All equipment regulated by this Permit shall at all times be maintained in good working order and shall be operated as efficiently as possible so as to ensure compliance with all applicable emission limits. For purposes of compliance with this requirement, good working order, efficient operation, and proper maintenance shall mean the implementation of all protocols, procedures, and activities recommended by the device manufacturer or those required by this Permit. [NCUAQMD Rule 102 §5.0]

RECORDS & TRAINING

67. The Permittee shall provide training and instruction to all contractor(s), subcontractor(s), and employee(s). Training shall include the identification of all the requirements contained within this Permit, and the appropriate method to be used to comply with the permit conditions. Training shall occur prior to any of the contractor(s), subcontractor(s), or employee(s) constructing or operating equipment authorized by this permit. Records documenting the persons receiving instruction and the instruction materials shall be made available to the APCO upon request. [NCUAQMD Rule 105 §5.0]

68. Permittee shall furnish to the APCO, within a reasonable time, any information that the NCUAQMD may request to determine compliance with this Permit or whether cause exists for modifying, revoking and reissuing, or terminating this Permit. Upon request, Permittee shall also furnish to the NCUAQMD copies of records required to be kept by this Permit. [CH&S §42303; NCUAQMD Rule 103 §6.0, Rule 102 §5.0]

PERMIT TERM

69. This Permit is issued pursuant to NCUAQMD Rule 110 Section 9 and shall only become effective after ~~a Final Determination of Compliance has been issued by the APCO~~ the California Energy Commission approves the project pursuant to NCUAQMD Rule 110 §9.6.

70. The authorization for equipment installation and construction activities identified in this Permit shall expire no more than 545 days from date of issue, unless extended by the APCO for good cause shown. [NCUAQMD Rule 102 §5.0]

71. Once the subject equipment has been constructed in compliance with the conditions of this permit, this Authority to Construct Permit shall serve as a Temporary Permit to Operate for a period not to exceed one hundred and eighty (180) days of operation. Should the need arise, the Temporary Permit to Operate may be extended by the APCO for up to an additional ninety (90) days for good cause shown. The burden of proof lies with the Permittee to demonstrate good cause for such action. [CH&SC §42301.1; NCUAQMD Rule 102 §2.0]

FEDERALLY ENFORCEABLE, EQUIPMENT SPECIFIC REQUIREMENTS

The information specified under this section is enforceable collectively and severally by the NCUAQMD, U.S. EPA, and the public.

Authorized Equipment

72. The Permittee shall install and construct the project as described in Authority To Construct application September 29th 2006 and its series of amendments ending with the most recent submittal of February 27th 2008. Should discrepancies or contradictions exist between the application and this Permit, the provisions of this Permit shall prevail. The specific components authorized are listed in Table 1.0 and Table ~~2.0~~1.1 below. For each of the reciprocating internal combustion engines S-1 through S-10, both a Selective Catalytic Reduction system (SCR) and an oxidation catalyst shall be designated “A-(engine number) SCR” and “B-(engine number) oxidation catalyst respectively”. [NCUAQMD Rule 504 §2.1]

Table 1.~~1~~ 0 Authorized Emission Devices

Unit No.	Equipment	Nominal Size
S-1	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #1, equipped with lean burn technology, abated by A-1 SCR and B-1 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-2	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #2, equipped with lean burn technology, abated by A-2 SCR and B-2 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-3	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #3, equipped with lean burn technology, abated by A-3 SCR and B-3 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-4	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #4, equipped with lean burn technology, abated by A-4 SCR and B-4 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-5	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #5, equipped with lean burn technology, abated by A-5 SCR and B-5 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-6	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #6, equipped with lean burn technology, abated by A-6 SCR and B-6 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-7	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #7, equipped with lean burn technology, abated by A-7 SCR and B-7 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-8	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #8, equipped with lean burn technology, abated by A-8 SCR and B-8 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-9	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #9, equipped with lean burn technology, abated by A-9 SCR and B-9 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-10	Wärtsilä 18V50DF Dual Fuel Reciprocating Engine #10, equipped with lean burn technology, abated by A-10 SCR and B-10 oxidation catalyst	148.9 MMBtu/hr 16.3 MW 22,931 BHp
S-11	Caterpillar DM8149 (or equivalent) Diesel-fired Emergency IC Engine powering a 350kW electrical generator	469 HP
S-12	Clarke/John Deere JU6H-UF50 (or equivalent) Diesel-fired Emergency IC Engine powering a fire water pump	210 HP

Table ~~2.0~~1.1 Authorized Control Devices

Control Equipment	Manufacturer	Model	Specifications
Oxidation Catalyst	HUG Engineering (or equivalent)	OCT-0806-040-0062/450 (or equivalent)	Catalyst: Platinum Reactor Temperature: 608°F to 908°F Outlet Temperature: 608°F to 908°F Max Flow: 143,000 acfm Control Efficiency: 13 ppmvd CO @ 15% O_2 while in NG Mode; 20 ppmvd CO @ 15% O_2 while in Diesel Mode
Selective Catalytic Reduction System	HUG Engineering (or equivalent)	RVF-0890-040-200/300 (or equivalent)	Catalyst: Vanadium Pentoxide Reactor Temperature: 608°F to 908°F Outlet Temperature: 608°F to 908°F Max Flow: 143,000 acfm Control Efficiency: 6 ppmvd NOx @ 15% O_2 while in NG Mode; 35 ppmvd NOx @ 15% O_2 while in Diesel Mode

73. The Permittee shall not modify the equipment subject to this permit in such a manner so as to exceed the Heat Input Capacities, or deviate from the nominal full-load design specifications as submitted in the AFC, and as identified in Table ~~1.1~~2.0, Table ~~1.2~~2.1, or Table ~~1.3~~2.2. [NCUAQMD Rule 102 §5.0]

Table ~~1.1~~2.0 S-1 Through S-10 Engine Specifications

Primary Fuel	Natural Gas
Backup Fuel	CARB Diesel
Design Ambient Temperature	67.5 ˚F
Nominal Heat Input Rate (HHV)	143.9 MMBtu/hr natural gas plus 0.79 MMBtu pilot fuel (natural gas mode) – OR – 148.9 MMBtu/hr CARB Diesel Fuel (diesel mode)
Nominal Exhaust Temperature	728˚F
Nominal Exhaust Flow Rate	121,500 acfm
Exhaust Release Height	100 Feet (above grade)
Nominal Exhaust O2 Concentration, dry volume	11.6%

Nominal Exhaust CO2 Concentration, dry volume	5.3%
Emission Controls	Lean Burn Technology and SCR; Oxidation Catalyst
SIC	4911
SCC	20100202 natural gas mode; 20100301 diesel mode

Table ~~1.2~~2.1 S-11 Engine Specifications

Primary Fuel	CARB Diesel
Nominal Heat Input Rate (HHV)	4.0 MMBtu/hr
Heat Input, gal/hr	29.1
SIC	4911
SCC	20100301

Table ~~1.3~~2.2 S-12 Engine Specifications

Primary Fuel	CARB Diesel
Nominal Heat Input Rate (HHV)	1.68 MMBtu/hr
Heat Input, gal/hr	12.3
SIC	4911
SCC	SCC 20201607

74. The Permittee shall only fire reciprocating engines S-1 through S-10 with fuel which meets or exceeds the fuel specifications identified in Table~~s 1.3 and 1.4~~2.3. Prior to firing reciprocating engines S-1 through S-10 with an Alternative Fuel or CARB Diesel with additives, the Permittee shall make a request to the APCO to switch fuel types. The request shall include all necessary information to characterize emission changes which may occur as a result of the change. The Permittee shall not fire reciprocating engines S-1 through S-10 with a liquid fuel other than CARB Diesel without prior approval from the APCO. [NCUAQMD Rule 102 §5.0]

Table ~~12~~.34 Fuel Specifications for S-1 through S-10

Fuel Type	Property	Value
Natural Gas	Sulfur Content	< 1 gr / 100scf per test; annual average <0.33gr/100scf
CARB Diesel	Sulfur Content	< 15 ppm

75. Reciprocating engines S-1 through S-10 shall be equipped with a monitoring system capable of measuring and recording hours of operation (in tenths of an hour) and fuel consumption (in cubic feet and gallons) while operating in natural gas mode and diesel mode. The measuring devices shall be accurate to plus or minus 1% at full scale, and shall be tested at least once every twelve months or at more frequent intervals if necessary to ensure compliance with the 1% accuracy requirement. [NCUAQMD Rule 102 §5.0]

76. The exhaust stacks shall not be fitted with rain caps or any other similar device which would impede vertical exhaust flow. [NCUAQMD Rule 102 §5.0]

77. The Permittee shall install and maintain a non-resettable hour meter with a minimum display capability of 9,999 hours upon the Emergency IC Diesel Generators S-11 and S-12. [NCUAQMD Rule 102 §5.0]

78. The Emergency IC Diesel Generators S-11 and S-12 shall use one of the following fuels:
    a. CARB Diesel Fuel, or
    b. An alternative diesel fuel that meets the requirements of the Verification Procedure (as codified in CCR Title 13 Sections 2700-2710), or
    c. CARB Diesel Fuel used with fuel additives that meets the requirements of the Verification Procedure (as codified in CCR Title 13 Sections 2700-2710), or
    d. Any combination of a) through d) above.

79. The reciprocating engines S-11 and S-12 shall be certified to meet the EPA Tier 3 emission levels. [40 CFR 60 Subpart IIII]

80. The Permittee shall obtain APCO approval for the use of any equivalent engine for S-11 or S-12 not specifically approved by this Authority to Construct. Approval of an equivalent engine shall be made only after the APCO's determination that the submitted design and performance data for the proposed IC engine is equivalent to the approved engine. [NCUAQMD Rule 102 §5.0]

81. The Permittee's request for approval of an equivalent engine shall include the following information: engine manufacturer and model number, horsepower (hp) rating, exhaust stack information, and manufacturer's guaranteed emission concentrations. [NCUAQMD Rule 504 §4.0; NCUAQMD Rule102 §5.0]

82. The Permittee's request for approval of an equivalent engine shall be submitted to the NCUAQMD at least 90 days prior to the planned installation date. The Permittee shall also notify the NCUAQMD at least 30 days prior to the actual installation of the NCUAQMD approved equivalent engine. [NCUAQMD Rule 103 §6.0]

83. The Permittee shall install exhaust gas temperature monitoring devices at the inlet and the outlet of the oxidation catalyst. [40 CFR §63.6625; BACT]

84. Ammonia injection points shall be equipped with operational ammonia flow meters and injection pressure indicators. The flow meters shall be accurate to plus or minus 1% at full scale and shall be calibrated at least once every twelve months or at more frequent intervals if necessary to ensure compliance with the 1% requirement. [NCUAQMD Rule 102 §5.0]

85. The Permittee shall install points of access to the Emission Devices, Control Devices, and Continuous Emission Monitoring Devices such that source testing in accordance with the appropriate reference test methods can be performed. All points of access shall conform to the latest Cal-OSHA safety standards. For purposes of compliance with this part, appropriate test methods shall mean the test methods identified in the Testing and Compliance Monitoring Conditions section of this Permit; and the collection of gas samples with a portable NOx, CO, and O2 analyzer. Sample collection ports shall be located in accordance with 40 CFR Part 60 Appendix A, and with the CARB document entitled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [NCUAQMD Rule 102 §5.0]

86. Each reciprocating engine shall be equipped with a continuous emission monitor (CEM) for NOx, CO, and O2. Continuous emissions monitor(s) shall meet the requirements of 40 CFR part 60, Appendices B and F, and NCUAQMD-approved protocol during normal operations. The monitors shall be designed and operated so as to be capable of monitoring emissions during normal operating conditions and during Startup and Shutdowns Periods. [NCUAQMD Regulations Appendix B]

87. The Permittee shall demonstrate compliance with the ammonia slip limit by using the following calculation procedure: The ~~ammonia emission concentration shall be verified by the continuous recording of the ratio of the~~ ammonia injection rate to each ~~the~~ NOx ~~inlet rate into the~~ SCR control system shall be continuously recorded ~~(molar ratio)~~. Correlations between the engine heat input rates, the SCR system ammonia injection rate~~s~~, and corresponding ammonia emission concentration ~~The maximum allowable NH3:NOx molar ratio~~ shall be determined for each fuel in accordance with permit conditions #163 and #164, and shall be verified in accordance with permit conditions #165 and #166~~during any required source test, and shall not be exceeded until reestablished through another valid source test~~. Alternatively, the Permittee may be required to install, operate and maintain a continuous in-stack emissions monitor for emissions of ammonia. The Permittee shall obtain APCO approval for the installation and use the ammonia CEMs equipment at least 60 days prior to the planned installation date. [NCUAQMD Rule 103 §6.0]

88. Both onsite and offset emission credits were utilized for this project. Prior to commencement of construction, in accordance with Rule 106 §6.6, the Permittee shall provide to the NCUAQMD APCO documentation of transfer of ownership of offsite Emission Reduction Credits sufficient to offset the emissions identified in Table 3. Prior to commencement of the Commissioning Period, the Permittee shall surrender to the NCUAQMD sufficient offsite emission credits to offset the increases listed in Table 3.0 below. NOx credits provided to offset PM10 increases shall be at an inter-pollutant ratio of 3.58:1 after the appropriate distance ratio is applied. The Permittee shall permanently shut down NCUAQMD ~~the existing facility and all emission units permitted under Title V Permit To Operate NCU 059-12~~Permit Units No. NS-020 (Boiler #1), NS-021 (Boiler #2) and NS-057 (Gas Turbines) in accordance with Condition #110. [40 CFR 51, Appendix S; NCUAQMD Rule 110]

Table 3.0 HBRP Required Offsite Offsets By Quarter

Pollutant	Pollutant Quantities in Tons			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
PM10	2.45	2.35	2.37	2.34
ROC	0.62	0.59	0.59	0.59

EMISSION LIMITING CONDITIONS

89. The Permittee shall not discharge particulate matter into the atmosphere from any combustion source in excess of 0.20 grains per cubic foot of dry gas calculated to 12 percent CO2 at standard conditions. [NCUAQMD Rule 104 §3.1]

90. The Permittee shall not discharge sulfur dioxide into the atmosphere in excess of 1000 ppmv or 40 tons per year. [NCUAQMD Rule 104 §5.0]

91. Visible emissions from reciprocating engines S-1 through S-12 shall not be as dark or darker in shade as that designated as No. 1 on the Ringleman Chart, or of such opacity so as to obscure an observer's view to a degree equal to or greater than 20%, for any period or periods aggregating more than 3 minutes in any one hour. This visible emission limitation shall not apply during Startup or Shutdown Periods or during the Commissioning Period. [NCUAQMD Rule 102 §5.0]

92. ~~The Permittee~~ The Permittee shall not operate reciprocating engines S-1 through S-10 such that the emissions of NOx, from a combination of all engines, exceeds 392 lbs per hour. Furthermore, except ~~as provided below~~during the Commissioning Period, the Permittee shall not operate reciprocating engines S-1 through S-10 such that more than 2 units are in a Diesel Startup Period during any one Clock Hour. Following completion of the emissions testing for all ten units required under Condition #163, the Permittee may request the use of an alternative compliance demonstration method. Such a request shall include, but not be limited to the following:

A. Identification of alternative operational limit(s) and/or alternative method(s) for determining compliance with the facility wide pound per hour NOx emission limit; and
B. Source test data and calculations demonstrating that revisions to emission factors, and/or utilization of an alternative compliance determination method, are appropriate.

Upon written approval by the District of the alternative compliance demonstration method, thise permit ~~limitation on the number of Diesel Mode Startups~~ condition may be modified. In no event shall the facility wide hourly limit of 392 lbs of NOx be increased, nor any operational activities permitted, ~~which~~ if such changes would allow an exceedance of any ~~emission limitation~~ambient air quality standard. [NCUAQMD Rule 102 §5.0]

93. The Permittee shall not discharge diesel particulate matter from reciprocating engines S-1 through S-10 while operating in Diesel Mode such that emissions of Diesel Particulate Matter exceed 0.11 g/bhp-hr. [NSPS 40 CFR Part 60 Subpart IIII]

94. The Permittee shall not discharge Carbon Monoxide from reciprocating engines S-1 through S-10 in excess of 0.14 g/bhp-hr or 20 ppmvd @ 15% O2. [40 CFR 63 Subpart ZZZZ]

HEAT INPUT & FUEL LIMITATIONS

Engines S-1 Through S-10

95. The Permittee shall not operate reciprocating internal combustion engines S-1 through S-10 in such a manner so as to exceed the heat input capacities listed in Table 4.0 on a per engine basis. [NCUAQMD Rule 102 §5.0]

Table 4.0 Heat Input Limitations Per Engine

Each Unit[1]		Heat Input, MMBtu (HHV)	
		Hourly 3 hr rolling average	Daily 24 hour rolling average
Natural Gas Mode[2]	Natural Gas	143.9	3,454
	Diesel (Pilot)	0.8	19
Diesel Mode	Diesel	148.9	3574

Notes:
1) Each unit can only run in either Natural Gas or Diesel Mode, not both simultaneously.
2) Heat Input in Natural Gas Mode is the sum of natural gas and diesel pilot also.

96. Except as provided in Condition 98 below, t~~T~~he Permittee shall not operate reciprocating internal combustion engines S-1 through S-10 in such a manner so as to exceed the heat input capacities listed in Table 4.1 below calculated as a sum of all 10 engines. [NCUAQMD Rule 102 §5.0]

Table 4.1 Heat Input Limitations S-1 Through S-10 Engines Combined

Sum of All 10 Units		Heat Input, MMBtu (HHV)		
		Hourly	Daily	Annual
Natural Gas Mode[1]	Natural Gas	1,439	34,536	9,277,233[2]
	Diesel (Pilot)	7.9	190	51,576
Diesel Mode	Diesel	1,489	30,376[2,3]	148,900[2]

Notes:

1) Total Heat Input in Natural Gas Mode is the sum of natural gas and diesel pilot.

2) This limit applies to operation for maintenance and testing, and during periods of Natural Gas Curtailments as defined in this permit. The limit shall not apply to fuel consumed during the Commissioning Period.

3) This limit was established to ensure compliance with the PM2.5 standard

97. A. The Permittee shall not exceed the diesel fuel firing limits listed in Table 4.2 below while operating reciprocating engines S-1 through S-10 in Natural Gas Mode. [NCUAQMD Rule 102 §5.0]

Table 4.2 Diesel Fuel Firing Limitations (Pilot)

Engines S-1 Through S-10	Gallons of Diesel Fuel		
	Hourly 3 hr rolling average	Daily 24 hour rolling average	Annual 365 day rolling average
All Combined	58	1,402	376,734

~~98.~~ B. Except as provided in Condition 98 below, t~~T~~he Permittee shall not exceed the diesel fuel firing limits listed in Table 4.3 below while operating reciprocating engines S-1 through S-10 in Diesel Mode. [NCUAQMD Rule 102 §5.0]

Table 4.3 Diesel Fuel Firing Limitations

Engines S-1 Through S-10	Gallons of Diesel Fuel		
	Hourly 3 hr rolling average	Daily 24 hour rolling average	Annual 365 day rolling average
Per Engine	1,088	26,106	-
All Combined	10,876	221,877[1,2]	1,087,630[1]

Notes:

1) This limit applies to operation for maintenance and testing, and during periods of Natural Gas Curtailments as defined in this permit. The limit shall not apply to fuel consumed during the Commissioning Period.

2) This limit was established to ensure compliance with the PM2.5 standard (85% average load)

98. The Permittee may request, and the APCO may approve, revisions to the daily 24-hour rolling average limitations on Diesel fuel use in Conditions 95 and 97. Such a request shall include:

    a. Proposed revisions to the corresponding lb/MMBtu and/or lb/hr PM_{10} emission limits in Condition 103, so that the products of the allowable Diesel fuel use in Conditions 95 and 97 and the corresponding emission limits in Condition 103 do not exceed the daily and annual PM_{10} emissions limits in Conditions 105 and 106, respectively; and

    b. All supporting calculations and test data that demonstrate to the satisfaction of the APCO that the proposed revisions to the fuel use limitations will not cause the daily and annual PM_{10} emissions limits in Conditions 105 and 106 to be exceeded.

POLLUTANT LIMITATIONS

S-1 -S-10 Startup & Shutdown Periods

99. The Permittee shall not operate reciprocating engines S-1 through S-10, such that they individually discharge pollutants exceeding the limits identified in Table 5.0 below during Startup or Shutdown Periods. [NCUAQMD Rule 102 §5.0]

Table 5.0 Start & Shutdown Period Emission Limits

Mode of Operation	Pollutant				
	NOx	CO	ROC	PM10	SOx
Natural Gas, lb/hr	23.6	24.1	17.9	3.6	0.4
Diesel Mode, lb/hr	164	25.5	17.2	10.8	0.22

S-1 -S-10 Natural Gas Mode

100. The Permittee shall not operate reciprocating engines S-1 through S-10, such that they individually discharge pollutants exceeding the limits identified in Table 5.1 below based upon a three (3) hour average with the exception of NOx which shall be based upon a one (1) hour average. The limits shall not apply during Startup or Shutdown Periods. [40 CFR 63.6(f)(1), NCUAQMD Rule 102 §5.0]

Table 5.1 Natural Gas Mode Emission Limits – per engine

Pollutant	Emission Rate		
	ppmvd @ 15% O2	lb/hr	lb/MMBtu
CO	13	4.13	0.029
NH3	10	1.9	0.013
NOx	6.0	3.1	0.022
PM10	-	3.6	-
ROC	28	5.1	0.035
SOx	-	0.40	0.0028

101. The combined discharge of pollutants, from the reciprocating engines S-1 through S-10 shall not exceed the limits listed in Table 5.2 below during any Calendar Day in which none of the engines are operated in Diesel Mode for any period of time. For purposes of compliance with this condition, the emissions from Startup and Shutdown Periods shall be included in the daily calculation of emissions.

[NCUAQMD Rule 102 §5.0]

Table 5.2 S-1 Through S-10 Combined Natural Gas Mode Limit

Pollutant	Emission Rate lb/Day
CO	1,589
NH3	456
NOx	1,360
PM10	864
ROC	1,608
SOx	97

S-1 -S-10 Diesel Mode

102. The Permittee shall not discharge pollutants into the atmosphere from the reciprocating engines S-1 through S-10 while in Diesel Mode, based upon a three (3) hour rolling average, in excess of the emission limits identified in Table 5.3 below. The limits shall not apply during Startup or Shutdown Periods. [40 CFR 63.6(f)(1), NCUAQMD Rule 102 §5.0]

Table 5.3 Diesel Mode Emission Limits – per engine

Pollutant	Emission Rate		
	ppmvd @ 15% O2	lb/hr	lb/MMBtu
CO	20.0	6.9	0.047
NH3	10	2.1	0.014
NOx	35.0	19.9	0.134
PM10	-	10.8	0.137
ROC	40.0	7.9	0.053
SOx	0.40	0.22	0.0016

103. The discharge of Diesel Particulate Matter into the atmosphere from the reciprocating engines S-1 through S-10 while in Diesel Mode shall not exceed the emission limits identified in Table 5.4 below. The limits shall not apply during the Commissioning Period as defined in this permit. [NCUAQMD Rule 102 §5.0;]

Table 5.4 Diesel Particulate Matter Limitations

Engines S-1 Through S-10	Gallons of Diesel Fuel		
	Hourly 3 hr rolling average	Daily 24 hour rolling average	Annual 365 day rolling average
Per Engine	5.56	133.4	-
All Combined	55.6	1,334	5,560

104. The combined discharge of pollutants from the reciprocating engines S-1 through S-10 during any Calendar Day shall not exceed the limits listed in Table 5.5 below during any Calendar Day in which one or more of the engines are operated in diesel mode for any period of time. For purposes of compliance with this condition, the emissions from Startup and Shutdown Periods shall be included in the daily calculation of emissions.

Table 5.5 S-1 Through S-10 Combined Diesel Mode Limit

Pollutant	Emission Rate lb/Day
CO	2,219
NH3	506
NOx	9,103
PM10	1,542
ROC	2,183
SOx	97

For purposes of determining compliance of reciprocating engines S-1 through S-10 with the daily PM10 limit in Table 5.5, the Permittee shall ~~not operate~~calculate and record PM10 emissions from each engine for each Calendar Day as follows: 0.180 pounds per minute times the number of ~~reciprocating engines S-1 through S-10 in~~ Diesel Mode Operational Minutes during that Calendar Day plus 0.060 pounds per minute times the number of Natural Gas Mode Operational Minutes~~for more than 142 engine-hours per day.~~ during that Calendar Day. Following completion of the PM10 emissions testing required under Condition #163 on all 10 engines, the Permittee may request the use of an alternative compliance demonstration method. Such a request shall include, but not be limited to the following:

~~C. Identification of the highest PM emission rates of the 10 units as determined during initial performance testing.~~

~~D~~A. Identification of alternative operational limit(s) and/or alternative method(s) for determining compliance with the facility wide pound per day PM emission limit; and

~~E~~B. Source test data and calculations demonstrating that revisions to emission factors and/or compliance determination method(s) are appropriate.

Upon written approval by the District of the alternative compliance demonstration method, the permit limitation on the number of hours of operation in Diesel Mode may be modified. Until an alternative compliance demonstration method is approved, the Permittee shall not operate the engines in Diesel Mode for more than 142 engine-hours per Calendar Day. ~~The highest PM pollutant values identified during the initial performance testing shall become the permitted emission limits for all engine units.~~ In no event~~,~~ shall the newly established emission limits be in excess of 10.8 lbs/hr. (the manufacturer's guaranteed emission rates indentified in the AFC~~),~~ and in the ATC materials submitted by the applicant). In no event shall the facility wide daily limit of 1,542 pounds be increased, nor any operational activity permitted, ~~which~~ if such an increase would allow an exceedance of any ~~emission limitation~~ambient air quality

standard. ~~Compliance with the daily facility wide PM emission limit shall be calculated as a function of engine hourly emission rate times the number of hours of operation per day.~~ [NCUAQMD Rule 102 §5.0]

105. The combined discharge of pollutants from the reciprocating engines S-1 through S-10 during any calendar year shall not exceed the limits listed in Table 5.6 below.
[NCUAQMD Rule 102 §5.0]

Table 5.6 S-1 Through S-10 Combined Annual Emission Limits

Pollutant	Emission Rate Tons/Yr
CO	172.7
NH3	63.3
NOx	179.1
PM10	119.8
ROC	190.8
SOx	~~4.3~~4.4

Engines S-11 and S-12

106. The Permittee shall not operate reciprocating engines S-11 and S-12 such that pollutant discharge into the atmosphere exceeds the quantities in Table 5.7 below.
[NCUAQMD Rule 102 §5.0]

Table 5.7 Reciprocating Engines S-11 and S-12 Emission Limits

Unit	Pollutant	g/Hp – hr	lb/hr
S-11 Emergency Generator	CO	0.63	0.65
	DPM	0.05	0.05
	NOx	3.47	3.59
	ROC (non-methane HC)	0.4	0.41
	SOx	-	0.0061
S-12 Fire Pump	CO	0.59	.27
	DPM	0.14	0.06

	NOx	4.9	2.27
	ROC (non-methane HC)	0.5	0.23
	SOx	-	0.0026

107. The combined discharge of pollutants from the reciprocating engines S-11 through S-12 during any calendar year shall not exceed the limits listed in Table 5.8 below. [NCUAQMD Rule 102 §5.0]

Table 5.8 S-11 Through S-12 Combined Annual Emission Limits

Pollutant	Emission Rate lbs/Yr
CO	45
NOx	287
PM10	5.5
ROC	31.5
SOx	0.4

STARTUP COMMISSIONING & SIMULTANEOUS OPERATION

108. This Permit supplements existing NCUAQMD Permit Numbers for the HBPP of NS-020 (Boiler #1), NS-21 (Boiler #2) and NS-057 (Turbines) until such time as the sources are decommissioned. [NCUAQMD Rule 102 §5.0]

109. The Permittee shall notify the NCUAQMD of the anticipated date of initial startup of the reciprocating engines S-1 through S-10 not more than 60 days, or less than 30 days prior to initial startup. The Permittee shall notify the APCO of the actual startup of reciprocating engines S-1 through S-10 not more than 15 days after actual initial startup. [NCUAQMD Rule 102 §5.0]

110. The existing generating units at Humboldt Bay Power Plant shall be shut down as soon as possible following the commercial operation of all of the reciprocating engines S-1 through S-10. The existing generating units at Humboldt Bay Power Plant [NCUAQMD Permit Units NS-020 (Boiler #1), NS-21 (Boiler #2) and NS-57 (Turbines)] and any of the new ~~HBRP~~ HBGS reciprocating engines S-1 through S-10 shall not be in simultaneous operation for more than 180 calendar days, including their individual Commissioning Periods; and shall be shutdown and their Permits to Operate (PTOs) surrendered once engines S-1 through S-10 have successfully completed their Commissioning Phase as defined elsewhere in this permit. Operation of the existing

plant units and any engine or engines for any portion of a calendar day, shall accrue toward the maximum limit of 180 days. [NCUAQMD Rule 110, Rule 102 §5.0]

111. Selective catalytic reduction (SCR) systems and oxidation catalysts shall serve each reciprocating engine except as provided for in Condition #114. Permittee shall submit SCR and oxidation catalyst design details to the NCUAQMD for review and approval at least 90 days prior to scheduled delivery of these systems to the site. The Permittee shall not install or operate the SCR and oxidation catalyst systems without authorization from the APCO. [NCUAQMD Rule 110, Rule 102 §5.0]

112. Permittee shall submit continuous emission monitor design, installation, and operational details to the NCUAQMD within 120 days following commencement of construction. [NCUAQMD Rule 102 §5.0]

113. In accordance with the NCUAQMD approved Commissioning Plan required under Condition #123, the reciprocating engines shall be tuned to minimize emissions in the time frame specified in the approved Commissioning Plan. [NCUAQMD Rule 102 §5.0;]

114. In accordance with the NCUAQMD approved Commissioning Plan required under Condition #123, the Selective Catalytic Reduction (SCR) system and the oxidation catalyst shall be installed, adjusted, and operated to minimize emissions from each reciprocating engine in the time frame specified in the Commissioning Plan.

    [NCUAQMD Rule 102 §5.0;]

115. The continuous monitors specified in Permit Conditions #75, #83, and #86 shall be installed, calibrated, and operational prior to the first firing of reciprocating engines S-1 through S-10. After first firing, the detection range of the CEMS shall be adjusted as necessary to accurately measure the resulting range of NOx and CO emission concentrations. [NCUAQMD Rule 102 §5.0;]

116. The Permittee shall record and monitor the parameters identified in Table 7.0 of this Permit at least once every 15 minutes (excluding normal calibration periods or when the monitored source is not in operation). The Permittee shall use APCO approved methods to calculate heat input rates, oxides of nitrogen mass emission rates (reported as nitrogen dioxide), carbon monoxide mass emission rates, and NOx and CO emission concentrations, summarized for each hour and each day.

    [NCUAQMD Rule 102 §5.0; NCUAQMD Regulation Appendix B]

117. The total number of firing hours of each reciprocating engine S-1 through S-10 without abatement of emissions by the SCR system and the oxidation catalyst shall not exceed 100 hours for each engine during the Commissioning Period. Such operation of each reciprocating engine without abatement shall be limited to discrete Commissioning Activities that can only be properly executed without the SCR system and the oxidation catalyst in place. Upon completion of these activities for each engine, the Permittee shall provide written notice to the NCUAQMD and the unused balance of the allowable firing hours without abatement for that engine shall expire. [NCUAQMD Rule 102 §5.0]

118. When one or more reciprocating engines S-1 through S-10 are undergoing Commissioning Activities without an SCR system and oxidation catalyst installed, the Permittee shall not: [NCUAQMD Rule 102 §5.0]

a. Fire more than five uncontrolled reciprocating engines simultaneously.

b. Operate the uncontrolled engines such that their combined hours of operation exceed 90 engine-hours during any Calendar Day.

~~c. Operate the uncontrolled engines such that their combined hours of operation while in the "alignment phase" exceed 13 engines-hours during any Calendar Day.~~

119. During the Commissioning Period ~~while any of the engines are being operated without an SCR system and oxidation catalyst~~, the Permittee shall not operate reciprocating engines S-1 through S-10, such that the combined emissions from all of the engines regardless of their commissioning status, exceed any of the limits in Table 5.9 below: [NCUAQMD Rule 102 §5.0]

Table 5.9 S-1 through S-10 Combined Commissioning Emission Limits

Pollutant	lbs/hr	lbs/day
CO	197.2	2,662
NOx	~~323.3~~392	4,365
PM10	54	1,296
ROC (as Methane)	86.6	1,559
SOx (SO2)	2.0	48.4

120. For each engine during its Commissioning Period, after ~~four hours of~~ steady-state operation of the SCR system and the oxidation catalyst has occurred, the NOx and CO emissions from that reciprocating engine shall thereafter comply with the limits specified in Permit Conditions #99 through #105. For purposes of compliance with this condition, steady-state operation shall mean: the engine, SCR system, and oxidation catalyst all functioning according to manufacturers' specifications and operating in compliance with emission limits ~~as determined by the CEMS~~and are ready for source performance testing in accordance with the requirements of Condition 163. In no event, shall the Commissioning Period for each engine exceed 180 consecutive calendar days beginning on the first day the engine is first fired. [NCUAQMD Rule 102 §5.0]

121. Firing hours on 100% CARB Diesel Fuel or Alternative Liquid Fuel during the Commissioning Period shall not be considered Maintenance and Testing for purposes of compliance with the annual operating hour limitations specified in the Operational Conditions section of this Permit. [NCUAQMD Rule 102 §5.0]

122. The total mass emissions of NOx, CO, ROC, PM10, and SOx that are emitted from the reciprocating engines during the Commissioning Period shall accrue towards the annual emission limits specified in Condition #107. [NCUAQMD Rule 102 §5.0]

123. The Permittee shall submit a plan to the NCUAQMD at least four weeks prior to the first operation of the first of reciprocating engines S-1 through S-10, describing the procedures to be followed during the Commissioning Period. The plan shall include a description of each Commissioning Activity, the anticipated duration of each activity in hours, and the purpose of the activity. The activities described shall include, but not be limited to, the tuning of the reciprocating engines, the installation and operation of the SCR systems and the oxidation catalysts, the installation, calibration, and testing of the NOx and CO continuous emissions monitors, and any activities requiring the firing of each unit without abatement by an SCR system or oxidation catalyst. [40 CFR Part 63; NCUAQMD Rule 102 §5.0]

124. Not later than 90 days prior to first operation, the Permittee shall prepare and submit to the NCUAQMD for approval a plan for complying with the requirements of 40 CFR 63 Subpart ZZZZ. This compliance plan shall provide for an initial performance test on each engine to demonstrate that each oxidation catalyst is achieving a minimum 70% reduction in CO over a four hour period. During the initial performance test, the Continuous Emission Monitors shall successfully complete a performance evaluation in accordance using PS3 and 4A of 40 CFR Part 60 Appendix B; the oxidation catalyst pressure drop and inlet temperature shall be measured using ASTM D6522-00 [§63.6625(a)]; and the CEMS data collected in accordance with §63.6625(a) with the data reduced to 1-hour averages.

125. Not later than 90 days prior to first operation, the Permittee shall prepare and submit to the NCUAQMD for approval a plan for complying with the requirements of 40 CFR 60 Subpart IIII. This compliance plan shall provide for an initial performance test on each reciprocating engine to demonstrate compliance with the NOx and PM limitations of 40 CFR §60.4204(c)(1) and (c)(2) and shall establish operating parameters to be monitored continuously to ensure that each reciprocating engine continues to meet the applicable emission standards.

OPERATIONAL CONDITIONS

Engines S-1 through S-10

126. In the event of an excess emission incident, regardless of the cause, the Permittee shall immediately take corrective action to minimize the release of excess emissions. Notice shall be provided to the NCUAQMD as indicated in the Reporting and Recordkeeping Section of this Permit. For purposes of compliance with this condition, excess emissions shall mean discharge of pollutants in quantities which exceed those authorized by Federal, State, NCUAQMD Rules, and this Permit. [40 CFR 70.6(a)(3)(iii)(B); NCUAQMD Rule 105 §5.0]

127. All equipment listed in Table 1.0 Authorized Emission Devices and ~~2.0~~1.1 Authorized Control Devices shall be operated and maintained by the Permittee in accordance with

manufacturer's specifications for optimum performance; and in a manner so as to minimize emissions of air contaminants into the atmosphere. [NCUAQMD Rule 102 §5.0]

128. The Permittee shall implement and maintain a written Startup, Shutdown, and Malfunction Plan as described in as described in 40 CFR 63.6(e) (3) which contains specific procedures for maintaining the reciprocating engines S-1 through S-12, their associated control devices, their associated CEMS, sensors, measuring devices, and their associated exhaust gas duct work, during periods of startup, shutdown, and malfunction. The plan must clearly describe the startup and shutdown sequence procedure for each unit. The Plan shall also include a specific program of corrective actions to be implemented in the event of a malfunction in either the process or control systems. Modifications to the Plan are subject to APCO approval and the Permittee shall not operate the reciprocating engines S-1 through S-12 and their associated control devices unless a NCUAQMD approved Startup, Shutdown, and Malfunction Plan is in effect. The Plan shall be submitted to the NCUAQMD not less than thirty (30) calendar days prior to the Commissioning Period for any of reciprocating engines S-1 through S-10.

    [NCUAQMD Rule 102 §5.0]

129. The Permittee shall develop, implement and maintain a written Device Operational Plan that contains specific procedures for operating the reciprocating engines S-1 through S-12, their associated control devices, their associated CEMS, sensors, measuring devices, and their associated exhaust gas duct work under the varying load conditions which may occur during normal modes of operation. The Plan shall also include specific protocols to be followed when transitioning between modes of operation. This plan shall be consistent with the requirements of this Permit, and all local, state and federal laws, rules, and regulations. The plan shall include, but not be limited to, daily system integrity inspections and the recording of operational parameters. The Plan shall be submitted to the NCUAQMD not more than sixty ~~(30~~60) calendar days following expiration of the Commissioning Period for any of reciprocating engines S-1 through S-10. The Plan is subject to APCO approval. The Permittee shall not operate the reciprocating engines S-1 through S-12 and their associated control devices, after the expiration of the Commissioning Period for any of the reciprocating engines plus 60 days, unless a NCUAQMD approved Device Operational Plan is in effect. [NCUAQMD Rule 102 §5.0]

130. The Permittee shall develop, implement and maintain a written Device Maintenance & Replacement Plan that contains specific procedures for equipment maintenance and identifies replacement intervals for components of the reciprocating engines S-1 through S-12, their associated control devices, their associated CEMS, sensors, measuring devices, and their associated exhaust gas duct work. The Plan shall be submitted to the NCUAQMD not more than thirty (30) calendar days following expiration of the Commissioning Period for any of reciprocating engines S-1 through S-10. The Plan is subject to APCO approval. The Permittee shall not operate the reciprocating engines S-1 through S-12 and their associated control devices, after the expiration of the Commissioning Period for any of the reciprocating engines plus 60 days, unless a NCUAQMD approved Device Maintenance & Replacement Plan is in effect. [NCUAQMD Rule 102 §5.0]

131. The Permittee shall only operate the Reciprocating engines S-1 through S-10 in Natural Gas Mode except during the Commissioning Period, during Maintenance and Testing, and during Natural Gas Curtailments as set forth in this permit. [NCUAQMD Rule 102 §5.0]

132. The Permittee shall not operate reciprocating engines S-1 through S-10 such that Startup Periods exceed 60 minutes in length. This limitation shall not apply during the Commissioning Period. [NCUAQMD Rule 102 §5.0]

133. The Permittee shall not operate reciprocating engines S-1 through S-10 such that Shutdown Periods exceed 30 minutes in length. This limitation shall not apply during the Commissioning Period. [NCUAQMD Rule 102 §5.0]

134. The Permittee shall not operate the reciprocating engines S-1 through S-10 such that the combined hours of operation during Startup and Shutdown Periods exceeds 30 engine-hours per day. This limitation shall not apply during the Commissioning Period. [NCUAQMD Rule 102 §5.0]

135. The Permittee shall not operate the reciprocating engines S-1 through S-10 such that the combined hours of operation during Startup and Shutdown Periods exceeds 3,650 engine-hours per calendar year. Of the 3,650 engine hours available hours, the hours of operation during Startup and Shutdown Periods in Diesel Mode shall not exceed 500 engine-hours per calendar year. For the purpose of determining compliance with this condition, Startup and Shutdown Periods during the Commissioning Period shall not accrue toward these limitations. [NCUAQMD Rule 102 §5.0]

136. The Permittee shall not operate any of the reciprocating engines S-1 through S-10 below 50% load except during Startup and Shutdown Periods and during the Commissioning Period. [NCUAQMD Rule 102 §5.0]

137. The Permittee shall not operate the reciprocating engines S-1 through S-10 for more than 80 engine-hours per Calendar Day at loads less than 12.0 MW except during the Commissioning Period. [NCUAQMD Rule 102 §5.0]

138. While operating the reciprocating engines S-1 through S-10 in Diesel Mode, the Permittee shall fire the engines:
    a. Only with CARB Diesel as specified in Table 2.3~~1.4~~ Fuel Specifications for S1 through S-10;
    b. For not more than 50 hours per year for maintenance and testing per engine; and
    c. Such that the combined engine operating hours do not exceed 1000.0 engine hours per year on a 365 day rolling average basis.

139. For each Oxidation Catalyst installed, during the performance testing required pursuant to the Testing and Monitoring section of this Permit, the Permittee shall determine the pressure drop across each catalyst. The Permittee shall operate the reciprocating

engines S-1 through S-10 such that the pressure drop across the catalyst does not exceed the following acceptable range for any period of time: The acceptable pressure range is two inches of water column (plus or minus 10%) deviation from the pressure drop established during performance testing. [40 CFR 63 Subpart ZZZZ]

140. The Permittee shall not operate reciprocating engines S-1 through S-10 if the inlet temperature of the oxidation catalyst is outside of the acceptable operating range for any period of time. The acceptable operating range of the oxidation catalyst is greater than or equal to 450 ˚F and less than or equal to 1350 ˚F. Each reciprocating engine is paired with a single oxidation catalyst unit. For purposes of compliance with this condition, each engine and catalyst pair is evaluated separately. This Condition does not apply during Startup or Shutdown Periods, during the Commissioning Period, or during malfunctions. [40 CFR 63 Subpart ZZZZ]

141. The Permittee shall not operate reciprocating engines S-1 through S-10 unless the CO emissions from the units are abated by the oxidation catalyst at a rate greater than or equal to 70% over uncontrolled emission levels, calculated on a 3 hour rolling average. Verification of the emissions reduction shall be completed in accordance with 40 CFR 63 Subpart ZZZZ. This Condition does not apply during Startup or Shutdown Periods, during the Commissioning Period, or during malfunctions. [40 CFR 63 Subpart ZZZZ]

Engines S-11 and S-12

142. The Permittee shall not operate the reciprocating engines S-11 and S-12, for the purpose of maintenance and testing, in excess of the hour limits listed in Table 6.~~1~~ 0 below [NCUAQMD Rule 102 §5.0]:

Table 6.~~1~~ 0 S-11 and S-12 Hourly Operating Limits

Device	Daily	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
S-11	1	12	12	13	13
S-12	1	12	12	13	13

143. The Permittee shall not operate the reciprocating engines S-11 and S-12, for the purpose of maintenance and testing, within the same 24 hour period. [NCUAQMD Rule 102 §5.0]

144. The Permittee shall not operate the reciprocating engines S-11 and S-12, for the purpose of maintenance and testing, when any of the reciprocating engines S-1 through S-10 are operating in diesel mode. [NCUAQMD Rule 102 §5.0]

145. The Permittee shall not operate reciprocating engine S-11, for the purpose of maintenance and testing, for more than 45 minutes in any 60 minute period. [NCUAQMD Rule 102 §5.0]

REPORTING & RECORDKEEPING

146. The Permittee shall report all occurrences of breakdowns of the equipment listed in Table 1.0 Authorized Emission Devices or Table 1.1~~2.0~~ Authorized Control Devices which result in the release of emissions in excess of the limits identified in this Permit. Said report shall be submitted to the NCUAQMD in accordance with the timing requirements of NCUAQMD Rule 105 §5.0.

147. The Permittee shall maintain a Breakdown log that describes the breakdown or malfunction, includes the date and time of the malfunction, the cause of the malfunction, corrective actions taken to minimize emissions and the date and time when the malfunction was corrected. [NCUAQMD Rule 102 §5.0]

148. The Permittee shall immediately record the following information when an event occurs where emissions from the equipment listed in Table 1.0 Authorized Emission Devices are in excess of any limits incorporated within this permit:

    a. Date and time of the excess emission event
    b. Duration of the excess emission event
    c. Description of the condition or circumstance causing or contributing to the excess emission event
    d. Emission unit or control device or monitor affected
    e. Estimation of the quantity and type of pollutants released
    f. Description of corrective action taken
    g. Actions taken to prevent reoccurrence of excess emission event.

149. The Permittee shall provide to the NCUAQMD, a completed "Compliance Certification" form signed by the Facility's Responsible Official which certifies the compliance status of the facility twice per calendar year. The compliance certification form must be submitted to the NCUAQMD according to the following schedule: The semiannual certification (covering quarters 1 and 2) must be submitted prior to July 31st of the reporting year; and the annual certification (covering quarters 1, 2, 3, and 4) prior to March 1st of the following calendar year. The content of the Certification shall include copies of the records designated in Table 7.0 to be kept "Annually".

150. The Permittee shall maintain a monthly log of usage for the Emergency IC Diesel Generators S-11 and S-12 in accordance with applicable Reporting Requirements for Emergency Standby Engines, Item (e)(4)(I) of Section 93115, Title 17, California Code of Regulations, Air Toxic Control Measure (ATCM) for Stationary Compression Ignition (CI) engines. The monthly log of usage shall list and document the nature of use for each of the following by recording the hour meter readings for each operational event:
    a. Emergency use hours of operation;
    b. Maintenance and testing hours of operation (e.g., load testing, weekly testing, rolling blackout, general power outage, etc);

c. Hours of operation for emission testing to show compliance with §93115(e)(2)(A)3 and (e)(2)(B)3 of the ATCM;

d. Hours of operation to comply with requirements of NFPA 25;

e. Hours of operation for all other uses other than those specified in section (e)(2)(A)3 and (e)(2)(B)3 of the ATCM;

f. Fuel used through the retention of fuel purchase records that account for all fuel used in the engine and all fuel purchased for use in the engine, and, at a minimum, contain the following information for each individual fuel purchase transaction:

   i. Identification of the fuel purchased as either CARB Diesel, or an alternative diesel fuel that meets the requirements of the Verification Procedure;

   ii. Sulfur content of the fuel;

   iii. Amount of fuel purchased;

   iv. Date when the fuel was purchased;

   v. Signature of owner or operator or representative of Permittee who received the fuel; and

   vi. Signature of fuel provider indicating fuel was delivered.

151. The Permittee shall continuously maintain onsite for the most recent five year period and shall be made available to the NCUAQMD APCO upon request, the records as listed in Table 7.0 below.

Table 7.0 Required Records for Engines S-1 through S-10

Frequency	Information to be Recorded
Upon Occurrence	A. Records of maintenance conducted on engines (40 CFR 60 Subpart IIII) B. Time, duration, and fuel firing mode for each engine startup C. Time, duration, and fuel firing mode for each engine shutdown D. Time, duration and reason for each period of operation in Diesel Mode E. For each bulk delivery of diesel fuel received, certification from the supplier that the diesel fuel meets or exceeds CARB Diesel specifications F. For each bulk delivery of diesel fuel received, the higher heating value (HHV) and sulfur content of the fuel G. Fuel Mode – each operating minute shall be designated as either “Natural Gas” or “Diesel Mode”
At least one electronic reading every 15 minutes	A. NOx (ppmvd @15% O2) B. CO (ppmvd @15% O2) C. O2 (%) D. Exhaust gas temperature as SCR inlet (˚F) E. Exhaust gas temperature at OC inlet (˚F) F. Engine load (%)

Hourly (for each engine)	A. NOx (ppmvd @15% O2) and lb/hr, on a ~~rolling 3~~1 hour average B. CO (ppmvd @15% O2) and lb/hr, on a rolling 3 hour average C. ROC (ppmvd @15% O2) and lb/hr, on a rolling 3 hour average D. NH3 (ppmvd @15% O2) and lb/hr, on a rolling 3 hour average E. SOx (ppmvd @15% O2) and lb/hr, on a rolling 3 hour average F. Natural gas fuel consumption (MMBtu HHV, ~~3 hr rolling~~hourly average) G. Diesel fuel consumption during Diesel Mode (MMBtu HHV, ~~3 hr rolling~~ hourly average) H. Volumetric proportion of natural gas to diesel pilot injection when operating in Natural Gas Mode

Frequency	Information to be Recorded
Daily	A. NOx (lbs/day, total for all engines) B. CO (lbs/day, total for all engines) C. ROC (lbs/day, total for all engines) D. SOx (lbs/day, total for all engines) E. PM (lbs/day, total for all engines) F. Diesel Particulate Matter (lbs/day, total for all engines) G. Natural gas fuel consumption (MMBtu HHV, for each engine and total for all engines) H. Diesel pilot fuel consumption (MMBtu HHV, all engines combined) I. Diesel fuel consumption during Diesel Mode (MMBtu HHV and gallons, for each engine and total for all engines) J. Engine load (% load on a 24 hour average for each engine and total for all engines) K. Hours of operation (each engine and total for all engines as a sum of operating minutes) L. ~~Quantity of fuel combusted (therms and gallons for each engine and total for all engines)~~
Monthly	A. Sulfur content of natural gas (gr/100scf, monthly fuel testing) B. Natural gas sulfur content (gr/100scf, 12 month rolling average)
Quarterly (combined total for all engines)	A. NOx (tons) B. CO (tons) C. SOx (tons) D. ROC(tons) E. PM (tons) F. Diesel Particulate Matter (tons) G. Natural gas fuel consumption (MMBtu HHV) H. Diesel pilot fuel consumption (MMBtu HHV) I. Diesel fuel consumption during Diesel Mode (MMBtu HHV and gallons) J. Sulfur content of natural gas (gr/100scf, 12 month rolling average) K. Hours of operation (for each fuel mode) L. ~~Quantity of fuel combusted (therms, gallons)~~
Annually (combined total for all engines)	A. NOx (tons) B. CO (tons) C. SOx (tons) D. ROC(tons) E. PM (tons)

	F. Diesel Particulate Matter (tons) G. Natural gas fuel consumption (MMBtu HHV) H. Diesel pilot fuel consumption (MMBtu HHV) I I. Diesel fuel consumption during Diesel Mode (MMBtu HHV and gallons) J. Sulfur content of natural gas (gr/100scf, annual average) K. Hours of operation (for each fuel mode) L. ~~Quantity of fuel combusted (therms, gallons)~~

152. For each Quarter, the Permittee shall submit a written report to the APCO detailing the following items for the operation of the CEMS. The report shall conform to the requirements of NCUAQMD Rules and Regulations Appendix B, Section 2.2, and shall be submitted within 30 days of the end of the quarter.
    a. Time intervals;
    b. Date and magnitude of excess emissions;
    c. Nature and cause of excess (if known);
    d. Corrective actions taken and preventive measures adopted;
    e. Averaging period used for data reporting shall correspond to the averaging period for each respective emission standard;
    f. Applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and
    g. A negative declaration when no excess emissions occurred.

153. The Permittee shall provide notification and record keeping as required pursuant to 40 CFR, Part 60, Subpart A, 60.7.

154. The Permittee shall annually prepare and submit a comprehensive facility wide emission inventory report for all criteria pollutants and toxic air contaminants emitted from the facility. The inventory and report shall be prepared in accordance with the most recent version of the CAPCOA / CARB reference document Emission Inventory Criteria Guidelines. The inventory report shall be submitted to the NCUAQMD APCO no later than March 1st of the following calendar year. The inventory report is subject to NCUAQMD APCO approval. [NCUAQMD Rule 102 §5.0]

155. The Permittee shall submit the health risk assessment protocol to the NCUAQMD APCO for review no later than 9 months after the Commissioning Period for the reciprocating engines S-1 through S-10 has concluded. The protocol shall be based upon CARB and California Office of Health and Hazard Assessment guidance documents. [NCUAQMD Rule 102 §5.0]

156. No later than ~~14~~ 3 months after the ~~Commissioning Period for reciprocating engines S-1 through S-10 has concluded~~health risk assessment protocol required by Condition 15~~6~~5 has been approved by the NCUAQMD APCO, the Permittee shall submit to the NCUAQMD APCO a revised health risk assessment. The health risk assessment shall be prepared pursuant to the~~an~~ NCUAQMD APCO approved protocol. ~~based upon CARB and California Office of Health and Hazard Assessment guidance documents.~~

[NCUAQMD Rule 102 §5.0]

157. Not later than 24 hours after determining that diesel mode operation is to occur as a result of an expected Natural Gas Curtailment, the permittee shall notify the APCO by telephone, email, electronic page, or facsimile. The notification shall include, but not be limited to, the following [NCUAQMD Rule 102 §5.0]:
    a. The anticipated start time and duration of operation in diesel mode under the Natural Gas Curtailment; and
    b. The anticipated quantity of Diesel fuel expected to be burned under the Natural Gas Curtailment.

158. Not later than 24 hours following the end of a period of any diesel mode operation, the permittee shall notify the APCO by email or facsimile of the following [NCUAQMD Rule 102 §5.0] :

    a. The actual start time and end time of the period of diesel mode operation;
    b. The identification of the Reciprocating engines that were operated and the average load at which each reciprocating engine was operated on Diesel fuel during the diesel mode operating period; and
    c. The actual quantity of Diesel fuel consumed during the diesel mode operation.

TESTING & COMPLIANCE MONITORING

159. The Permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F.
160. The Permittee shall monitor and record exhaust gas temperature at the inlet and at the outlet of the oxidation catalyst. [40 CFR 63 Subpart ZZZZ]

161. Not less than thirty days prior to the date of any source test required by this Permit, the Permittee shall provide the NCUAQMD APCO with written notice of the planned date of the test and a copy of the source test protocol.

162. Source test results shall be summarized in a written report and submitted to the NCUAQMD APCO directly from the independent source testing firm on the same day, the same time, and in the same manner as submitted to Permittee. Source Test results shall be submitted to the NCUAQMD APCO no later than 60 days after the testing is completed.

163. The Permittee shall demonstrate compliance with all the emission limits identified in this Permit ~~during~~ prior to the end of the Commissioning Period of each of the reciprocating engines S-1 through S-10 using the following methods. Testing shall be conducted both while the engines are operated in Natural Gas Mode and while operated in Diesel Mode. All compliance tests shall be conducted at 50%, 75%, and 95% or greater of the operating capacity of each reciprocating engine. Alternative test methods may be approved by the APCO.

a. Particulate Matter – CARB Method 5 (front and back half) or EPA Methods 201a and 202

b. Diesel Particulate Matter – CARB Method 5 (front half)

c. Visible Emissions

   i. Permittee shall perform a "Visible Emission Evaluation" (VEE) concurrent with particulate matter testing. A CARB certified contractor shall perform such an evaluation.

d. Ammonia – Bay Area Air Quality Management District (~~NCUAQMD~~ BAAQMD) Method ST-1B

e. Reactive Organic Gases – CARB Method 100

f. Nitrogen Oxides – CARB Method 100

g. Carbon Monoxide – CARB Method 100 & ASTM D6522-00 [NESHAP ZZZZ]

h. Oxygen – CARB Method 100 & ASTM D6522-00 [NESHAP ZZZZ]

   i. Oxygen shall be measured at the inlet and outlet of the oxidation catalyst

   ii. Oxygen measurements shall be made at the same time as the CO measurements

   iii. Pressure drop measurements across the catalyst shall be made at the same time as the CO measurements

i. Natural Gas Fuel Sulfur Content – ASTM D3246

j. Liquid Fuel Sulfur Content – ASTM D5453-93

164. The Permittee shall demonstrate compliance with all the emission limits identified in this Permit for the reciprocating engines S-1 through S-10 once per calendar year unless indicated below, using the following methods. Except as provided in Condition #~~123~~166, testing shall be conducted while the engines are operated in Natural Gas Mode. All compliance tests shall be conducted at an operating capacity of 50%, 75%, or 95% or greater during the testing of each reciprocating engine. Alternative test methods may be approved by the APCO. [NCUAQMD Rule 102 §5.0]

a. Particulate Matter – CARB Method 5 (front and back half) or EPA Methods 201a and 202

~~b. Diesel Particulate Matter – CARB Method 5 (front half)~~

b. Visible Emissions -Permittee shall perform a "Visible Emission Evaluation" (VEE) concurrent with particulate matter testing. A CARB certified contractor shall perform such an evaluation.

c. Ammonia – Bay Area Air Quality Management NCUAQMD Method ST-1B

d. Reactive Organic Gases – CARB Method 100

e. Nitrogen Oxides – CARB Method 100

f. Carbon Monoxide – CARB Method 100

g. Oxygen – CARB Method 100

   i. Oxygen shall be measured at the inlet and outlet of the oxidation catalyst

   ii. Oxygen measurements shall be made at the same time as the CO measurements

iii. Pressure drop measurements across the catalyst shall be made at the same time as the CO measurements

h. Natural Gas Fuel Sulfur Content – ASTM D3246

~~j. Liquid Fuel Sulfur Content – ASTM D5453-93~~

165. The engines shall be tested on a rotating basis with all of the engines to be tested in natural gas mode each year and all engines tested at the three different load values at least once every three years; and that each engine is tested at a different load each year. Each engine shall be tested, at the following loads (50%, 75%, ≥95%) or under conditions determined by the APCO to most challenge the emission control equipment. The APCO may waive some or all of the testing requirements if the results of previous compliance tests have demonstrated compliance with permitted emission limits by a sufficient margin. [NCUAQMD Rule 102 §5.0]

166. Prior to the end of the commissioning period, the Permittee shall conduct District-approved source testing on four of the reciprocating engines S-1 through S-10 to determine the corrected ammonia (NH_3) emission concentration to demonstrate compliance with Conditions 100 and 102. The source tests shall determine the correlation between measured parameters, which may include but need not be limited to the heat input rates of the engines, the ammonia injection rates, and/or NOx concentrations upstream and downstream of the SCR catalyst, and the corresponding NH_3 ammonia concentration at the exhaust stack. Each test shall be conducted over the expected operating range of the engines (including, but not limited to, minimum, 75% and 95% or greater loads) to establish the range of ammonia injection rates necessary to achieve NOx emission reductions while maintaining ammonia slip levels. Continuing compliance with conditions 100 and 102 shall be demonstrated through calculations of corrected ammonia concentrations based upon the source test correlations and continuous records of ammonia injection rates.

~~166.~~167. Permittee shall demonstrate compliance with permitted emission limits for Engines S-1 through S-10 while operating in Diesel Mode once every three years or following each 200 hours of operation of an individual engine in Diesel mode whichever is sooner. Compliance shall be demonstrated as indicated below using the following methods. All compliance tests shall be conducted while an engine is operated in Diesel mode at 50%, 75% or 95% or greater operating capacity of each engine; or under conditions determined by the APCO to most challenge the emission control equipment. Alternative test methods may be approved by the APCO [NCUAQMD Rule 102 §5.0]:

a. Particulate Matter -CARB Method 5 (front and back half), or EPA Methods 201a and 202.

b. Diesel Particulate Matter – CARB Method 5 (front half only)

c. Visible Emissions -U.S. EPA Method 9

d. Ammonia – Bay Area Air Quality Management NCUAQMD Method ST-1B

e. Reactive Organic Gases – ARB Method 100

f. Nitrogen Oxides --ARB Method 100

g. Carbon Monoxide – ARB Method 100

h. CO shall be measured at the inlet and outlet of the oxidation catalyst.

i. Oxygen – ARB Method 100

i. Oxygen shall be measured at the inlet and outlet of the oxidation catalyst.

ii. Oxygen measurements shall be made at the same time as the CO measurements.

j. Liquid Fuel Sulfur Content – ASTM D5453-93

~~167.~~168. The engines shall be tested at various loads (50%, 75%, ≥95%) on a rotating basis, with one-third of the engines to be tested in diesel mode in each year; and tested at each of the three loads. The APCO may waive some or all of the testing requirements if the results of previous compliance tests have demonstrated compliance with permitted emission limits by a sufficient margin. The engines shall be tested on a rotating basis with all engines tested at the three different load values at least once every nine years; and that each engine is tested at a different load each rotation. [NCUAQMD Rule 102 §5.0]

~~168.~~169. The Permittee shall demonstrate compliance with the hourly, daily, and annual ROC emission limits through the use of valid CO CEM data and the ROC/CO relationship determined by annual CO and ROC source tests; and APCO approved emission factors and methodology. [40 CFR 63 Subpart ZZZZ; NCUAQMD Rule 102 §5.0]

~~169.~~170. The Permittee shall demonstrate compliance with the hourly, daily, and annual SOx emission limits through the use of valid fuel use records, natural gas sulfur content, diesel fuel sulfur content, mass balance calculations; and APCO approved emission factors and methodology. The natural gas sulfur content shall be determined on a monthly basis using ASTM D3246. [NCUAQMD Rule 102 §5.0, PSD]

~~170.~~171. The Permittee shall demonstrate compliance with the hourly, daily, and annual PM emission limits, and the diesel particulate matter emission limits, through the use of valid fuel use records, source tests, and APCO approved emission factors and methodology. [NCUAQMD Rule 102 §5.0, PSD]

~~171.~~172. Relative accuracy test audits (RATAs) shall be performed on each CEMS at least once every twelve months, in accordance with the requirements of 40 CFR 60, Appendix B. Calibration Gas Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The NCUAQMD shall be notified in writing at least 30 days in advance of the scheduled date of the audits. Audit reports shall be submitted along with quarterly compliance reports to the NCUAQMD within 60 days after the testing was performed.

LOCAL ENFORCEABLE ONLY, EQUIPMENT SPECIFIC REQUIREMENTS

FUEL USAGE

~~172.~~173. The Emergency IC Diesel Generators S-11 and S-12 shall use one of the following fuels:

a. CARB Diesel Fuel, or

b. An alternative diesel fuel that meets the requirements of the Verification Procedure (as codified in CCR Title 13 Sections 2700-2710), or

c. CARB Diesel Fuel used with fuel additives that meets the requirements of the Verification Procedure (as codified in CCR Title 13 Sections 2700-2710), or

d. Any combination of a) through d) above.

EMISSIONS

~~173.~~174. The Permittee shall not discharge diesel particulate matter from reciprocating engines S-1 through S-10 while operating in Diesel Mode such that emissions of Diesel Particulate Matter exceed 0.15 g/bhp-hr. [CCR Title 17 §93115]

OPERATIONAL CONDITIONS

~~174.~~175. While operating the reciprocating engines S-1 through S-10 in Diesel Mode, the Permittee shall fire the engines for no more than 50 hours per year for each engine for Maintenance and Testing. [CCR Title 17, §93115]

~~175.~~176. The Emergency IC Diesel Generators S-11 and S-12 are authorized the following maximum allowable annual hours of operation as listed in Table ~~8~~6.0 below [17 CCR §93115] :

Table ~~6~~8.0 Hours of Operation for Emergency IC Diesel Generators S-11 & S-12

Emergency Use	Non-Emergency Use	
	Emission Testing to show compliance	Maintenance & Testing
Not Limited by the ATCM	Not Limited by the ATCM	50 hours/year

AMBIENT MONITORING

~~176.~~177. ~~No later than 180 days after construction of the equipment authorized pursuant to this permit begins, and concurrent with the commencement of operation,~~ ~~t~~The Permittee shall provide full funding for the purchase and installation of a new monitoring station (Shelter; CO, NOx, PM10/PM2.5, and other sampling equipment as determined by the APCO) to be installed at a location approved by the APCO. The funding shall include all costs associated with the purchase, installation, operation and maintenance (including personnel costs) of the monitoring station for an initial period of not less than five (5) years. PG&E shall reimburse the District for costs incurred within 30 days of receiving an invoice from the District. At the conclusion of that period, the APCO may extend the operation of the site if deemed in the best interest of the District, and PG&E will continue to fund all costs associated with its continued operation. The District shall manage the procurement, operation and maintenance of the site, and District staff will be responsible for collecting, securing, and quality assuring all data. [District Rule 102 §5.0]

~~177.~~178. ~~No later than 180 days after construction of the equipment authorized pursuant to this permit begins, and concurrent with the commencement of operation, t~~The Permittee shall provide full funding for the purchase and installation of a new meteorological monitoring station to be installed at a location approved by the APCO. The funding shall include all costs associated with the purchase, installation, operation and maintenance (including personnel costs) of the meteorological monitoring station for an initial period of not less than five (5) years. PG&E shall reimburse the District for costs incurred within 30 days of receiving an invoice from the District. At the conclusion of that period, the APCO may extend the operation of the site if deemed in the best interest of the District, and PG&E will continue to fund all costs associated with its continued operation. The District shall manage the procurement, operation and maintenance of the site, and District staff will be responsible for collecting, securing, and quality assuring all data. The data collected at the station shall meet the requirements of EPA-454/R-99-005 "Meteorological Monitoring Guidance for Regulatory Modeling Applications" February 2000. [District Rule 102 §5.0]

INSIGNIFICANT EMISSIONS UNITS

The following systems are considered insignificant emissions units and are not subject to equipment specific requirements. However, these units are required to comply with all applicable Federal and Local Enforceable Only general requirements:

Exempt Equipment	Equipment Description	Basis for the Exemption
Air Conditioning Units	Comfort Air Conditioners	NCUAQMD Rule 200(d)(8)
Fuel Dispensing Facility		NCUAQMD Rule 200(d)(8)
Fuel Oil Service Tank #1		NCUAQMD Rule 200(d)(8)
Fuel Oil Service Tank #2		NCUAQMD Rule 200(d)(8)
Fuel Oil Storage Tank #1		NCUAQMD Rule 200(d)(8)
Fuel Oil Storage Tank #2		NCUAQMD Rule 200(d)(8)
Gasoline Storage		NCUAQMD Rule 200(d)(8)
Distilled Oil Storage Tank		NCUAQMD Rule 200(d)(8)
Lube Oil Tanks		NCUAQMD Rule 200(d)(8)
Oil/Water Separator		NCUAQMD Rule 200(d)(8)
Portable Sandblasting Unit		NCUAQMD Rule 200(d)(8)
Sandblasting and Print Facility		NCUAQMD Rule 200(d)(8)
Shop Cold Solvent Cleaner		NCUAQMD Rule 200(d)(8)
Unconfined Solvent and Paint Use	General Operations (facility wide)	NCUAQMD Rule 200(d)(8)
Welding Shop		NCUAQMD Rule 200(d)(8)

Wipe Cleaning Operations	General Operations (facility wide)	NCUAQMD Rule 200(d)(8)
Any equipment or activity not specifically identified by this Permit		NCUAQMD Rule 200(d)(8)

ATTACHMENT 3

Property Owners within 1,000 Feet of the Proposed Facility

JUDY HARRISON
PO BOX 3545
EUREKA CA 95502-3545
305-073-003, 305-073-004, 305-073-058

WILLIAM C & DEBORAH M WHITEHORN
16201 KING AV
RIVERSIDE CA 92504
305-073-005, 305-073-056, 305-073-057

ROBERT W & KRINTINA DARBY
1245 KING SALMON AV
EUREKA CA 95503
305-073-006

TERRY & JANIE FORD
BOX 171
CUTTEN CA 95534
305-073-007

KATHERINE E EDWARDS
1229 KING SALMON AV
EUREKA CA 95503
305-073-008, 305-073-009, 305-073-064

GERRY W MCGEE
1215 KING SALMON AV
EUREKA CA 95503
305-073-010

CHRISTOPHER J & GEORGIA L HACKER
7105 HUMBOLDT HILL RD
EUREKA CA 95503
305-073-011, 305-073-034, 305-073-066

ROBERT L & KATHERYN J FIGAS
115 REDMOND RD
EUREKA CA 95501
305-073-012

JOHN A MCNIEL
1201 KING SALMON AV
EUREKA CA 95503
305-073-013

WILLIAM D BOWMAN & MARGARET MORSCHAUSER
1179 KING SALMON AV
EUREKA CA 95501
305-073-014, 305-073-015

WILLIAM D BOWMAN
PO BOX 315
FIELDS LANDING CA 95537-0315
305-073-016

ANTHONY J CASTILLO
PO BOX 225
EUREKA CA 95502-0225
305-073-017

RICK KISTLER
2036 IRVING DR
EUREKA CA 95503
305-073-018, 305-073-019, 305-073-020

KEITH G CONDON
16 SOLE ST
EUREKA CA 95503
305-073-021, 305-073-022, 305-073-027

ROBERT J & DEBRA J FRAZIER & PETRUSHA ENTERPRISES, DBA RESTAURANT EQUIPMENT
3302 T ST
EUREKA CA 95501
305-073-023

THEODORE C COOPER
6 SOLE ST
EUREKA CA 95503
305-073-025

FRANK A & ROBIN A BACIK
1151 RIVRSIDE DR
UKIAH CA 95482
305-073-026

STERLING R COUSINS
2478 JENES LN
SANTA ROSA CA 95403
305-073-028, 305-073-029

DEAN SCOTT- SMITH
54 SOLE ST
EUREKA CA 95503
305-073-030

JULIE A OWENS
62 SOLE ST
EUREKA CA 95503
305-073-031

JOSEPH J & ROSEMARY T SIMERA
98 SOLE ST
EUREKA CA 95503
305-073-032

ILAN KINORI
2 SOUTH ST
MILLFORD CT 06460
305-073-033

LONI D HOLLENBECK
PO BOX 3253
EUREKA CA 95502
305-073-036, 305-073-037, 305-073-038

LONI D HOLLENBECK
PO BOX 3603
EUREKA CA 95502-3603
305-073-039, 305-073-040, 305-073-041

LONI D HOLLENBECK
PO BOX 3603
EUREKA CA 95502-3603
305-073-042, 305-073-043, 305-073-044

LONI D HOLLENBECK
PO BOX 3603
EUREKA CA 95502-3603
305-073-045, 305-073-046, 305-073-047

MARYBETH VOLK
PO BOX 915
FERNDALE CA 95536-0915
305-073-048

DENNIS B & MARY G GRINSELL
1328 GROSS ST
EUREKA CA 95503
305-073-049, 305-073-050,

B A CASEY
1511 15TH ST
OCEANO CA 93445
305-073-053, 305-073-054, 305-073-055

JOHN J & CATHERINE J SZYCHULDA
11725 WILDER RD
RED BLUFF CA 96080
305-073-059

JAMES C & NANCY C MAAS
4650 WALNUT DR
EUREKA CA 95503
305-073-060

DANA S MILLER
184 SOLE ST
EUREKA CA 95503
305-073-068

CHARLES V & JEAN A HEANEY
PO BOX 35
KNEELAND CA 95549-0035
305-073-070

ANN E SCHMALZ
PO BOX 36
KNEELAND CA 95549-0036
305-073-071

BARBARA COPPERMAN
PO BOX 287
EUREKA CA 95502-0287
305-073-072, 305-073-073

STANWOOD A MURPHY JR
PO BOX 149
FORTUNA CA 95540-0149
305-082-001

KATHRYN CORTOPASSI
1531 BUHNE DR
EUREKA CA 95501
305-082-002

VINCENT & MARY VELLUTINI
3450 F ST
EUREKA CA 95501
305-082-003

BETSY A THODE
912 HODGSON ST
EUREKA CA 95503
305-082-004

THEODORE E & MARY A HYER
PO BOX 1553
WEAVERVILLE CA 96093-1553
305-082-005

DENNIS W & CAROLYN M HYER
143 SOLE ST
EUREKA CA 95503-6836
305-082-006

DONALD O BROWN
PO BOX 174
FIELDS LANDING CA 95537
305-082-007, 305-082-008

JONATHAN S FLYER
375 OLE HANSEN RD
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305-082-009, 305-082-010

GLADYS M BERGHAGEN
61 SOLE ST
EUREKA CA 95503
305-082-016, 305-082-017

JAMES L ROBERTS SR
3569 PARK ST
SHASTA LAKE CA 96019
305-082-018

THEODORE C COOPER
6 SOLE ST
EUREKA CA 95503-6835
305-082-019

WILLIAM C & MARIA F EDDLEMAN
7 SOLE ST
EUREKA CA 95503
305-082-020

ANGUS B & JOAN H STEWART
77 SOLE ST
EUREKA CA 95503
305-082-023

LONI D HOLLENBECK
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EUREKA CA 95502-3603
305-083-001, 305-083-003

SHELLEY M HOLLENBECK
PO BOX 3253
EUREKA CA 95502-3253
305-083-002

DOUG E EVANS JR
152 COD ST
EUREKA CA 95503
305-083-006, 305-083-007

KEVIN WATTS
408 BELLEVUE
SANTA CRUZ CA 95060
305-083-008

ROBERT D JR & EDITH WOLTERBEEK
3101 CONCORDE DR SUITE B
MCKINLEYVILLE CA 95519
305-083-009

JACQUELINE WILSON
239 EDELEN AV
LOS GATOS CA 95030
305-083-010

WILLIAM J & JUDITH ESKES
112 COD ST
EUREKA CA 95503
305-083-013

BUCK & LOIS J NOEL
8441 ELK RIVER RD
EUREKA CA 95503
305-083-014, 305-083-015, 305-083-016

LAURENCE L JR & NANCY L SMITH
1830 MADRONE AVE
EUREKA CA 95503
305-083-017, 305-083-018, 305-083-019

ELOISE K COTTRELL
32 COD ST
EUREKA CA 95503
305-083-020

JOAN BRADY
105 COD ST
EUREKA CA 95503
305-083-021

JULIE A OWENS
62 SOLE ST
EUREKA CA 95503
305-083-022

EUGENE A JR & LEANA S SCHNELL
2700 FAIRFIELD
EUREKA CA 95501
305-083-023, 305-083-024, 305-083-025

LOIS H ROWE
120 COD AV
EUREKA CA 95503
305-083-026

CHARLES & JERRILEA HENRY
205 PINE ST
YREKA CA 96097
305-083-027

JAMES N & CLAIRE G HOFF
5644 SO BROADWAY
EUREKA CA 95503-6905
305-131-007, 305-131-013

JAMES N & CLAIRE G HOFF
5644 SO BROADWAY
EUREKA CA 95503-6905
305-131-016, 305-131-038

HUMBOLDT COUNTY C/O AUDITOR CONTROLLER
825 FIFTH ST RM 126
EUREKA CA 95501-1153
305-131-010, 305-131-018

STEVEN T DANIELSON DBA DANIELSON RENTALS
PO BOX 3598
EUREKA CA 95502-3598
305-131-017

AMERICAN AGCREDIT, FLCA
200 CONCOURSE BLVD
SANTA ROSA CA 95403-8210
305-131-019

DBA KIEM TV POLLACK/BELZ BROADCASTING CO LLC
5650 S BROADWAY
EUREKA CA 95503
305-131-023

HOFF BROADCASTING CR
5644 SO BROADWAY
EUREKA CA 95503-6905
305-131-024

HUMBOLDT COMM SERV DIST
PO BOX 158
CUTTEN CA 95534-0158
305-131-026

HUMBOLDT BAY HARBOR RECR & CONS DIST
PO BOX 1030
EUREKA CA 95502-1030
305-131-036, 305-131-037

HUMBOLDT COMMUNITY SERVICES DIST
PO BOX 158
CUTTEN CA 95534
305-131-039

HUMBOLDT BAY HARBOR RECR & CONS DIST
PO BOX 1030
EUREKA CA 95502-1030
305-141-003, 305-141-004

HUMBOLDT BAY HARBOR RECR & CONS DIST
PO BOX 1030
EUREKA CA 95502-1030
305-161-001

GARY S MOOSLIN
PO BOX 318
CARLOTTA CA 95528-0318
305-162-004, 305-162-012

STANWOOD A JR & PAMELA J MURPHY
PO BOX 149
FORTUNA CA 95540-0149
305-162-006, 305-162-011

WILLIAM W MILLS
3971 N CLARK ST #C
FRESNO CA 93726
305-162-008

DEPT OF PUBLIC WORKS, HUMBOLDT COUNTY, KING SALMON WETLAND MITIGATION POND
1106 SECOND ST
EUREKA CA 95501-0531
305-162-010

JOSEPH L BROWN JR C/0 ROBERT BROWNE
715 VIA DEL CASTILLE
MORGAN HILL CA 95037-5829
305-181-001

SBE 853-12-21L PAR 35 NORTHWESTERN PACIFIC RAILROAD CO SB
419 TALMAGE RD STE M
UKIAH CA 95482-7433
305-181-003

ROBERT D PRIOR
PO BOX 23
EUREKA CA 95502-0023
305-181-004

JAMES G & GLORIA R CHRISTOPHER
3640 F ST
EUREKA CA 95503-5348
305-221-006

JO AN BRADY
105 COD ST
EUREKA CA 95503
305-221-007

WAYNE NICKERSON C/O FRANK GLOEGGLER
99 COD ST
EUREKA CA 95503-6811
305-221-008

PHILIP R & JUDY B AYCOCK
BOX 637
FERNDALE CA 95536
305-221-009

WELLS FARGO BANK NA & BECHLER GRANT CO C/C WELLS FARGO BANK
PO BOX 63939
SAN FRANCISCO CA 94163-3939
305-221-010

BONNIE M MESINGER
35 COD ST
EUREKA CA 95503
305-221-011, 305-221-035

BURNIE H & MARY A KEMP
360 HERRICK AV
EUREKA CA 95503
305-221-014

SHARON FRACKER
15 COD ST
EUREKA CA 95503
305-221-015, 305-221-016

DAN TARANTO
890 CLOUDSWOOD RD
ARCATA CA 95521
305-221-019

CHRISTOPHER W SEITZ
PO BOX 1329
FERNDALE CA 95536-1329
305-221-020

GLENN R COUNCILMAN
2736 H ST
EUREKA CA 95501
305-221-021, 305-221-022, 305-221-023

RICHARD B & LA VONNE J WISSINGER
3377 PARK ST
EUREKA CA 95501
305-221-024, 305-221-025, 305-221-026

IRA B JR & MARGARETTE SMITH
70 CRAB
EUREKA CA 95503
305-221-027

ROBERT A & LOIS A MCNEW
26 CRAB
EUREKA CA 95503
305-221-029, 305-221-030

JAMES A ZITO
611 L ST
EUREKA CA 95501
305-221-034

PATRICIA D MCFARLAND
4374 RIDGECREST DR
EUREKA CA 95503
305-221-036, 305-221-037

PATRICIA D MCFARLAND
4374 RIDGECREST DR
EUREKA CA 95503
305-221-038, 305-221-039, 305-221-040

STEPHEN M HAAG
113 FANTAGES WAY
FOLSOM CA 95630
305-221-041, 305-221-048

DAVID A ELLERD
1695 BUHNE DR
EUREKA CA 95503
305-221-043

GEORGE C STILL
10 CRAB AV
EUREKA CA 95503
305-221-044

PAMELA L WATSON-HOWARD
2139 H ST
EUREKA CA 95501
305-221-045, 305-221-046

MEREDITH L & NICHOLAS K LAUNIUS
PO BOX 454
EUREKA CA 95502-0454
305-221-047

JOHN T & GISELA J KINDER
1821 BUHNE DR
EUREKA CA 95503
305-231-005

DENNIS E & SANDRA L PENA
193 GRENADINE WAY
HERCULES CA 94547
305-231-006

GERALD J & MARYLEE JOHNSON
1212 BEARD WY
CARMICHAEL CA 95608
305-231-007

JOSEPH M & KAREN K HARDCASTLE
353 KELSEY LN
MYERS FLAT CA 95554
305-231-008

ROBERT & SHEILA MCCLUNG
3340 H ST
EUREKA CA 95503
305-231-009

JON R & CALISTA J MELL
3617 CALIFORNIA ST
EUREKA CA 95503
305-231-010, 305-231-011

JERROLD A MOORE
1 CHARPARAL CT
NOVATO CA 94949
305-231-012, 305-231-013, 305-231-014

JERROLD A MOORE
1 CHARPARAL CT
NOVATO CA 94949
305-231-015, 305-231-016

STACEY E JUELL
2229 D ST
EUREKA CA 95501
305-231-017

MICHAEL J & KAREN L HISER
PO BOX 764
LOLETA CA 95551-0764
305-231-018

GREG RAEL
3386 OLD ARCATA RD
BAYSIDE CA 95524
305-231-019

GREG RAEL
1026 3RD ST
EUREKA CA 95501
305-231-020

ANGUS B & JOAN H STEWART
77 SOLE ST
EUREKA CA 95503
305-231-021, 305-231-022

PAMELA L WATSON-HOWARD
2139 H ST
EUREKA CA 95501
305-231-029

ALVAN B DUNLAP
90 PERCH
EUREKA CA 95503
305-231-030

ROBERT J & DEBRA J FRAZIER
PO BOX 1372
EUREKA CA 95502-1372
305-231-031

JOAN DAVIES
1504 BUHNE ST
EUREKA CA 95501-4254
305-231-032, 305-231-034

JOAN DAVIES
5022 CANYON DR
EUREKA CA 95503
305-231-033

ALLING C FOREMAN
22 PERCH
EUREKA CA 95503-6830
305-231-038

JOHN T & GISELA J KINDER
1821 BUHNE DR
EUREKA CA 95503
305-231-039

CRAIG N RIORDAN
32 PERCH
EUREKA CA 95503
305-231-040

RICHARD K MILLER DBA LEASED EQUIPMENT
3652 A BROADWAY
EUREKA CA 95503
306-121-045

ROBERT J & DEBRA J FRAZIER
PO BOX 1372
EUREKA CA 95502-1372
306-361-003

LINDA NELSON
2304 H ST
EUREKA CA 95501
306-391-001

DAVID R & JILL S CREECH
10 BARSCAPE LN
EUREKA CA 95503
306-391-002

ROBERT J BELAND
5962 HUMBOLDT HILL RD
EUREKA CA 95503
306-391-003

EUREKA'S REDWOOD CHRISTIAN CENTER
6000 HUMBOLDT HILL RD
EUREKA CA 95503
306-391-004

KRISTEN M ZECK
6060 HUMBOLDT HILL RD
EUREKA CA 95503
306-391-006

LOUIS H GOSELIN
772 TOMPKINS HILL RD
FORTUNA CA 95540
306-391-008

HARVEY C & ELONA M GRIGGS
601 BAY ST
EUREKA CA 95501-1270
306-391-009

SOUTH BAY UNION SCHOOL DISTRICT C/O DOUG FRINK
8073 BERTA RD
EUREKA CA 95503
306-391-010

JOHN W JR & LAVERNE COOPER
PO BOX 34
EUREKA CA 95502-0034
306-391-011

CALVIN R & SUSAN F NORTON
471-320 LINCO LN
SUSANVILLE CA 96130
306-391-012, 306-391-016

HUMBOLDT CO HUMANE SOCIETY INC
6073 LOMA AVE
EUREKA CA 95503-3000
306-391-013

SOUTH BAY UNION SCHOOL DISTRICT SCHOOL YARD
6077 LOMA AV
EUREKA CA 95503-6869
306-391-014

NO INFORMATION PROVIDED BY COUNTY
305-073-062

NO INFORMATION PROVIDED BY COUNTY
305-010-020

NO INFORMATION PROVIDED BY COUNTY
305-010-021

NO INFORMATION PROVIDED BY COUNTY
305-010-037

CITY OF EUREKA WASTEWATER TREATMENT PROJECT
NO ADDRESS PROVIDED BY COUNTY
305-181-005