CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

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06-AFC-7C
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DATE: February 25, 2010

TO: Interested Parties

FROM: Chris Davis, Compliance Project Manager

SUBJECT: Humboldt Bay Generating Station Project (06-AFC-7C)
Staff Analysis of Proposed Modifications to Air Quality Conditions of Certification

On April 30, 2009, Pacific Gas and Electric Company (PG&E) filed a petition with the California Energy Commission to amend the Energy Commission Decision for the Humboldt Bay Generating Station project. Staff prepared an analysis of this proposed change and a copy is enclosed for your information and review.

The Humboldt Bay Generating Station project is a 163 MW base load power plant located in the City of Eureka in Humboldt County. The project was certified by the Energy Commission on September 24, 2008 and is currently under construction.

The proposed modifications to air quality conditions are based on more detailed information made available since certification by Wärtsilä, the manufacturer of the power generating equipment. The changes are proposed to be consistent with the revised North Coast Unified Air Quality Management District permit conditions and improve the consistency and enforceability of the permit.

Energy Commission staff reviewed the petition and assessed the impacts of this proposal on environmental quality, public health and safety, and is proposing revisions to existing air quality and public health conditions of certification**.** In addition, air quality conditions of certification have been renumbered to conform with air district conditions. It is staff's opinion that, with the implementation of revised conditions, the project will remain in compliance with applicable laws, ordinances, regulations, and standards and that the proposed modifications will not result in a significant adverse direct or cumulative impact to the environment (Title 20, California Code of Regulations, Section 1769).

The amendment petition and staff's analysis has been posted on the Energy Commission's webpage at:

http://www.energy.ca.gov/sitingcases/humboldt/compliance/index.html.

The Energy Commission's Order (if approved) will also be posted on the webpage. Energy Commission staff intends to recommend approval of the petition at the April 21**,** 2010**,** Business Meeting of the Energy Commission. If you have comments on this proposed modification, please submit them to me at the address below prior to April 14, 2010.

Chris Davis**,** Compliance Project Manager
California Energy Commission
1516 9th Street, MS-2000
Sacramento, CA 95814

Comments may be submitted by fax to (916) 654-3882, or by e-mail to CMDavis@energy.state.ca.us. If you have any questions, please contact me at (916) 654-4842.

For further information on how to participate in this proceeding, please contact the Energy Commission Public Adviser's Office, at (916) 654-4489, or toll free in California at (800) 822-6228, or by e-mail at publicadviser@energy.state.ca.us. News media inquiries should be directed to the Energy Commission Media Office at (916) 654-4989, or by e-mail at mediaoffice@energy.state.ca.us.

Enclosure

HUMBOLDT BAY GENERATING STATION (06-AFC-07C)
Request To Amend Final Commission Decision
Air Quality and Public Health Staff Analysis

Prepared by: Brewster Birdsall, P.E., QEP and Alvin J. Greenberg, Ph.D.
February 2010

INTRODUCTION

The petition to amend the air quality and public health conditions of certification (COCs) was submitted by Pacific Gas and Electric Company (PG&E) on April 30, 2009. The amendment would revise terminology and clarify some limitations for operating the Humboldt Bay Generating Station (HBGS), formerly the Humboldt Bay Repowering Project (06-AFC-07C). The current COCs were set by the original September 24, 2008 Energy Commission Decision (CEC Pub. No. 800-2008-005-CMF, CEC 2008b). This is the first proposed amendment to the air quality conditions in the Energy Commission Decision.

The HBGS will be a new load-following power plant consisting of ten (10) natural gas- and diesel-fired Wärtsilä 18V50DF 16.3 megawatt (MW) reciprocating engine-generator sets and associated equipment with a combined nominal generating capacity of 163 MW. The project will replace the existing 105 MW Units #1 and #2 and the two 15 MW Mobile Emergency Power Plants (MEPP) at PG&E's Humboldt Bay Power Plant site. The HBGS is under construction with an anticipated first fire in May 2010 and a commercial online date in August 2010.

The HBGS is subject to permitting requirements of the North Coast Unified Air Quality Management District (NCUAQMD), and the original permit conditions are in the Energy Commission Decision. In response to PG&E's petition, the NCUAQMD recently completed its public process to modify the HBGS Authority to Construct (ATC) permit (NCUAQMD 2009). The public comment period for the draft NCUAQMD permit closed on October 19, 2009. Energy Commission staff provided comments by email on October 19, and the district fully addressed staff's comments. In a separate process, the NCUAQMD revised the existing power plant's operating permit to reflect the new equipment and requirements. This assessment reflects the changes made by NCUAQMD in response to the public and staff comments on the ATC as well as the appropriate revisions to reflect the NCUAQMD's recent significant modification to the Title V Permit to Operate (PTO) (NCUAQMD 2010).

This staff analysis evaluates the consistency of the proposed changes with the Energy Commission's 2008 decision, whether the project, as modified, would remain in compliance with applicable laws, ordinances, regulations, and standards, and whether the proposed modifications would result in a significant adverse direct or cumulative impact to the environment [Title 20, California Code of Regulations, section 1769(a)(2) and (a)(3)].

PG&E proposes to (PG&E 2009a):

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

This analysis includes an update of relevant setting information and a discussion of the emissions and impacts related to the amendment. Many conditions have been revisited by the district. The complete revisions required by the district are shown in this analysis. Most conditions have been renumbered. This analysis finds that changes requested by PG&E would conform with applicable federal, state, and local, namely NCUAQMD, air quality laws, ordinances, regulations, and standards, and the amended project would not cause significant air quality impacts, provided that the recommended conditions of certification are included as provided below.

LAWS, ORDINANCES, REGULATIONS AND STANDARDS (LORS) COMPLIANCE

No LORS applicable to the project have changed since the Commission decision was published in September 2008 (NCUAQMD 2009 and NCUAQMD 2010).

ANALYSIS

In addition to the four basic ways described above in which PG&E's proposal (PG&E 2009a) would amend the current air quality and public health conditions of certification, there are many other changes that PG&E would like to make that are illustrated in **Air Quality Amendment Table 1**. PG&E's stated reasons range from improving the consistency and clarity of the requirements to revising the means of demonstrating compliance so that the facility can be operated more flexibly. The proposed changes would not alter the allowable emissions, but they would change how PG&E demonstrates compliance with allowable emission limits. This staff assessment finds the proposed changes as being within the four categories above.

Air Quality Amendment Table 1,
PG&E's Proposed Changes to HBGS Permit Conditions

PG&E's Proposed Change	PG&E's Stated Reason for Change	Original Conditions Affected
Clarify the type of permit and provide mechanism for renewal/extension	ATC is not a Title V permit. ATC would expire by October 2009 unless renewed; commercial operation not expected until August 2010.	Various Conditions including AQ-2, AQ-69, AQ-70
Revise the definitions for "Operational Minute" and "Operational Mode Transfer"	Clarify applicability of Operational Minute and Operating Hour requirements to emissions and operating limits.	Definitions in NCUAQMD Permit

Revise the procedure for monitoring ammonia slip	Allow use of feedback ammonia control system; control ammonia injection rates and ammonia slip levels by developing correlations during source testing between ammonia injection rates and the NOx concentrations monitored at the stack.	AQ-87; new condition AQ-160
Revise limitations on emissions and operations during the commissioning period	Make the limits consistent with the required commissioning procedures for the engines and with other emissions limitations in the permit, based on more realistic assumptions regarding the time required for commissioning activities. No increases in maximum hourly, daily or annual emissions upon which ambient air quality analyses were based.	AQ-118, AQ-119, AQ-120
Add exceptions for the commissioning period to various operational conditions	Need for operational flexibility during commissioning (low-load operation, startups/shutdowns, oxidation catalyst temps).	AQ-91, AQ-92, AQ-134, AQ-135, AQ-136, AQ-137, AQ-140, AQ-141
Add provision for alternative compliance plan for compliance with PM2.5 limits	Allow the fuel use limits to be changed administratively if PG&E can demonstrate that the higher fuel use limits, combined with lower emission limits, will ensure continued compliance with the daily PM10 emission limits.	AQ-96, AQ-98
Revise conditions related to compliance with daily PM10 limit during Diesel mode operation	Eliminate the daily engine-hour limit and replace it with a procedure for calculating daily PM emissions based on Operating Minutes. Eliminate the requirement to use the highest PM emission rate identified during testing for all engines.	AQ-104
Clarify timing requirements for submitting revised HRA protocol and Health Risk Assessment	Require the submittal of the revised HRA "no later than 3 months following approval of the protocol" to ensure that agency delays do not cause PG&E to violate a permit condition.	AQ-155, AQ-156
Clarify timing for requirements related to ambient and meteorological monitoring stations	Clarify 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.	AQ-176, AQ-177
Miscellaneous cleanup amendments	Correct typographical errors, minor inconsistencies, and erroneous references to avoid potential noncompliance due to lack of clarity.	AQ-74, AQ-88, AQ-105, AQ-122, AQ-138(b), AQ-151, AQ-164

Source: PG&E Summary of Proposed Amendments to Air Quality Conditions, May 2009.

Other permit changes would be minor and/or administrative in nature. They are discussed in more detail in PG&E's petition and the supporting filings with the NCUAQMD. This analysis concludes by showing the current COCs and how this license amendment would change the COCs.

PROPOSED CHANGES TO REFLECT AIR PERMIT TYPE

Title V Permit to Operate Required at Startup

The permit issued by NCUAQMD in 2008 showed "Title V Permit to Operate" on its title page (original **AQ-2** and **AQ-4**). This was a reference to the federal operating permit program pursuant to Title 40 of the Code of Federal Regulations, Part 70 (40 CFR 70) and NCUAQMD Regulation V. These were identified as applicable regulations in the Energy Commission Final Staff Assessment (CEC 2008a). Staff found that HBGS would likely comply with the requirements.

Because PG&E currently holds a Title V Permit to Operate for the existing boilers and combustion turbines at the existing Humboldt Bay Power Plant (HBPP Unit #1, Unit #2, and MEPPs), NCUAQMD rules require that PG&E file an application to modify the

existing Title V Permit to Operate after obtaining the "preconstruction" permits for the HBGS, *i.e.*, after the obtaining the ATC. After the Authority to Construct was issued for HBGS in 2008, PG&E did submit (in February 2009) an application for a significant modification to the existing Title V Permit to Operate for HBPP. The NCUAQMD subsequently proposes to clarify conditions and the title page of the construction permit to indicate that it is an ATC and a Temporary Permit to Operate, thus allowing initial operation of the HBGS (consistent with NCUAQMD Rule 501 and Rule 502, which allows an application shield). A valid Title V Permit to Operate must be obtained before normal operation (revised **AQ-6**). The district subsequently issued a draft of the Title V permit in October 2009 and sent the proposed Title V permit to U.S. EPA for review on December 18, 2009. The U.S. EPA review ended with the significant modification to the Title V permit dated February 8, 2010 Conditions shown in this staff assessment reflect the ATC conditions with the appropriate revisions reflecting the February 8, 2010 Title V Permit to Operate.

Shutdown of Existing Emission Units Required and Timing

The permit issued by NCUAQMD in 2008 specified an expiration date of 18 months after issuance (original **AQ-69** and **AQ-70**), but the PG&E construction schedule for HBGS has involved only reasonable and minor delays of a nature that would be allowed by 40 CFR 52.21(r)(2), regarding expiration of permits in the Prevention of Significant Deterioration program (PSD). The NCUAQMD proposes to adjust the requirements for timely construction (revised **AQ-2** and **AQ-65**), and staff finds that no additional impacts would be likely as a result of this change.

PROPOSED CHANGES TO LIMITATIONS DURING COMMISSIONING

Emissions Limitations for NOx during Commissioning

The 2008 staff analysis and permit included a facility-wide emission limit on nitrogen oxides (NOx) of 392 lb/hr during routine operations (in original **AQ-92**) that was less stringent than that for commissioning (323.3 lb/hr in original **AQ-118**, **AQ-119**, and **AQ-120**). The new version of the 392 lb/hr NOx cap on routine operation (revised as **AQ-87**) would be much simpler than the original, which had a complex alternative compliance strategy. Commissioning activities would be carefully managed to ensure commissioning emissions remain under this cap (in revised **AQ-114**, **AQ-115**, and **AQ-116**).

The 392 lb/hr NOx limit is set based on routine operation of all ten engines, and it includes certain operational restrictions that could be translated to restrictions for commissioning. Revised condition **AQ-87** still includes a prohibition of no more than two units in a diesel startup period during any hour, where a startup with more than two minutes in diesel mode is defined as a diesel mode startup. Achieving the NOx emission limit for all ten engines requires "managing" operation because of the potential impact to nitrogen dioxide (NO_2) concentrations should higher NOx emissions occur (as was shown in modeled impacts of the AFC Revision, Table 8.1B-11C, September 2007).

The original limit of 392 lb/hr NOx remains in place. It was derived in 2007 and 2008 after extensive dispersion modeling to determine compliance with the most-stringent 1-

hour standard for NO_2 (as described in CEC FSA 2008a and PG&E 2007). It used the then-best-available background ambient air quality data, mainly from Ukiah. The highest NO_2 impacts occur with high ozone concentrations, which allow the NO_2 to form from project NOx. Newer ambient air quality data is available from Eureka for the background NO_2 and ozone concentrations.[1] Although the dispersion modeling was not revisited for this amendment, the newer background data confirms that much lower ozone concentrations occur in Eureka than in Ukiah. Eureka's lower peak ambient ozone concentrations have the effect of limiting formation of NO_2 from NOx. This means that the project's NO_2 impacts are likely to be lower than those shown in the May 2008 Final Staff Assessment.

Because the 392 lb/hr NOx limit applies to all routine operation, PG&E proposes to also use this limit during commissioning activities. NCUAQMD proposes certain operational restrictions (in revised **AQ-113** and **AQ-114**) so HBGS would be likely to comply with the 392 lb/hr NOx emission limit during commissioning, and the continuous monitors for NOx would be installed and operational during commissioning to help track compliance (**AQ-111**). However, since commissioning involves such a wide range of activities, additional operational restrictions may be appropriate. Staff recommended that the district establish conditions so that no diesel mode starts would be allowed for any unit that has completed commissioning while non-commissioned units are operating, and this is shown in revised **AQ-114**. Staff finds that no additional NO_2 impacts would occur during commissioning, beyond those previously shown for diesel mode, as a result of the proposed changes.

Exceptions Allowed During Commissioning

Original ATC conditions specify how the facility would need to be operated to achieve the performance anticipated by oversight agencies (in original **AQ-92** and various other operational limits in original **AQ-134**, et al.). Many of these original conditions do not clearly exclude the commissioning phase from the requirements that otherwise apply during routine operation. PG&E proposes to add clarifying statements throughout the conditions to eliminate potentially conflicting operational requirements. The NCUAQMD proposes to include PG&E's changes (revised as **AQ-87** and **AQ-126**, et al.). Staff finds that no additional impacts would occur as a result of the changes.

PROPOSED CHANGES TO LIMITATIONS ON PROJECT OPERATION

Definition of "Operational Minute" and "Operational Mode Transfer"

The original ATC conditions included a definition for "Operational Mode Transfers," or fuel switching between the natural gas/diesel pilot mode and the diesel mode. Operational mode would be tracked for every minute, and one minute of diesel mode operation during a clock hour would qualify the entire hour as operating in diesel mode for purposes of determining compliance with emission limits. This originally allowed higher hourly emission limits to apply, even if diesel mode was only used for one minute in an hour. The proposed changes would instead apply a minute-by-minute emission factor during diesel mode for determining compliance with daily particulate matter limits (in revised **AQ-97** and **AQ-98**). This satisfies the need to limit daily diesel particulate

[1] See: http://www.arb.ca.gov/adam/welcome.html, accessed February 2010.

matter emissions, but it raises a new concern on determining compliance with other emission limits on an hour-by-hour basis.

The original conditions required that electronic monitoring of emissions be recorded at least once every 15 minutes (original **AQ-116** and **AQ-151**, revised **AQ-112** and **AQ-146**). Emission limits are higher for diesel mode (ATC Table 5.3) than natural gas mode (ATC Table 5.1), but none of the emission limits apply on a shorter basis than a one-hour averaging period. Rapid fuel switching between modes in an hour is not expected to occur often because of the basic prohibition on diesel mode operation except during natural gas curtailments (in **AQ-126**). Staff recommended that the district clarify its definition of mode transfers, and the district's definitions now confirm that more than two minutes in diesel mode triggers the higher emission limits for the given hour (NCUAQMD 2009). These changes should simplify compliance verification.

Revise Ammonia Slip Monitoring Method

The original permit condition (original **AQ-87**) for ammonia slip monitoring requires tracking of nitrogen oxides (NOx) at the inlet to the selective catalytic reduction (SCR) system, but the final design of the engines and emission control systems do not include upstream and downstream NOx monitoring. Instead, PG&E proposes to monitor injection of ammonia with a correlation of that injection rate to an emission rate (revised as **AQ-82** and **AQ-161**), verified by annual or more frequent source tests (revised **AQ-159** and **AQ-162**). Staff finds that no additional impacts would be likely as a result of this change.

Alternative Compliance Methods for Particulate Matter

The original limitations on fuel use (original **AQ-96** and **AQ-98**) help to ensure that the facility does not cause excessive particulate matter emissions, including inhalable particulate matter, less than 10 microns in diameter (PM10) and fine particulate matter, less than 2.5 microns in diameter (PM2.5). PG&E proposes adding language to allow changing the fuel use limits after performance test results become known. However, the NCUAQMD does not propose to change the conditions, noting that PG&E may apply for such modifications after the performance tests. Thus, no change to the fuel use limits would occur.

The facility wide PM10 emission limit for each calendar day (original **AQ-104**) minimizes the project's impact to ambient air quality concentrations of PM10 in the vicinity of the HBGS. PG&E is limited in the number of hours it may operate in diesel mode as part of this emission limit. PG&E proposes adding language to calculate the number of operating hours in terms of minutes and removing the prescriptive language on how alternative compliance demonstration methods might be developed. Operating minutes in natural gas or diesel mode are monitored and recorded (original **AQ-151**, revised **AQ-146**). NCUAQMD proposes to accept these changes because PG&E would maintain the option to apply for alternate PM10 compliance limits after performance tests, subject to agency approval. No change in impacts would be likely.

Requirements for Ambient and Meteorological Monitoring Stations

The permit issued in 2008 (original **AQ-176** and **AQ-177**) requires PG&E to fully fund the installation of a new ambient air quality data monitoring station and a new meteorological monitoring station at a location designated by the NCUAQMD Air Pollution Control Officer (APCO). The NCUAQMD and PG&E agree that costs for these new stations should be invoiced to PG&E as their development occurs, which improves how agency and project owner finances are used (revised **AQ-172** and **AQ-173**). No change in impacts would be likely.

PROPOSED CHANGES RELATED TO PUBLIC HEALTH CONDITIONS

Clarify Timing of Revised Health Risk Assessment

PG&E must submit a protocol for conducting a revised health risk assessment (HRA) and the NCUAQMD would be expected to review and potentially approve the protocol, but the original permit conditions do not specify that the protocol must be approved by the NCUAQMD (original **AQ-155** and **AQ-156**). PG&E proposes to revise the conditions so that the requirement to submit the assessment follows NCUAQMD approval of the protocol (**AQ-150** and **AQ-151**). This change would not cause any additional impact.

PG&E also requested that Energy Commission staff make changes to the "verification" parts of Conditions of Certification **Public Health-1** and **Public Health-2**, regarding use of performance tests in preparing the revised HRA; this proposal was made in email filings separate from the Petition to Amend the Air Quality Conditions (PG&E 2009b). Staff proposes to update these **Public Health** conditions because they refer to an outdated air quality condition, and staff proposes to revise how the test data from the engines would be gathered so the requirements are more consistent with the testing requirements established by the ATC.

ADMINISTRATIVE CHANGES TO AIR QUALITY CONDITIONS

PG&E proposes to make various cleanup amendments (original **AQ-74**, **AQ-88**, **AQ-122**, **AQ-138**, et al.) to correct typographic errors and inconsistencies. For example, original condition **AQ-138** included a typo, revised as **AQ-133**. The prohibition on diesel mode operation set by staff in Condition of Certification **Public Health-1** remains in place, which is more stringent than the limit of 1,000 hours in **AQ-133**.

CONCLUSIONS

The requested changes in permit conditions would conform with applicable federal, state, and NCUAQMD air quality laws, ordinances, regulations, and standards. Staff finds that the amended project would not cause significant air quality impacts, provided that the following conditions of certification are included. These conditions are based on the NCUAQMD revised Authority to Construct released December 2, 2009 with minor revisions to reflect the February 8, 2010 Title V Permit to Operate. Staff recommends that the revised COCs be approved as shown below.

PROPOSED CHANGES TO THE CONDITIONS OF CERTIFICATION

This analysis shows all original 177 air quality conditions, revised to 173, related to operations as in the current license (06-AFC-07C) including the changes resulting from the proposed amendment. The proposed amendment would not affect existing conditions **AQ-SC1** through **AQ-SC9** generally related to construction, reporting, and recordkeeping. The complete revisions to the **Air Quality** and **Public Health** conditions are shown here.

Deleted text is shown in ~~strikethrough~~, and added text is **underlined and bold**.

DISTRICT-RECOMMENDED CONDITIONS OF CERTIFICATION

FEDERALLY ENFORCEABLE GENERAL REQUIREMENTS

~~TITLE V~~ PERMIT MODIFICATIONS AND RENEWAL

AQ-1 **The permittee shall submit to the Air Pollution Control Officer (APCO) a completed Title V permit application for renewal no earlier than September 17, 2011 (18 months prior to the expiration date of the Title V permit) and no later than September 17, 2012 (6 months prior to the expiration date of the Title V permit). [District Rule 502 §2.2; 40 CFR 70.5(a)(1)(iii)]** ~~This~~ **The Authority to Construct** permit shall serve as the Prevention of Significant Deterioration preconstruction permit for the sources identified herein, and is issued pursuant to ~~40 Code of Federal Regulations (C.F.R.), 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 § 2.2 (5/19/05)] [40 C.F.R. 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. Upon completion of the construction and the commissioning phase for the internal reciprocating engines, the Permittee shall submit a Title V Permit to Operate application to the Air Pollution Control Officer. [NCUAQMD Reg 5 Rule 405(b)] [NCUAQMD Reg V Rule 502 § 2.23 (5/19/05)] [40 C.F.R. 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 commissioning.~~

AQ-2~~3~~ If modifications to the permit 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 **Rule 102** ~~Reg 5 Rule 405(c)~~] [NCUAQMD Reg V Rule 502 §2.3 ~~(5/19/05)~~] [40 C.F.R. 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-3 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)]

~~**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 C.F.R. 70.5(b).]~~

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

AQ-4~~5~~ The permittee ~~A Permittee's responsible official~~ shall promptly provide additional information in writing to the APCO upon discovery of the 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 **Rule 103 Section 6.0** ~~Reg 5 Rule 420(c)~~] ~~[NCUAQMD Reg V Rule 502 §§ 5.1, 5.3, 5.4 (5/19/05)] [40 C.F.R. 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-5~~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 APCO. [NCUAQMD **Rule 103 Section 6.0** ~~Reg 5 Rule 420(b)~~] ~~[NCUAQMD Reg V Rule 502 § 5.2 (5/19/05)] [40 C.F.R. 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-6 Prior to first operation of the equipment authorized pursuant to this permit, the permittee shall possess a valid Title V Permit to Operate for the engines. [NCUAQMD Regulation V Rule 501]

Verification: The project owner shall make the site available for inspection by representatives of the district, California Air Resources Board (ARB), and Commission upon request.

~~**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 § 1.2, 1.3, and 1.4] [40 C.F.R. 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 1 through June 30 and July 1 through December 31 of each year; statements on compliance status with any applicable enhanced monitoring; and annual compliance plans, no later than January 30 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 § 4.13 (5/19/05)] [40 C.F.R. 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 5 years. [NCUAQMD Reg 5 Rule 660] [NCUAQMD Reg V Rule 504 § 11 (5/19/05)] [40 C.F.R. 70.6(a)(2).]~~

~~**Verification:** No verification needed.~~

COMPLIANCE

AQ-7~~10~~ The permittee shall comply with all conditions of the ~~Title V~~ permit. [NCUAQMD **Rule 105** ~~Reg 5 Rule 610(g) (1)~~] [NCUAQMD ~~Reg V~~ Rule 504 §2.7~~.~~]

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

~~**AQ-11** Compliance with the conditions of this Title V permit shall be deemed in compliance with all applicable requirements identified in the Title V permit. [40 C.F.R. 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 Title V permit. [NCUAQMD Reg 5 Rule 610(g) (4)] [NCUAQMD Reg V Rule 504 § 2.7.4 (5/19/05).]~~

~~**Verification:** No verification needed.~~

AQ-8~~13~~ This ~~Title V~~ permit may be modified, revoked, reopened, and reissued or terminated for cause. [NCUAQMD ~~Reg I~~ Rule 102 ~~Reg 5 Rule 570(a) and (b)~~] ~~[NCUAQMD Reg 5 Rule 503 § 9 (5/19/05).]~~

Verification: No verification needed.

AQ-9~~14~~ The permittee shall furnish to the APCO, within 10 (ten) days of the request, any information that the APCO 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 APCO 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. [**District Rule 103 Section 6** ~~40 C.F.R. 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 APCO.

AQ-10~~15~~ Noncompliance with any federally enforceable requirement in this ~~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 **Rule 102 Section 9** ~~Reg 5 Rule 610(g) (3)~~] ~~[NCUAQMD Reg 5 Rule 504 § 2.7.3 (5/19/05).]~~

Verification: No verification needed.

AQ-11~~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 **Rule 102 Section 5.0** ~~Reg 5 Rule 610(g) (5)~~] ~~[NCUAQMD Reg 5 Rule 504 § 2.7.5 (5/19/05).]~~

Verification: No verification needed.

AQ-12~~17~~ This **Authority to Construct/PSD** ~~Title V~~ permit does not convey any property rights of any sort or any exclusive privilege. [NCUAQMD **Rule 102 Section 5.0** ~~Reg 5 Rule 610(g) (2)~~] ~~[NCUAQMD Reg V Rule 504 § 2.7.2 (5/19/05).]~~

Verification: No verification needed.

AQ-13~~18~~ Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the APCO 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 **Authority to Construct/PSD** ~~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 **Rule 109 and Rule 504 § 2.5** ~~Reg 5 Rule 610(e)~~] [~~NCUAQMD Reg V Rule 504 § 2.5 (5/19/05).~~]

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

REPORTS AND RECORDKEEPING

AQ-14~~19~~ Monitoring Reports

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

B. The reporting periods for this permit shall be for the six month periods January 1 through June 30 and July 1 through December 31. The reports shall be submitted by July 30 and **March 1** ~~January 30~~ 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 **Rule 103 Section 6** ~~Reg 5 Rules 460 and 625~~] [NCUAQMD ~~Reg V~~ Rule 502 §11 and Rule 504 §5 and ~~(5/19/05~~)] [40 C.F.R. 70.6(a)(3)(ii) and (iii).]

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

AQ-15~~20~~ Compliance Reports

A. The permittee shall submit to the APCO 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 ~~Title V~~ permit, including emission limitations, standards and work practices.

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

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

2. 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.

3. 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 (2) of this condition.

4. Such other facts as the APCO may require in order to determine the compliance status of the source.

5. A method for monitoring the compliance of the stationary source with its emissions limitations, standards, and work practices. [NCUAQMD **Rule 102 Section 5.0** ~~Reg 5 Rule 650~~] [NCUAQMD ~~Reg V~~ Rule 504 § 10 ~~(5/19/05)~~] [~~40 C.F.R. 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-16~~21~~ The permittee shall report within 24 hours of detection any deviation from a federally enforceable **Authority to Construct/PSD** ~~Title V~~ permit condition not attributable to an emergency. In order to fulfill the reporting requirement of this condition, the permittee shall notify the APCO by telephone followed by a written statement describing the nature of the deviation from the federally enforceable permit condition. [NCUAQMD **Rule 102 Section 5.0** ~~Reg 5 Rule 625~~] [NCUAQMD ~~Reg V~~ Rule 504 Section 5 ~~(5/19/05)~~] [40 C.F.R. 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-17~~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 **Authority to Construct/PSD** ~~Title V~~ permit. [NCUAQMD **Rule 102 Section 5.0** ~~Reg. 5 Rules 455 and 615~~] [NCUAQMD ~~Reg. V~~ Rule 502 Section 10 ~~and Rule 504 Section 3 (5/19/05)~~] [40 C.F.R. 70.6(a)(3)(ii)]

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

PUBLIC NUISANCE

AQ-18~~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 **Rule 104 Section 1.1** ~~Reg. 1 Rule 400(a).~~]

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

VISIBLE EMISSIONS

AQ-19~~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 more than three minutes in any one hour which is:

A. As dark or darker in shade as that designated No. 2 (**3~~6~~**-minute average), on the Ringelmann Chart, as published by the United States Bureau of Mines, or

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 **forty percent (40%) opacity** ~~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, ARB, and Commission upon request.

PARTICULATE MATTER

AQ-20~~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 **New Source Performance Standards (**NSPS**) (District Rule 104 Section 11.0)** ~~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		Emission	Process Weight Rate		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-159~~164~~**.

AQ-21~~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, ARB, and Commission upon request.

SULFUR COMPOUNDS

AQ-22~~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-159~~164~~**.

OPEN BURNING

AQ-23~~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 APCO. [NCUAQMD ~~Reg 2~~ Rules 200 & 201.]

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

EQUIPMENT BREAKDOWNS

AQ-24~~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 APCO a signed contemporaneous log or other relevant evidence which demonstrates that:

1. An emergency occurred.
2. Identification of the cause(s) of the emergency.
3. The facility was being properly operated at the time of the emergency.
4. Identification of each and every step taken to minimize the emissions resulting from the emergency.
5. Within two working days of the emergency event, the permittee shall notify the APCO 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 **Rule 105 Section 5.0** ~~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-25~~30~~ The permittee ~~of this Title V source~~ **shall not** allow~~ing~~ or **cause** ~~causing~~ the opening of appliances containing **chlorofluorocarbons (**CFCs**)** for maintenance, service, repair, or disposal **unless first complying** with the required practices set out ~~in and~~ pursuant to 40 C.F.R. 82.156. [40 C.F.R. 82 Subpart F.]

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

AQ-26~~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 C.F.R. 82.158. [40 C.F.R. 82 Subpart F.]

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

AQ-27~~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 C.F.R. 82.161. [40 C.F.R. 82 Subpart F.]

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

ASBESTOS

AQ-28~~33~~ The permittee ~~of this Title V source~~ shall comply with the standards of 40 C.F.R. 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 Commission upon request.

PAYMENT OF FEES

AQ-29~~34~~ The permittee ~~of this Title V source~~ shall pay an annual permit fee and other fees as required in accordance with NCUAQMD **Rules** ~~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 Permit** effective on the date the fees were due, and on notification by the APCO 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 by the NCUAQMD and the U.S. EPA pursuant to Section 502(a) of the Clean Air Act as amended in 1990. [NCUAQMD **Regulation IV Rule 406** ~~Reg. 5 Rule 670.~~]

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-15~~20~~**).

ACCIDENTAL RELEASES

AQ-30~~35~~ If subject to Section 112(r) of the Clean Air Act (CAA) and 40 C.F.R. 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 C.F.R. Part 68.]

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

AQ-31~~36~~ If subject to Section 112(r) of the CAA and 40 C.F.R. Part 68, the permittee shall comply with the requirements of 40 C.F.R. Part 68 no later than the latest of the following dates as provided in 40 C.F.R. 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 C.F.R. Part 68.]

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

AQ-32~~37~~ If subject to Section 112(r) of the CAA and 40 C.F.R. 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 C.F.R. Part 68. ~~[40 C.F.R. Part 68.]~~

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

AQ-33~~38~~ If subject to Section 112(r) of the CAA and 40 C.F.R. 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 30 of each year. [40 C.F.R. 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-34~~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 APCO 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 APCO within 30 (thirty) days of transfer of ownership. [NCUAQMD **Rule 102 Section 5.0** ~~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-54~~59~~**).

SEVERABILITY

AQ-35~~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 **Rule 102 Section 5.0** ~~Reg. 5 Rule 610(h)~~] [~~40 C.F.R. 60.6(b)(5).~~]

Verification: No verification needed.

LOCAL ENFORCEABLE ONLY, GENERAL REQUIREMENTS

APPLICABILITY

AQ-36~~41~~ The requirements outlined in this section are non-federally enforceable local permit requirements. [NCUAQMD Rule 102]

Verification: No verification needed.

AQ-37~~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 APCO.

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

AQ-38~~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-39~~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-40~~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-41~~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-42~~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-43~~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-44~~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: The project owner shall submit to both the district and CPM the applications for permit modifications as needed.

AQ-45~~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-46~~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 Commission upon request.

AQ-47~~52~~ This permit does not convey any property rights of any sort, or any exclusive privilege.

Verification: No verification needed.

AQ-48~~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 Commission upon request.

AQ-49~~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 Commission upon request.

AQ-50~~55~~ **The permit conditions shall be liberally construed for the protection of the health, safety and welfare of the people of the NCUAQMD.** In the event that two or more conditions may apply, and such conditions both cannot apply without conflict, the condition(s) most **restrictive** ~~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-51~~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-52~~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 Commission upon request.

AQ-53~~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-15~~20~~**).

AQ-54~~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-34~~39~~**).

AQ-55~~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-34~~39~~**).

AQ-56~~61~~ For purposes of this permit, the terms identified in the Definition Section shall have the meaning set out **in District Rule 101 and as defined in the Definition section of this permit. In the event of any conflict between Rule 101 and the permit definitions, the Definitions section of this permit shall prevail** ~~therein~~. [NCUAQMD Rule 102 §5.0.]

Verification: No verification needed.

EMISSIONS & OPERATION

AQ-57~~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, regulations or statutes of other governmental agencies.

Verification: No verification needed.

AQ-58~~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. **The opacity limitation is in effect at all times, including but not limited to startup, shutdown, and malfunction.** [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 Commission upon request.

AQ-59~~64~~ Permittee shall not discharge into the atmosphere from any source whatsoever any air contaminant for a period or periods 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. [**California Health and Safety Code (**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 Commission upon request.

AQ-60~~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 Commission upon request.

AQ-61~~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 Commission upon request.

RECORDS & TRAINING

AQ-62~~67~~ The permittee shall provide training and instruction to all **affected** 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 Commission upon request.

AQ-63~~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-64~~69~~ **Title V 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 for renewal has been submitted in accordance with District Rule 502 §2.2, in which case the existing Title V permit will remain in effect until the Title V permit renewal has been issued or denied. [40 CFR 70.7(c) (1) (ii)]** ~~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 pursuant to NCUAQMD Rule 110 §9.6.~~

Verification: No verification needed.

AQ-65~~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-66~~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&S §42301.1; NCUAQMD Rule 102 §2.0.]

Verification: No verification needed.

FEDERALLY ENFORCEABLE, EQUIPMENT-SPECIFIC REQUIREMENTS

AUTHORIZED EQUIPMENT

AQ-67~~72~~ The permittee shall install and construct the project as described in Authority to Construct application September 29, 2006 and its series of amendments ending with the most recent submittal of **April 6, 2009**~~February 27, 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 1.0
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 **Reciprocating** IC Engine powering a 350kW electrical generator	469 HP
S-12	Clarke/John Deere JU6H-UF50 (or equivalent) Diesel-fired Emergency **Reciprocating** 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: 13ppmvd CO @15%O_2 while in NG Mode; 20ppmvd CO @15%O_2 while in diesel mode
Selective Catalytic Reduction System	HUG Engineering (or equivalent)	RFV-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: 6ppmvd NOx @15%O_2 while in NG Mode; 35ppmvd 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 Commission upon request.

AQ-68~~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	20201607

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

AQ-69~~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 ~~1.4~~ 2.3
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-70~~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/diesel pilot 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 percent 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 Commission upon request.

AQ-71~~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 Commission upon request.

AQ-72~~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 Commission upon request.

AQ-73~~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 Commission upon request.

AQ-74~~79~~ The reciprocating engines S-11 and S-12 shall be certified to meet the EPA Tier 3 emission levels. **The permittee shall submit documentation of EPA Tier 3 certification a minimum of 30 days prior to installation of the devices.** [40 C.F.R. 60 Subpart IIII]

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

AQ-75~~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-76~~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-77~~82~~ The permittee's request for approval of an equivalent engine shall be submitted to the NCUAQMD at least **thirty (30)** ~~90~~ days prior to the planned installation date. The permittee shall also notify the NCUAQMD at least **ten (10)** ~~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~~ **thirty (30)** days prior to the planned installation date.

AQ-78~~83~~ The permittee shall install exhaust gas temperature monitoring devices at the inlet and the outlet of the oxidation catalyst. [40 C.F.R. §63.6625; BACT]

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

AQ-79~~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 percent 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 percent requirement. [NCUAQMD Rule 102 §5.0]

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

AQ-80~~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 O_2 analyzer. Sample collection ports shall be located in accordance with 40 C.F.R. 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 Commission upon request.

AQ-81~~86~~ Each reciprocating engine **S-1 through S-10** shall be equipped with a continuous emission monitor (CEM) for NOx, CO, and O_2. Continuous emissions monitor(s) shall meet the requirements of 40 C.F.R. 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 shutdown periods. [NCUAQMD Regulations Appendix B]

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

AQ-82~~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 rates, and corresponding ammonia emission concentration** ~~The maximum allowable NH3:NOx molar ratio~~ shall be determined **for each fuel in accordance with the Testing and Compliance Monitoring section of this permit** ~~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-83~~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 PM_{10} 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 the ~~existing facility and all emission units permitted under Title V Permit To Operate NCU 059-12~~ **NCUAQMD Permit Units No. NS-020 (Boiler #1), NS-021 (Boiler #2) and NS-057 (Turbines #2 and #3)** in accordance with **the Startup, Commissioning & Simultaneous Operation**

section of this permit ~~Condition #110~~. [40 C.F.R. 51, Appendix S; NCUAQMD Rule 110]

Table 3.0
HBRP Required Offsite Offsets By Quarter

	Pollutant Quantities in Tons			
Pollutant	**1st Quarter**	**2nd Quarter**	**3rd Quarter**	**4th Quarter**
PM_{10}	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 CONDTIONS

AQ-8~~489~~ 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 CO_2 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-159~~164~~**.

AQ-85~~90~~ The permittee shall not discharge sulfur dioxide into the atmosphere **from reciprocating engines S-1 through S-12 such** in excess of 1000 ppmv **for any single device** or **more than** 40 tons per year **as a combination of all devices**. [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-159~~164~~**.

AQ-86~~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 Ringelmann Chart, or of such opacity so as to obscure an observer's view to a degree equal to or greater than 20 percent, for any period or periods 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 Commission upon request.

AQ-87~~92~~ The permittee shall not operate reciprocating engines S-1 through ~~S-10~~ **S-12** 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:~~ **[NCUAQMD Rule 102 §5.0]**

~~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, the permit limitation on the number of Diesel Mode Startups 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 would allow an exceedance of any emission limitation. [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-88~~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 **for each engine**. [NSPS 40 C.F.R. 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-159~~164~~**.

AQ-89~~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% O_2. [40 C.F.R. 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-159~~164~~**. 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

AQ-90~~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	Heat Input, MMBtu (HHV) Calendar Day ~~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	3,574

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-91~~96~~ 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 4.1 below calculated as a sum of all 10 engines. **Fuel combusted during compliance testing shall not accrue toward the limitations established in this condition.** [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-92~~97~~ 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 **the modes listed below** ~~natural gas mode~~. **Fuel combusted during compliance testing shall not accrue toward the limitations established in this condition.** [NCUAQMD Rule 102 §5.0]

A. Natural Gas Mode.

Table 4.2
Diesel Fuel Firing Limitations (Pilot)

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

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 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]~~

B. Diesel Mode.

Table 4.3
Diesel Fuel Firing Limitations

Engines S-1 Through S-10	Gallons of Diesel Fuel		
	Hourly 3 hr rolling average	Daily (Calendar Day) ~~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 percent 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**).

POLLUTANT LIMITATIONS

S-1 – S-10 Startup & Shutdown Periods

AQ-93~~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-94~~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 C.F.R. 63.6(f)(1), NCUAQMD Rule 102 §5.0]

Table 5.1
Natural Gas Mode Emission Limits – per engine

Pollutant	Emission Rate		
	ppmvd @ 15% O_2	lb/hr	lb/MMBtu
CO	13	4.13	0.029
NH_3	10	1.9	0.013
NOx	6.0	3.1	0.022
PM_{10}	-	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-95~~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
NH_3	456
NOx	1,360
PM_{10}	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-96~~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 C.F.R. 63.6(f)(1), NCUAQMD Rule 102 §5.0.]

Table 5.3
Diesel Mode Emission Limits – per engine

Pollutant	Emission Rate		
	ppmvd @ 15% O_2	lb/hr	lb/MMBtu
CO	20.0	6.9	0.047
NH_3	10	2.1	0.014
NOx	35.0	19.9	0.134
PM_{10}	-	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-97~~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	Diesel Particulate Matter (pounds)		
	Hourly 3 hr rolling average	Daily (Calendar Day) ~~24 hour rolling average~~	Annual 365 day rolling average
Per Engine	5.56	133.4	—
All Combined	55.6	1,334	5,560

~~**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
NH_3	506
NOx	9,103
PM10	1,542
ROC	2,183
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**).

AQ-98 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 **calculate and record PM10 emissions from each engine for each calendar day as follows: 0.180 pounds per minute times the number of operational minutes in diesel mode during that calendar day; plus 0.060 pounds per minute times the number of natural gas mode operational minutes during that calendar day. In no event shall the permittee** ~~not~~ operate ~~reciprocating~~ **the** engines ~~S-1 through S-10~~ **such that their combined hours of operation** in diesel mode **exceed** ~~for more than~~ 142 ~~engine~~ hours per ~~day~~ **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:~~

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

~~B. 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~~

~~C. 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. 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 identified 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 would allow an exceedance of any emission limitation. 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-99~~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
NH_3	63.3
NOx	179.1
PM10	119.8
ROC	190.8
Sox	4.3

Verification: The project owner shall submit to the CPM and APCO the annual operational reports that include monitoring and compliance results (**AQ-SC9** and **AQ-15~~20~~**).

Engines S-11 and S-12

AQ-100~~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

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~~07~~ 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 and S-12 Combined Annual Emission Limits

Pollutant	Emission Rate lbs/Yr
CO	45
NOx	287
DPM	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 (**AQ-SC9** and **AQ-15~~20~~**).

STARTUP COMMISSIONING & SIMULTANEOUS OPERATION

AQ-102~~108~~ **The permittee shall discontinue operation of permit units** ~~This permit supplements existing NCUAQMD permit numbers for the HBPP of~~ NS-020 (Boiler #1), NS-021 (Boiler #2) and NS-057 (Turbines **#2 and #3**) **and shall surrender the Permits to Operate for these permit units within 180 days after initial startup of reciprocating engines S-1 through S-10**~~such time as the sources are decommissioned~~. [NCUAQMD Rule 102 §5.0]

Verification: No verification needed.

AQ-103 The permittee shall develop, implement, and maintain a written commissioning plan for reciprocating engines S-1 through S-10 that describes specific procedures to be followed during the commissioning period. The commissioning plan shall be submitted to the NCUAQMD at least thirty (30) days prior to the first operation of the first of reciprocating engines S-1 through S-10. 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. The plan shall provide that the reciprocating engines S-1 through S-10 shall be commissioned in two groups of five engines each; that each of the existing boilers [NCUAQMD Permit Units NS-020 (Boiler #1) and NS-021 (Boiler #2)] shall be replaced by one of the groups of engines; and that each boiler and its associated group of engines shall not be in operation simultaneously for more than 90 calendar days. Operation of a boiler and any of its associated engines for any portion of a calendar day shall accrue toward the maximum limit of 90 days applicable to that boiler. [NCUAQMD Rule 102 §5.0; Rule 110 Section 8.8]

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan at least 30 days prior to the first operation of the reciprocating engines.

AQ-104 The commissioning plan is subject to NCUAQMD review and approval. If the NCUAQMD does not act to approve, reject, or request additional information within thirty (30) days of receipt of the plan submitted by the permittee, the plan shall be considered to be approved. The permittee shall not commission reciprocating engines S-1 through S-10 unless an NCUAQMD approved commissioning plan is in effect. [NCUAQMD Rule 102 §5.0]

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan at least 30 days prior to the first operation of the reciprocating engines.

AQ-105~~113~~ In accordance with the NCUAQMD approved commissioning plan required under **the Startup, Commissioning & Simultaneous Operation section of this permit** ~~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]

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan as required in **AQ-103~~123~~**.

AQ-106~~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-107~~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-021 (Boiler #2) and NS-057 (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. **Commissioning activities may be further limited in scope and duration by the NCUAQMD approved commissioning plan.** [NCUAQMD Rule 110, Rule 102 §5.0]

Verification: The project owner shall surrender to the CPM and APCO the permits for **each existing boiler (NCUAQMD Permit Units NS-020 and NS-021) and the turbines (Permit Units NS-057)** ~~existing units~~ at Humboldt Bay Power Plant within 180 **days** after initial startup of the new reciprocating engines.

AQ-108~~111~~ Selective catalytic reduction (SCR) systems and oxidation catalysts shall serve each **of the reciprocating engines S-1 through S-10** ~~reciprocating engine~~ except as provided for in **the district-approved commissioning plan required under the Startup, Commissioning & Simultaneous Operation section of this permit** ~~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]

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-109~~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-110~~114~~ In accordance with the NCUAQMD approved commissioning plan required under **the Startup, Commissioning & Simultaneous Operation section of this permit** ~~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]

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan as required in **AQ-103~~123~~**.

AQ-111~~115~~ The continuous monitors specified in **the Authorized Equipment section of this** 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]

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

AQ-112~~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 Commission upon request.

AQ-113~~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-103~~123~~**.

AQ-114~~118~~ **A.** 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. ~~A.~~ Fire more than five uncontrolled reciprocating engines simultaneously.

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

B. When one or more reciprocating engines S-1 through S-10 are undergoing commissioning activities, including the test run and tune phase, the permittee shall not: ~~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.~~

a. Simultaneously operate more than five units which have not yet completed commissioning.

b. Operate in diesel mode startup any unit which has completed commissioning while there are any non-commissioned units in operation.

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan as required in **AQ-103~~123~~**.

AQ-115~~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
PM_{10}	54	1,296
ROC (as Methane)	86.6	1,559
SOx (SO_2)	2.0	48.4

Verification: The project owner shall submit to the CPM and APCO for approval the commissioning plan as required in **AQ-103~~123~~**.

AQ-116~~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 **the Pollutant Limitations section of this** 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 performance testing in accordance with the requirements of Testing and Compliance Monitoring section of this permit**. 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-103~~123~~**.

AQ-117~~121~~ Firing hours on 100 percent 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-103~~123~~**.

AQ-118~~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 **Pollutant Limitations section of this permit** ~~Condition #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-103~~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 C.F.R. 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-119~~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 C.F.R. 63 Subpart ZZZZ. This compliance plan shall provide for an initial performance test on each **of the reciprocating** engine**s S-1 through S-10** to demonstrate that each oxidation catalyst is achieving a minimum 70 percent 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 **Performance Specification (**PS**)** 3 and **PS** 4A of 40 C.F.R. 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~~ **40 C.F.R. 63 Subpart ZZZZ compliance** plan **no less than 90 days before operation** ~~as required in **AQ-123**~~. **If the district does not act to approve, reject, or request additional information within thirty (30) days of receipt of the plan submitted by the permittee, the plan shall be considered to be approved by the district.**

AQ-120~~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 C.F.R. 60 Subpart IIII. This compliance plan shall provide for an initial performance test on each **of the** reciprocating engine**s S-1 through S-10** to demonstrate compliance with the NOx and PM limitations of 40 C.F.R. §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~~ **40 C.F.R. 60 Subpart IIII compliance** plan **no less than 90 days before operation** ~~as required in **AQ-123**~~. **If the district does not act to approve, reject, or request additional information within thirty (30) days of receipt of the plan submitted by the permittee, the plan shall be considered to be approved by the district.**

OPERATIONAL CONDITIONS

Engines S-1 through S-10

AQ-121~~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 C.F.R. 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-122~~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 Commission upon request.

AQ-123~~128~~ The permittee shall implement and maintain a written Startup, Shutdown, and Malfunction plan as described in 40 C.F.R. 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. **If the district does not act to approve, reject, or request additional information within thirty (30) days of receipt of the plan submitted by the permittee, the plan shall be considered to be approved by the district.**

AQ-124~~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~~**60** days after the commissioning period.

AQ-125~~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-126~~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-127~~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-128~~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-129~~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 **combined engine-hours of operation during startup and shutdown periods** ~~significant operation and maintenance events and monitoring records required~~ shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-130~~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, 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 **combined engine-hours of operation during startup and shutdown periods and startup and shutdown periods in diesel mode** ~~significant operation and maintenance events and monitoring records required~~ shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-131~~136~~ The permittee shall not operate any of the reciprocating engines S-1 through S-10 below 50 percent load except during startup and shutdown periods. **This limitation shall not apply during the commissioning period.** [NCUAQMD Rule 102 §5.0]

Verification: A summary of **engine operations below 50 percent load** ~~significant operation and maintenance events and monitoring records required~~ shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-132~~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. **This limitation shall not apply during the commissioning period.** [NCUAQMD Rule 102 §5.0]

Verification: A summary of **total engine-hours per calendar day at loads less than 12.0 MW per engine based on readings taken every 15 minutes** ~~significant operation and maintenance events and monitoring records required~~ shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-133~~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 ~~1.4~~**2.3** Fuel Specifications for S-1 through S-10;

B. For no 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 or the combined engine hours specified in Condition of Certification **PUBLIC HEALTH-1**, whichever is less.

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~~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 percent) deviation from the pressure drop established during performance testing. [40 C.F.R. 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-135~~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 C.F.R. 63 Subpart ZZZZ]

Verification: A summary of significant operation and maintenance events and monitoring records required (**AQ-146~~151~~**) shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-136~~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 percent over uncontrolled emission levels, calculated on a 3 hour rolling average. Verification of the emissions reduction shall be completed in accordance with 40 C.F.R. 63 Subpart ZZZZ. This Condition does not apply during startup or shutdown periods**, during the commissioning period,** or during malfunctions. [40 C.F.R. 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-137~~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-138~~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-139~~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-140~~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-141~~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.

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-142~~147~~ **The permittee shall record the following information in the event of an equipment breakdown or malfunction: date and time of event; event duration; description of event; identification of the cause of the event; identify what corrective measures were taken and, if unsuccessful, what additional measures should be taken in the future; and quantification of excess emissions released during the event.** The permittee shall maintain **this information in** 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] **[District 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-143~~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-144~~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 **annual** 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-145~~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 **operational event category listed below** ~~of the following~~ by recording the

beginning and ending hour meter readings **and time of day of** ~~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:

1. Identification of the fuel purchased as either CARB diesel, or an alternative diesel fuel that meets the requirements of the verification procedure;

2. Sulfur content of the fuel;

3. Amount of fuel purchased;

4. Date when the fuel was purchased;

5. Signature of owner or operator or representative of permittee who received the fuel; and

6. 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-146~~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 C.F.R. 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

Frequency	Information to be Recorded
	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% O_2) B. CO (ppmvd @15% O_2) C. O_2 (%) 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% O_2) and lb/hr, on a ~~rolling 3~~**1** hour average B. CO (ppmvd @15% O_2) and lb/hr, on a rolling 3 hour average C. ROC (ppmvd @15% O_2) and lb/hr, on a rolling 3 hour average D. NH3 (ppmvd @15% O_2) and lb/hr, on a rolling 3 hour average E. SOx (ppmvd @15% O_2) 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
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, **and cubic feet** 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

Frequency	Information to be Recorded
	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**, and cubic feet**) H. Diesel pilot fuel consumption (MMBtu HHV**, and gallons**) 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. 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 Commission upon request.

AQ-147~~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-148~~153~~ The permittee shall provide notification and record keeping as required pursuant to 40 C.F.R., Part 60, Subpart A, 60.7.

Verification: No verification needed.

AQ-149~~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 (**AQ-SC9** and **AQ-15~~2~~0**).

AQ-150~~155~~ The permittee shall submit ~~the~~ **a** 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. [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-151~~156~~ No later than **120 days** ~~14 months~~ after the ~~Commissioning Period for reciprocating engines S-1 through S-10 has concluded~~ **health risk assessment protocol required pursuant to this section has been approved by the APCO**, the permittee shall submit to the ~~NCUAQMD~~ APCO a ~~revised~~ health risk assessment~~. The health risk assessment shall be~~

prepared pursuant to ~~an~~ **the** ~~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 **120 days of the protocol being approved**~~14 months after the commissioning period~~.

AQ-152~~**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-153~~**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-154~~**159**~~ The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment **for reciprocating engines S-1 through S-10** in accordance with the procedures and guidance specified in 40 C.F.R. Part 60, Appendix F.

Verification: No verification needed.

AQ-155~~**160**~~ The permittee shall monitor and record exhaust gas temperature at the inlet and at the outlet of the oxidation catalyst. [40 C.F.R. 63 Subpart ZZZZ]

Verification: A summary of significant operation and maintenance events and monitoring records required (**AQ-146**~~**151**~~) shall be included in the semi-annual operational report (**AQ-SC9**).

AQ-156~~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-157~~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-158~~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 percent, 75 percent, and 95 percent 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.
   1. 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 Source Test Procedure** ~~NCUAQMD~~ 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].
   1. Oxygen shall be measured at the inlet and outlet of the oxidation catalyst.
   2. Oxygen measurements shall be made at the same time as the CO measurements.

3. 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-159~~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. **For purposes of compliance with this condition,** ~~Except as provided in Condition #123,~~ 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 percent, 75 percent, or 95 percent 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~~C~~. 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~~D~~. Ammonia – Bay Area Air Quality Management **District Source Test Procedure** ~~NCUAQMD~~ ST-1B.

D~~E~~. Reactive organic gases – CARB Method 100.

E~~F~~. Nitrogen oxides – CARB Method 100.

F~~G~~. Carbon monoxide – CARB Method 100.

G~~H~~. Oxygen – CARB Method 100.

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

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

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

H~~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-160~~**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 percent, 75 percent , ≥95 percent) 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-159**~~**164**~~.

AQ-161 Prior to the end of the commissioning period, the permittee shall conduct district-approved source testing on each of the reciprocating engines S-1 through S-10 to determine the maximum allowable ammonia (NH_3) injection rate necessary to demonstrate compliance with the ammonia slip limits in the Pollutant Limitations section of this permit. Each test shall be conducted over the expected operating range of the engines (including, but not limited to, 50%, 75% and 95% and greater loads) to establish the range of ammonia injection rates necessary to achieve NOx emission reductions while maintaining ammonia slip to acceptable levels. Compliance with the ammonia slip limits in the Pollutant Limitations section of this permit shall be demonstrated through calculations of corrected ammonia concentrations based upon the source test correlations and continuous records of ammonia injection rates. The source tests shall determine the correlation between measured parameters, which shall include, but need not be limited to: engine heat input rate, ammonia injection rate, NOx concentration upstream and downstream of the SCR catalyst, and the corresponding NH_3 ammonia concentration at the point of discharge (exhaust stack).

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-156. The project owner shall submit to the CPM and APCO the annual operational reports that include monitoring and compliance results (AQ-SC9 and AQ-15).

AQ-162~~**166**~~ 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 percent, 75 percent or 95 percent 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 **District Source Test Procedure** ~~NCUAQMD~~ ST-1B.

E. Reactive organic gases – ARB Method 100.

F. Nitrogen oxides -- ARB Method 100.

G. Carbon monoxide – ARB Method 100.
   1. CO shall be measured at the inlet and outlet of the oxidation catalyst.

H. Oxygen – ARB Method 100.
   1. Oxygen shall be measured at the inlet and outlet of the oxidation catalyst.

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

I. 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-163~~167~~ The engines shall be tested at various loads (50 percent, 75 percent, ≥95 percent) 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-162~~166~~**.

AQ-164~~168~~ 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 C.F.R. 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**).

AQ-165~~169~~ 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**).

AQ-166~~170~~ 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**).

AQ-167~~171~~ Relative accuracy test audits (RATAs) shall be performed on each CEMS **for reciprocating engines S-1 through S-10** at least once every twelve months, in accordance with the requirements of 40 C.F.R. 60, Appendix B. Calibration Gas Audits of continuous emission monitors **for reciprocating engines S-1 through S-10** 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: The project owner shall submit to the CPM and APCO quarterly results of relative accuracy test audits (RATAs) as updates to the semi-annual monitoring results (**AQ-SC9**).

FUEL USAGE

AQ-168~~172~~ 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 Cal. Code Regs., tit. 13 §2700-2710), or

C. CARB diesel fuel used with fuel additives that meets the requirements of the verification procedure (as codified in Cal. Code Regs., tit. 13 §§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 Commission upon request.

EMISSIONS

AQ-169~~173~~ 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. [Cal. Code Regs., tit. 17 §93115.]

Verification: The project owner shall submit the results of source tests to both the district and CPM in accordance with condition **AQ-162~~166~~**.

OPERATIONAL CONDITIONS

AQ-170~~174~~ 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. [Cal. Code Regs., tit. 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**).

AQ-171~~175~~ The Emergency IC Diesel Generators S-11 and S-12 are authorized the following maximum allowable annual hours of operation as listed in Table ~~6~~**8**.0 below [Cal. Code Regs., tit. 17 §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

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

AQ-172~~176~~ **The** ~~No later than 180 days after construction of the equipment authorized pursuant to this permit begins, and concurrent with the commencement of operation, 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.

AQ-173~~177~~ **The** ~~No later than 180 days after construction of the equipment authorized pursuant to this permit begins, and concurrent with the commencement of operation, 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 ~~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.

PUBLIC HEALTH CONDITIONS OF CERTIFICATION

PUBLIC HEALTH-1 The project owner shall not operate the Wärtsilä engines on diesel fuel for a period exceeding 510 hours per year total for all 10 engines, with the exception of the first year when commissioning and compliance testing is required and the hours may not exceed 650. Once the health risk assessment prepared pursuant to **PUBLIC HEALTH-2** is approved by the CPM, the CPM will notify the project owner of the total number of engine hours on diesel fuel the project may operate annually, as determined by what the health risk assessment shows as the maximum number of hours that achieve a theoretical maximum cancer risk at the point of maximum impact of less than 10 in one million and acute and chronic Hazard Indices of less than 1.0. The CPM may also, based upon the results of the compliance testing and the health risk assessment, allow the use of an emission rate in pounds per year (lbs/yr) of diesel particulate matter as the limitation of operation when on diesel fuel in lieu of hours per year so long as the CPM can verify the emissions on a daily and yearly basis through objective criteria. The 510 total hours of operation for all engines using diesel fuel, and any subsequently adjusted number of hours, shall not include time needed for compliance testing required as per Condition **AQ-163~~167~~** if the testing is conducted when the wind direction is out of the east or south east.

Verification: The project owner shall provide hourly logs of diesel fuel usage to the CPM in the annual compliance report summary. The log shall include the unit number, duration, **and** purpose (annual compliance testing, natural gas curtailment or emergency)**. The log shall also include**~~, and~~ wind direction **for any hour the project owner is seeking to exclude**.

PUBLIC HEALTH-2 The project owner shall provide the results of a source test using diesel fuel on the number of engine exhaust stacks required below and a human health risk assessment (HRA) to the Compliance Project Manager (CPM). The source test and human health risk assessment shall be conducted according to protocols reviewed and commented on by the North Coast Unified Air Quality Management District and reviewed and approved by the CPM, and **the protocols** shall be submitted to the CPM ~~not less~~ **no later** than 60 days after the date of starting commercial operations. The source test shall be consistent with and conducted at the same time as testing required under Condition of Certification **AQ-163~~167~~**. The source test and HRA shall include the quantitative analysis and assessment of the following toxic air contaminants: diesel particulate matter in the exhaust stream both before and after the oxidative catalyst, acetaldehyde, acrolein, benzene, 1, 3-butadiene, ethyl benzene, formaldehyde, propylene, toluene, and xylenes.

The number of engine exhaust stacks to be sampled shall be determined in the following manner:

1. Four (4) engines chosen randomly shall be tested first. If stack testing results for each contaminant described above on all four engines falls within two standard deviations of the arithmetic mean of each individual contaminant, no further engines need be tested.
2. If any contaminants measured in the stack test fall outside two standard deviations of the arithmetic mean for that contaminant, three (3) engines chosen randomly shall be tested for all contaminants that fell outside two standard deviations of the arithmetic mean. If stack testing results for each contaminant described above on all seven engines tested fall within two standard deviations of the arithmetic mean of each individual contaminant, no further engines need be tested. The project owner may request relief from this and further stack testing by providing the CPM a written request with documentation explaining that further testing would not result in a significant change in the health risk assessment results.
3. This process shall be continued until either the results for all engines tested fall within two standard deviations of the arithmetic mean of each individual contaminant for all engines tested or all ten (10) engines are tested.
4. The HRA described above shall be based on all data produced for all engines tested under this protocol.

This source testing shall be repeated three years after the initial source test and again after 10 years of commencing commercial operations.

Verification: **No later** ~~Not less~~ than 60 days after the start of commercial operations, the project owner shall provide a copy of the source test and human health risk assessment protocols to the NCUAQMD for review and comment and to the CPM for review and approval. ~~Not less than 30~~ **No later than 60** days after each group of source tests has been completed, the project owner shall provide the source test results to the NCUAQMD and the CPM. When the project owner has fulfilled the requirement for testing ~~as described above~~, the project owner shall submit all test results and the HRA to the NCUAQMD for review and comment and to the CPM for approval within ~~60~~ **90** days of the date of the last test or not later than **9 months** ~~270 days~~ after the date of starting commercial operations **for all ten engines**, whichever is sooner.

Source test results from testing performed concurrently with Conditions AQ-159, AQ-160, AQ-162, and AQ-163 may be used to meet the requirements of this condition, provided that the testing includes the quantitative analysis and assessment of toxic air contaminants and diesel particulate matter as required by this condition.

ACRONYMS AND DEFINITIONS

As used in the NCUAQMD February 8, 2010 Title V Permit, the terms shall have the meaning.

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 District 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 Mode Startup: a Startup Period during which a reciprocating engine operates in Diesel Mode for periods exceeding one hundred and twenty (120) seconds.

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

s. Diesel Particulate Matter ATCM Emergency Use: shall only pertain to engines D-8, D-25, 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 District 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 District APCO's satisfaction to have been beyond the reasonable control of the Permittee.

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

t. District: North Coast Unified Air Quality Management District

u. Dscfm: dry standard cubic feet per minute

v. 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.

w. EPA: the United States Environmental Protection Agency

x. Facility: the site of the Humboldt Bay Generating Station at HBPP

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

z. HBGS: Humboldt Bay Generating Station

aa. HBPP: Existing Humboldt Bay Power Plant and applicable District permits.

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

cc. HHV: Higher Heating Value

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

ee. H2S: Hydrogen Sulfide

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

gg. 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

hh. MMBtu: million British thermal units

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

jj. 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).

kk. 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.

ll. Natural Gas Mode Startup: Startup Period during which the reciprocating engine operates in Diesel Mode for one hundred and twenty (120) seconds or less.

mm. NFPA: National Fire Protection Association

nn. 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

oo. 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

pp. 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.

qq. Operational Mode Transfer: the switching of fuel mode while operating at engine loads greater than 50%.

rr. O2: Oxygen

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

tt. PM: Particulate Matter

uu. Ppmvd: parts per million, volumetric dry

vv. 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 District Rule 101 §1.245

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

xx. ROC: reactive organic compound consistent with District Rule 101 §1.293

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

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

aaa. SO2: Sulfur Dioxide

bbb. 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 Tables 5.1 and 5.3 in the Pollutant Limitations Section of this Permit.

ccc. VEE: Visible Emissions Evaluation

ddd. Year: Any consecutive twelve-month period of time

REFERENCES

CEC (California Energy Commission) 2008a. Final Staff Assessment for the Humboldt Bay Repowering Project (06-AFC-07, CEC Pub No. 700-2007-020-FSA). May 2008.

CEC 2008b. Energy Commission Decision for Humboldt Bay Repowering Project (06-AFC-07, CEC Pub. No. 800-2008-005-CMF). September 24, 2008.

NCUAQMD (North Coast Unified Air Quality Management District) 2009. Final Decision, Responses to Comments, and Engineering Evaluation for the Revised Authority to Construct / PSD Permit for Humboldt Bay Generating Station (ATC / PSD Permit No: 443-1). Dated December 2, 2009.

NCUAQMD (North Coast Unified Air Quality Management District) 2010. Engineering Evaluation for Significant Modification of Title V Permit to Operate, and Title V Permit No. NCU 059-12, for Humboldt Bay Generating Station. Dated February 8, 2010.

PG&E (Pacific Gas and Electric Company). 2009a. Petition to Amend Air Quality Conditions in the Humboldt Bay Generating Station Final Decision. CEC Docket: 06-AFC-07C. April 30, 2009.

PG&E 2009b. PG&E HBGS Public Health Verification Conditions. Email from Nancy Matthews / Sierra Research on behalf of PG&E, to Dr. Alvin Greenberg. Dated July 13, 2009.

PG&E 2007. CH2MHill/D. Davy on behalf of Humboldt Bay Repowering Project. Supplemental Filing to Address Revised Air Quality Modeling and Increased Stack Height. September 2007.