

PROPOSED

date

CERTIFIED MAIL
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(***)**

06-
File No. 007

Mr. Warren H.W. Lee
President
Hawaii Electric Light Company, Inc.
P.O. Box 1027
Hilo, Hawaii 96721-1027

Dear Mr. Lee:

Subject: Covered Source Permit (CSP) No. 0007-01-C
Application for Minor Modification No. 0007-03
Hawaii Electric Light Company, Inc.
Two (2) 20 MW Combustion Turbine Generators, Units CT-4 and CT-5,
and Heat Recover Steam Generators with 16 MW Steam Turbine
Located at: Keahole Generating Station, Keahole, Hawaii
Date of Expiration: July 1, 2006

The subject Covered Source Permit is amended in accordance with Hawaii Administrative Rules, Title 11, Chapter 60.1. The issuance of this permit amendment is based on the plans, specifications, and additional information that you submitted as part of your modification application dated February 7, 2005 and the additional information dated January 26, 2006, February 24, 2006, March 17, 2006, March 30, 2005, and May 26, 2006. This permit, as amended supersedes Covered Source Permit (CSP) No. 0007-01-C issued on July 25, 2001 in its entirety.

The Covered Source Permit is issued subject to the conditions/requirements set forth in the following Attachments:

Attachment I: Standard Conditions
Attachment II: Special Conditions
Attachment II-INSIG Insignificant Activities
Attachment III: Annual Fee Requirements
Attachment IV: Annual Emissions Reporting Requirements

The forms for the submission of reports and annual emissions are as follows:

PROPOSED

Annual Emissions Report Form: Combustion Turbines
Annual Emissions Report Form: Ammonia Slip
Annual Emissions/Monitoring Report Form: Operating Hours
Monitoring Report Form: Daily Start-up and Shut Down
Monitoring Report Form: Fuel Consumption
Monitoring Report Form: Fuel Certification
Excess Emission and Monitoring System Performance Summary Report
Compliance Certification Form

Mr. Warren H.W. Lee
date
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This permit: (a) shall not in any manner affect the title of the premises upon which the equipment is to be located; (b) does not release the permittee from any liability for any loss due to personal injury or property damage caused by, resulting from or arising out of the design, installation, maintenance, or operation of the equipment; and (c) in no manner implies or suggests that the Department of Health, or its officers, agents, or employees, assumes any liability, directly or indirectly, for any loss due to personal injury or property damage caused by, resulting from or arising out of the design, installation, maintenance, or operation of the equipment.

Sincerely,

THOMAS ARIZUMI

SS:lk

Enclosures

c: Wendall Sano, EHS - Kona

**ATTACHMENT I: STANDARD CONDITIONS
COVERED SOURCE PERMIT NO. 0007-01-C**

Amended Date: DATE

Expiration Date: July 1, 2006

This permit is granted in accordance with the Hawaii Administrative Rules (HAR), Title 11, Chapter 60.1, Air Pollution Control, and is subject to the following standard conditions:

1. Unless specifically identified, the terms and conditions contained in this permit are consistent with the applicable requirement, including form, on which each term or condition is based.

(Auth.: HAR §11-60.1-90)

2. This permit, or a copy thereof, shall be maintained at or near the source and shall be made available for inspection upon request. The permit shall not be willfully defaced, altered, forged, counterfeited, or falsified.

(Auth.: HAR §11-60.1-6; SIP §11-60-11)²

3. This permit is not transferable whether by operation of law or otherwise, from person to person, from place to place, or from one piece of equipment to another without the approval of the Department of Health, except as provided in HAR, Section 11-60.1-91.

(Auth.: HAR §11-60.1-7; SIP §11-60-9)²

4. A request for transfer from person to person shall be made on forms furnished by the Department of Health.

(Auth.: HAR §11-60.1-7)

5. In the event of any changes in control or ownership of the facilities to be constructed or modified, this permit 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, copies of which will be forwarded to the Department of Health and the U.S. Environmental Protection Agency (EPA), Region 9.

(Auth.: HAR §11-60.1-5, §11-60.1-7, §11-60.1-94)

6. The facility covered by this permit shall be constructed and operated in accordance with the application, and any information submitted as part of the application, for the Covered Source Permit. There shall be no deviation unless additional or revised plans are submitted to and approved by the Department of Health, and the permit is amended to allow such deviation.

(Auth.: HAR §11-60.1-2, §11-60.1-4, §11-60.1-82, §11-60.1-84, §11-60.1-90)

7. This permit (a) does not release the permittee from compliance with other applicable statutes of the State of Hawaii, or with applicable local laws, regulations, or ordinances, and (b) shall not constitute, nor be construed to be an approval of the design of the covered source.

(Auth.: HAR §11-60.1-5, §11-60.1-82)

8. The permittee shall comply with all the terms and conditions of this permit. Any permit noncompliance constitutes a violation of HAR, Chapter 11-60.1 and the Clean Air Act and is grounds for enforcement action; for permit termination, suspension, reopening, or amendment; or for denial of a permit renewal application.

(Auth.: HAR §11-60.1-3, §11-60.1-10, §11-60.1-19, §11-60.1-90)

9. If any term or condition of this permit becomes invalid as a result of a challenge to a portion of this permit, the other terms and conditions of this permit shall not be affected and shall remain valid.

(Auth.: HAR §11-60.1-90)

10. The permittee shall not use as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the terms and conditions of this permit.

(Auth.: HAR §11-60.1-90)

11. This permit may be terminated, suspended, reopened, or amended for cause pursuant to HAR, Sections, 11-60.1-10 and 11-60.1-98, and Hawaii Revised Statutes (HRS), Chapter 342B-27, after affording the permittee an opportunity for a hearing in accordance with HRS, Chapter 91.

(Auth.: HAR §11-60.1-3, §11-60.1-10, §11-60.1-90, §11-60.1-98)

12. The filing of a request by the permittee for the termination, suspension, reopening, or amendment of this permit, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

(Auth.: HAR §11-60.1-90)

13. This permit does not convey any property rights of any sort, or any exclusive privilege.

(Auth.: HAR §11-60.1-90)

14. The permittee shall notify the Department of Health and U.S. EPA Region 9 in writing of the following dates:
- a. The **anticipated date of initial start-up** for each emission unit of a new source or significant modification not more than sixty (60) days or less than thirty (30) days prior to such date;
 - b. The **actual date of construction commencement** within fifteen (15) days after such date; and
 - c. The **actual date of start-up** within fifteen (15) days after such date.

(Auth.: HAR §11-60.1-90)

15. The permittee shall furnish, in a timely manner, any information or records requested in writing by the Department of Health to determine whether cause exists for terminating, suspending, reopening, or amending this permit, or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Department of Health copies of records required to be kept by the permittee. For information claimed to be confidential, the Director of Health may require the permittee to furnish such records not only to the Department of Health but also directly to the U.S. EPA Region 9 along with a claim of confidentiality.

(Auth.: HAR §11-60.1-14, §11-60.1-90)

16. The permittee shall notify the Department of Health in writing, of the **intent to shut down air pollution control equipment for necessary scheduled maintenance** at least twenty-four (24) hours prior to the planned shutdown. The submittal of this notice shall not be a defense to an enforcement action. The notice shall include the following:
- a. Identification of the specific equipment to be taken out of service, as well as its location and permit number;
 - b. The expected length of time that the air pollution control equipment will be out of service;
 - c. The nature and quantity of emissions of air pollutants likely to be emitted during the shutdown period;
 - d. Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period; and
 - e. The reasons why it would be impossible or impractical to shut down the source operation during the maintenance period.

(Auth.: HAR §11-60.1-15; SIP §11-60-16)²

17. **Except for emergencies which result in noncompliance with any technology-based emission limitation in accordance with HAR, Section 11-60.1-16.5, in the event any emission unit, air pollution control equipment, or related equipment malfunctions or breaks down in such a manner as to cause the emission of air pollutants in violation of HAR, Chapter 11-60.1 or this permit, the permittee shall immediately notify the Department of Health of the malfunction or breakdown, unless the protection of personnel or public health or safety demands immediate attention to the malfunction or breakdown and makes such notification infeasible. In the latter case, the notice shall be provided as soon as practicable. Within five (5) working days of this initial notification, the permittee shall also submit, in writing, the following information:**

- a. Identification of each affected emission point and each emission limit exceeded;
- b. Magnitude of each excess emission;
- c. Time and duration of each excess emission;
- d. Identity of the process or control equipment causing the excess emission;
- e. Cause and nature of each excess emission;
- f. Description of the steps taken to remedy the situation, prevent a recurrence, limit the excessive emissions, and assure that the malfunction or breakdown does not interfere with the attainment and maintenance of the National Ambient Air Quality Standards and state ambient air quality standards;
- g. Documentation that the equipment or process was at all times maintained and operated in a manner consistent with good practice for minimizing emissions; and
- h. A statement that the excess emissions are not part of a recurring pattern indicative of inadequate design, operation, or maintenance.

The submittal of these notices shall not be a defense to an enforcement action.

(Auth.: HAR §11-60.1-16; SIP §11-60-16)²

18. The permittee may request confidential treatment of any records in accordance with HAR section 11-60.1-14.

(Auth.: HAR §11-60.1-14, §11-60.1-90)

19. This permit shall become invalid with respect to the authorized construction if construction is not commenced as follows:
- a. Within eighteen (18) months after the permit takes effect, is discontinued for a period of eighteen (18) months or more, or is not completed within a reasonable time.
 - b. For phased construction projects, each phase shall commence construction within eighteen (18) months of the projected and approved commencement dates in the permit. This provision shall be applicable only if the projected and approved commencement dates of each construction phase are defined in Attachment II, Special Conditions, of this permit.

(Auth.: HAR §11-60.1-9, §11-60.1-90)

20. The Department of Health may extend the time periods specified in Standard Condition No. 19 upon a satisfactory showing that an extension is justified. Requests for an extension shall be submitted in writing to the Department of Health.

(Auth.: HAR §11-60.1-9, §11-60.1-90)

21. The permittee shall submit fees in accordance with HAR, Chapter 11-60.1, Subchapter 6.

(Auth.: HAR §11-60.1-90)

22. All certifications shall be in accordance with HAR, section 11-60.1-4.

(Auth.: HAR §11-60.1-4, HAR §11-60.1-90)

23. The permittee shall allow the Director of Health, the Regional Administrator for the U.S. EPA and/or an authorized representative, upon presentation of credentials or other documents required by law:

- a. To enter the premises where a source is located or emission-related activity is conducted, or where records must be kept under the conditions of this permit and inspect at reasonable times all facilities, equipment, including monitoring and air pollution control equipment, practices, operations, or records covered under the terms and conditions of this permit and request copies of records or copy records required by this permit; and
- b. To sample or monitor at reasonable times substances or parameters to ensure compliance with this permit or applicable requirements of HAR, Chapter 11-60.1.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

24. Within thirty (30) days of **permanent discontinuance of the construction, modification, relocation, or operation of the facility covered by this permit**, the discontinuance shall be reported in writing to the Department of Health by a responsible official of the source.

(Auth.: HAR §11-60.1-8; SIP §11-60-10)²

25. Each permit renewal application shall be submitted to the Department of Health and the U.S. EPA Region 9 no less than twelve months and no more than eighteen months prior to the permit expiration date. The director may allow a permit renewal application to be submitted no less than six months prior to the permit expiration date, if the director determines that there is reasonable justification.

(Auth.: HAR §11-60.1-101, 40 CFR §70.5(a)(1)(iii))¹

26. The terms and conditions included in this permit, including any provision designed to limit a source's potential to emit, are federally enforceable unless such terms, conditions, or requirements are specifically designated as not federally enforceable.

(Auth.: HAR §11-60.1-93)

27. The compliance plan and compliance certification submittal requirements shall be in accordance with HAR, sections 11-60.1-85 and 11-60.1-86. As specified in HAR, section 11-60.1-86, the compliance certification shall be submitted to the Department of Health and the U.S. EPA Region 9 once per year, or more frequently as set by any applicable requirement.

(Auth.: HAR §11-60.1-90)

28. **Any document (including reports) required to be submitted by this permit shall be certified as being true, accurate, and complete by a responsible official in accordance with HAR, sections 11-60.1-1 and 11-60.1-4, and shall be mailed to the following address:**

**Clean Air Branch
Environmental Management Division
State of Hawaii Department of Health
P.O. Box 3378
Honolulu, HI 96801-3378**

CSP No. 0007-01-C
Attachment I
Page 7 of 7
Amended Date: DATE
Expiration Date: July 1, 2006

Upon request and as required by this permit, all correspondence to the State of Hawaii Department of Health associated with this Covered Source Permit shall have duplicate copies forwarded to:

Chief
Permits Office, (Attention: Air-3)
Air Division
U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105

(Auth.: HAR §11-60.1-4, §11-60.1-90)

29. To determine compliance with submittal deadlines for time-sensitive documents, the postmark date of the document shall be used. If the document was hand-delivered, the date received ("stamped") at the Clean Air Branch shall be used to determine the submittal date.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

¹ The citations to the Code of Federal Regulations (CFR) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the CFR. Due to the integration of the preconstruction and operating permit requirements, permit conditions may incorporate more stringent requirements than those set forth in the CFR.

² The citations to the State Implementation Plan (SIP) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the SIP.

**ATTACHMENT II: SPECIAL CONDITIONS
COVERED SOURCE PERMIT NO. 0007-01-C**

Amended Date: DATE

Expiration Date: July 1, 2006

In addition to the standard conditions of the Covered Source Permit, the following special conditions shall apply to the permitted facility:

Section A. Equipment Description

1. This permit encompasses the following equipment and associated appurtenances:
 - a. Two (2) 20 MW General Electric LM2500 combustion turbine generators, Units CT-4 and CT-5;
 - b. One (1) 16 MW steam turbine generator unit, ST-7, including two (2) unfired heat recovery steam generators (HRSG) with two (2) selective catalytic reduction (SCR) units;
 - c. One (1) 235 hp emergency diesel engine fire pump;
 - d. Two (2) 50 foot diameter, 42 foot high diesel fuel oil tanks, nos. 3 and 4, and one (1) 80 foot diameter, 42 foot high diesel fuel oil tank, no. 5, and two (2) fuel oil day tanks;
 - e. One (1) 104 foot high three flue exhaust stack for CT-4, CT-5, and the 235 HP emergency diesel fire pump; and
 - f. One (1) 500 KW black start generator unit, BS-1, with an exhaust stack height of 70 feet.

(Auth.: HAR §11-60.1-3)

2. This permit incorporates conditional requirements for diesel engine generators D18, D19, D20, and D21.

(Auth.: HAR §11-60.1-3)

Section B. Applicable Federal Regulations

1. The combustion turbine generators, Units CT-4 and CT-5, are subject to the provisions of the Standards of Performance for New Stationary Sources (40 CFR Part 60), Subpart A - General Provisions.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.1)¹

2. The combustion turbine generators, Units CT-4 and CT-5, are subject to the provisions of the Standards of Performance of New Stationary Sources (40 CFR Part 60), Subpart GG. The permittee shall comply with all applicable requirements of Subpart GG, Standards of Performance for Stationary Gas Turbines, including all emission limits and all notification, testing, monitoring, and reporting requirements.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.330)¹

Section C. Operational Limitations

1. Combustion Turbine Generators, Unit Nos. CT-4 and CT-5

a. "Start-up" and "Shut-down"

- i. The "start-up" time shall not exceed twenty (20) minutes for any combustion turbine generator operating in simple cycle and ninety (90) minutes for any combustion turbine generator operating in combined cycle. Except during maintenance (e.g., equipment installations and inspections, and electrical switching work), testing, and emergency power demands due to sudden loss of a power generating unit, each combustion turbine generator shall not be started up more than four times per calendar day. A "start-up" sequence shall be from the time fuel use at the combustion turbine generator begins, until the time the combustion turbine generator is initially brought up to 25 percent of peak load at which time the operation of the air pollution control equipment shall commence.
- ii. The "shutdown" time for any combustion turbine generator operating in either simple or combined cycle shall not exceed twenty (20) minutes. Except during maintenance (e.g., equipment installations and inspections, and electrical switching work), testing, and emergency power demands due to sudden loss of a power generating unit, each combustion turbine generator shall not be shut down more than four (4) times per calendar day. A "shutdown" sequence shall be considered from the time when the combustion turbine generator is operating below 25 percent of peak load, until fuel consumption at the combustion turbine generator ceases.

b. Minimum Operational Loads

The combustion turbine generators shall not operate below 25 percent of peak load, except during equipment start-up, shutdown, maintenance, or testing.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

2. Air Pollution Equipment

The use of an alternative control system other than those specified below is contingent upon receiving the Department of Health's written approval to use such a system and shall not relieve the permittee from the responsibility to meet all emission limitations contained within this Covered Source Permit.

a. Combustor Water Injection

The permittee shall continuously operate and maintain a combustor water injection

system to meet the emission limits as specified in Attachment II, Special Condition D.1. of this Covered Source Permit. The combustor water injection system shall be fully operational and commence operation immediately after the start-up sequence of the combustion turbine generators. The combustor water injection system shall continue to operate until the commencement of the shutdown sequence of the combustion turbine generators.

The operation of the combustor water injection system shall be used whenever the combustion turbine generators are operating at 25 percent peakload and above. The following water-to-fuel ratio shall be maintained when the combustion turbine generators are in simple cycle operation or in combined cycle operation at loads less than 50 percent of the peakload.

WATER INJECTION SYSTEM MINIMUM WATER-TO-FUEL MASS RATIO BASED ON LOAD

Combustion Turbine Generator Peakload (Percent)	Ratio (lb-water/lb-fuel)
100	1.04
75 - <100	0.94
50 - <75	0.87
25 - <50	0.72

b. **Selective Catalytic Reduction System**

The permittee shall design, install, maintain, and continuously operate a selective catalytic reduction system with ammonia injection to meet the emission limits as specified in Attachment II, Special Condition D.1. of this Covered Source Permit.

The selective catalytic reduction system shall be fully functional and in operation whenever the combustion turbine generators are in combined cycle operation at loads greater than or equal to 50 percent of the peakload. The selective catalytic reduction system shall continue to operate until the load is reduced to below 50 percent of the peakload.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-140)

3. **Fuel Specifications**

a. Sulfur Content

The combustion turbine generators and diesel engines shall be fired only on fuel oil no. 2 with a maximum sulfur content not to exceed 0.4 percent by weight.

b. Nitrogen Content

The fuel bound nitrogen content of the fuel fired in the combustion turbine generators, units CT-4 and CT-5, shall not exceed 0.015 percent by weight on a rolling twelve (12) month average.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-140)

4. The maximum operating hours of the 235 hp emergency diesel engine fire pump shall not exceed 80 hours per rolling 12-month period.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

5. Alternate Operating Scenarios.

Terms and conditions for reasonably anticipated operating scenarios identified by the source in the covered source permit application and approved by the Department of Health are as follows:

- a. The permittee may replace a combustion turbine or diesel engine with a temporary replacement unit if any repair work reasonably warrants a temporary replacement (i.e., equipment failure, engine overhaul, or any major equipment problems requiring maintenance for efficient operation) of a combustion turbine or diesel engine and the following provisions are adhered to:
- i. Written notification identifying the reasons for the replacement from the site of operation is submitted to and approved by the Department of Health prior to the exchange;
 - ii. The temporary replacement unit is the same size or smaller and with equal or lower emissions rates for all criteria pollutants and hazardous air pollutants (HAPs);
 - iii. The temporary replacement unit complies with all applicable conditions including all air pollution control equipment requirements, operating restrictions and emission limits;
 - iv. The combustion turbine or diesel engine shall be repaired and returned to service

in a timely manner; and

- v. **Within ten (10) working days** after the removal and return of the combustion turbine or diesel engine, the permittee shall submit to the Department of Health written documentation of the following:
 - 1) Removal and return dates;
 - 2) Manufacturer's specifications with emission calculations of all criteria pollutants and HAPs for both the temporary replacement unit and the permitted unit; and
 - 3) Make, size, model and serial numbers for both the temporary replacement unit and the permitted unit.
- b. The combustion turbine generators may operate below 25 percent of peak load during:
 - i. Testing of the heat recovery steam generators and steam turbine; and
 - ii. Steam blows needed to clean the steam tubes prior to initial operation.
- c. In the event of equipment malfunctions, such as the sudden loss of a unit, the combustion turbine generators may operate up to 110 percent of peak load. The time period for operating the combustion turbines above 100 percent peak load shall be limited to no more than 30 minutes in duration. Under no circumstance shall the emission limits specified in Attachment II, Special Condition D.1. of this Covered Source Permit be exceeded while operating above 100 percent peak load.
- d. Upon receiving written approval from the Department of Health, the permittee may burn an alternative fuel provided the permittee demonstrates compliance with all applicable state and federal requirements and applicable conditions of this covered source permit. The alternative fuel shall be burned only temporarily, and shall not result in an increase in emissions of any air pollutant or in the emission of any air pollutant not previously emitted. The permittee shall not be allowed to switch fuels unless all of the following information is provided:
 - i. Specific type of fuel provided;
 - ii. Consumption rate of the fuel;
 - iii. Fuel blending rate;
 - iv. Emissions calculations;
 - v. Ambient air quality analyses verifying that SAAQS will be met;
 - vi. Fuel storage; and
 - vii. Plan to monitor and record the fuel analyses and consumption.
- e. The permittee may use fuel additives to reduce corrosion, control biological growth, and enhance combustion. Additives used during this scenario shall not affect emission estimates.

- f. Upon receiving written approval from the Department of Health, the permittee may use alternate means and methods to improve combustion and/or reduce emissions provided the permittee demonstrate that the following conditions will be met.
- i. The national and state ambient air quality standards will not be violated.
 - ii. The emissions and emission rates do not exceed the permitted emission limits.
 - iii. The facility shall continue to operate and comply with the conditions of this permit.
 - iv. There are no emissions of air pollutants not previously emitted.

The Department of Health may approve, conditionally approve, or deny any request for using alternate means and methods. Under no circumstance shall an alternate mean and/or method be employed without the prior written approval, or conditional approval, of the Department of Health.

- g. The permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility the scenario under which it is operating and, if required by any applicable requirement or the Department of Health, submit written notification to the Department of Health; and
- h. The terms and conditions under each alternative operating scenario shall meet all applicable requirements including all conditions of this permit.

(Auth.: HAR §11-60.1-90)

6. The true vapor pressure of the volatile organic liquids (VOLs) stored in tank nos. 3, 4, and 5 shall be maintained below 1.5 psia at all times.

(Auth.: HAR §11-60.1-2, §11-60.1-5, §11-60.1-39, §11-60.1-90)

7. Diesel engine generators unit nos. D18, D19, and D20 shall be permanently shut down and removed from service. The maximum fuel consumption of diesel engine generator D21 shall not exceed 70,000 gallons per rolling twelve (12) month period.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

Section D. Emission Limitations

1. Maximum Emission Limits

The permittee shall not discharge or cause the discharge into the atmosphere from **each** of the combustion turbine generator nitrogen oxides, sulfur dioxide, particulate matter/PM₁₀, carbon monoxide, volatile organic compounds, and ammonia in excess of the following

specified limits:

Combustion Turbine Generator Operating in the Simple Cycle Mode

Compound	Maximum Emission Limit (3-hour Average)	
	(lbs/hr)	(ppmvd @ 15 percent O ₂)
Nitrogen Oxides as NO ₂	42.3	42
Sulfur Dioxide	110	79
Particulate Matter/PM ₁₀	19.7	0.045 (gr/dscf @ 12 percent O ₂)
Carbon Monoxide		
100% Peakload	26.8	44
75% - <100% Peakload	56.4	123
50% - <75% Peakload	181.0	566
25% - <50% Peakload	475.6	2,386
Volatile Organic Compounds		
100% Peakload	0.8	2.5
75% - <100% Peakload	2.6	11.8
50% - <75% Peakload	28.1	178
25% - <50% Peakload	297.6	3,025

Combustion Turbine Generator Operating in the Combined Cycle Mode

Compound	Maximum Emission Limit (3-hour Average)	
	(lbs/hr)	(ppmvd @ 15 percent O ₂)
Nitrogen Oxides as NO ₂		
50% - 100% Peakload	15.1	15
25% - <50% Peakload	42.3	42
Sulfur Dioxide	110	79
Particulate Matter/PM ₁₀	19.7	0.045 (gr/dscf @ 12 percent CO ₂)
Carbon Monoxide		
100% Peakload	26.9	44
75% - <100% Peakload	50.2	105
50% - <75% Peakload	170.4	523
25% - <50% Peakload	457.4	2,218
Volatile Organic Compounds		
100% Peakload	0.8	2.5
75% - <100% Peakload	2.0	8.6
50% - <75% Peakload	25.0	156
25% - <50% Peakload	271.0	2,662
Ammonia	4.30	10

The Department of Health, with U.S. EPA Region 9 concurrence, may revise the allowable emission limitation for nitrogen oxides, particulate matter, carbon monoxide, volatile organic compounds, and ammonia after reviewing the initial performance test results required under Attachment II, Section G of this Covered Source Permit. The Department of Health, with U.S. EPA Region 9 concurrence, may also revise the water-to-fuel ratios or include ammonia-to-NO_x injection rates if findings through operating parameters and performance test results show an optimum operating range which minimizes emissions.

If the nitrogen oxides, particulate matter, carbon monoxide, volatile organic compounds, or ammonia emission limit is revised, the difference between the applicable emission limit set forth above and the revised lower emission limit shall not be allowed as an emission offset for future construction or modification.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-140)

2. For any six (6) minute averaging period, the combustion turbines and diesel engines covered under this Covered Source Permit shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during startup, shutdown, or equipment breakdown, the combustion turbines and diesel engines covered under this permit may exhibit visible emissions greater than twenty (20) but not exceeding sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minute period. In the event of equipment breakdown, the equipment shall be shut down within one (1) hour if the opacity problem cannot be corrected within the six (6) minute period.

(Auth.: HAR §11-60.1-3, §11-60.1-32, §11-60.1-90)²

3. Fugitive Emissions

- a. Potential sources of fugitive emissions in fuel oil transfer systems shall be inspected and maintained on a regular schedule to control VOC emissions.
- b. The permittee shall maintain records of inspections of the fuel oil transfer system as part of the operational log. The permittee shall provide the Department of Health with copies of the log upon request.
- c. The permittee shall provide access to the Department of Health to inspect tank weld, seams, gauge hatches, sampling ports and pressure relief valves.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

Section E. Monitoring and Recordkeeping

All records, including support information, shall be maintained for at least five (5) years from the date of the monitoring sample, measurement, test, report, or application. Support information includes all calibration and maintenance records and copies of all reports required by the permit. These records shall be in a permanent form suitable for inspection and made available to the Department of Health or their representative upon request.

1. Continuous Monitoring Systems

All monitoring systems shall record the date and time that the measured parameters and data were collected.

- a. The permittee shall continuously monitor and record the operating load of the combustion turbine generators.
- b. The permittee shall operate and maintain a continuous monitoring system to monitor and record the ratio of water-to-fuel being fired in the combustion turbine generators.

The water-to-fuel monitor/recorder shall be accurate to +/- 5 percent.

- c. The permittee shall operate and maintain a total volumetric flow metering system for the continuous measurement and recording of the fuel usage of the combustion turbine generators. The permittee shall maintain records on the total amount of fuel fired in the combustion turbine generators.
- d. The permittee shall operate and maintain a non-resetting hour meter on the 235 BHP emergency diesel fire pump for the permanent recording of the total hours the unit has operated. Records on the total hours of operation shall be maintained on a monthly basis.
- e. The permittee shall operate and maintain a continuous monitoring system to measure and record the NO_x, CO, and carbon dioxide (CO₂) or oxygen (O₂) concentrations in the stack gas from the combustion turbine generators, units CT-4 and CT-5. The emission rates for NO_x and CO shall be recorded in parts per million by volume dry (ppmvd) at 15 percent O₂ and pounds per hour (lbs/hr).
- f. Prior to the startup of the selective catalytic reduction system and thereafter, the permittee shall at its own expense install, operate, and maintain a continuous monitoring system for each combustion turbine to measure and record the following parameters and data.
 - i. The ammonia injection rate in pounds per hour (lbs/hr) and the ammonia-to-NO_x ratio. The ratio shall be based on the pounds per hour of ammonia injected into the SCR to the pounds of NO_x entering the SCR system.
 - ii. The NO_x and carbon dioxide (CO₂) or oxygen (O₂) concentrations in the exhaust gas stream at a point between the exit of the combustion turbine with water injection and the entrance to the SCR system.

The emission rates for NO_x shall be recorded in parts per million by volume dry (ppmvd) at 15 percent O₂ and in lbs/hr. The continuous emissions monitoring system used for these measurements shall meet the U.S. EPA performance specifications of 40 CFR Part 60 Section 60.13, Appendix B, and Appendix F.

- g. The permittee shall operate and maintain a transmissometer continuous monitoring system for the measurement and recording of the opacity of stack emissions. The systems shall meet the U.S. EPA monitoring performance standards of 40 CFR Part 60 Section 60.13 and 40 CFR Part 60, Appendix B, Performance Specifications.

- h. The permittee shall maintain a file of all measurements and monitoring data, performance testing requirements and results, system performance evaluations, calibration checks, adjustments and maintenance as performed, and all other information required by 40 CFR Part 60 recorded in a permanent form suitable for inspection.
- i. The permittee shall operate and maintain a non-resetting volumetric flow meter system on diesel engine generator D21 for the continuous measurement and recording of the fuel usage of the diesel engine generator. The flow meter reading shall be recorded at the beginning and end of each calendar month. Records of the total gallons of fuel consumed shall be maintained on a monthly and twelve (12) month rolling basis.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

2. Ammonia Slip

Records shall be maintained on the amount of ammonia slip from the operation of the selective catalytic reduction system. Estimates of ammonia slip shall be based on the ammonia emission rates measured during the initial and subsequent annual performance test required by Section G. of this Attachment. Back-up data, calculations, and the resulting ammonia emissions shall be maintained on a monthly basis.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

3. Fuel Specifications

- a. The fuel sulfur content of the fuel fired in the combustion turbines and diesel engines shall be verified by both of the following methods:
 - i. A representative sample of each batch of the fuel received shall be analyzed using the most current version of any of the following American Society for Testing and Materials (ASTM) methods: D129, D2622, D4292, D5453, or D1552; and
 - ii. A certificate of analysis on the sulfur content (percent by weight) shall be obtained from the fuel supplier for each batch of fuel received.
- b. The fuel bound nitrogen content of the fuel fired in the combustion turbines shall be verified by the following method. A representative sample of each batch of fuel received shall be analyzed for its nitrogen content by weight using the most current version of any of the following American Society for Testing and Materials (ASTM) methods: D6366, D4629, or D5762.
- c. The permittee shall maintain records of the fuel delivery receipts, the supplier's

certificate of analysis showing the sulfur content of the fuel delivered, and all test analysis. At a minimum, the test analysis shall include the following:

- i. Type of fuel;
- ii. Date and time the fuel sample was drawn;
- iii. Date the analyses were performed;
- iv. Name and address of the company or entity that performed the analyses;
- v. Means and methods used to analyze the fuel; and
- vi. Analyses results.

Records of the sulfur and nitrogen contents of the fuel shall be maintained on a monthly basis.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

4. An inspection, maintenance, and repair log shall be maintained for the combustion turbines and selective catalytic reduction system. Replacement and repairs to the catalyst of the selective catalytic reduction system shall be documented.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

Section F. Notification and Reporting Requirements

1. Notification and reporting pertaining to the following events shall be done in accordance with Attachment I, Standard Conditions Nos. 14, 16, 17, and 24, respectively:

- a. *Anticipated date of initial start-up, actual date of construction commencement, and actual date of start-up;*

- b. *Intent to shut down air pollution control equipment for necessary scheduled maintenance;*

- c. *Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedences due to emergencies); and*

- d. *Permanent discontinuance of construction, modification, relocation, or operation of the facility covered by this permit.*

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90; SIP §11-60-10, SIP §11-60-16)²

2. The permittee shall report **within five (5) working days** any deviations from permit requirements, including those attributable to upset conditions, the probable cause of such deviations and any corrective actions or preventive measures taken. Corrective actions may include a requirement for additional stack testing, or more frequent monitoring, or could trigger implementation of a corrective action plan.

(Auth.: HAR §11-60.1-3, §11-60.1-15, §11-60.1-16, §11-60.1-90)

3. **Within sixty (60) days** after initial start-up of the selective catalytic reduction system, the permittee shall submit to the Department of Health a quality assurance project plan for the continuous monitoring system conforming to 40 CFR Part 60, Appendix F.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR Part 60 Appendix F)

4. The permittee shall notify the Department of Health in writing **within thirty (30) days** prior to conducting performance specification tests on the continuous monitoring system. The testing date shall be in accordance with the performance test date identified in 40 CFR Part 60 Section 60.13.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.13)

5. The permittee shall submit a written report of all excess emissions, including those associated with the water-to-fuel ratio requirement, to the Department of Health and U.S. EPA **every semi-annual period**. The report shall include the following:

- a. The magnitude of excess emissions computed in accordance with 40 CFR Part 60 Subsection 60.13(h), any conversion factors used, and the date and time of commencement, completion of each time period of excess emissions, and the corresponding operating load of the combustion turbine generators.
- b. Specific identification of each period of excess emissions that occurs during start-ups, shutdowns, and malfunctions of the combustion turbine generators. The nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted, shall also be reported.
- c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks. The nature of each system repair or adjustment shall be described.
- d. The report shall so state if no excess emissions have occurred. Also, the report shall so state if the CEMS operated properly during the period and was not subject to any

repairs or adjustments except for zero and span checks.

- e. All reports shall be postmarked by the 30th day following the end of each semi-annual period. The enclosed **Excess Emissions and Monitoring System Performance Summary Report** form, or similar form shall be used in conjunction to the reporting of excess emissions of NO_x, CO, and opacity.
- f. For purposes of this Covered Source Permit, excess emissions shall be defined as follows:
 - i. Any three (3) hour period during which the average emissions of NO_x and CO, as measured by the continuous monitoring system, exceed the emission limits set forth in Attachment II, Special Condition D.1.;
 - ii. During simple cycle operation and combined cycle operation at loads less than 50 percent of peakload, any one (1) hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio at the corresponding operating load specified in Attachment II, Special Condition C.2.a.; and
 - iii. Any opacity measurements, as measured by the transmissometer continuous monitoring system, exceeding the opacity limits and corresponding averaging times set forth in Attachment II, Special Condition D.2.
- g. On and after the date of completion of the source performance test and CEMS certification, excess emissions indicated by the continuous emission monitoring system shall be considered violations of the applicable emission limit for the purposes of the permit with the following exceptions:
 - i. During the twenty (20) minute and ninety (90) minute start-up period of the combustion turbine generators operating in the simple cycle mode and combined cycle mode, respectively;
 - ii. During the twenty (20) minute shutdown period of the combustion turbine generators operating in either the simple cycle mode or combined cycle mode;
 - iii. Nitrogen oxide emissions in excess of 42 ppmvd at 15 percent O₂ while operating in simple cycle mode or 15 ppmvd at 15 percent O₂ while operating in combined cycle mode if it can be shown that the excess emissions resulted from the firing of fuel with a fuel-bound nitrogen content in excess of 0.015 percent by weight. Under no circumstance shall the nitrogen oxide emission limit of 42.3 pounds per hour while operating in simple cycle mode or 15.1 pounds per hour while operating

in combined cycle mode, as specified in Attachment II Special Condition D.1., be exceeded.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR Part §60.13)

6. The permittee shall submit **semi-annually** the following written reports to the Department of Health. The report shall be submitted **within sixty (60) days after** the end of each semi-annual calendar period, and shall include the following:
 - a. A monthly summary listing the time and duration of all start-up and shut-down sequences for each combustion turbine. The summary shall include the combustion turbine generator load (MW) at the time the air pollution control devices and systems are initiated and terminated. The enclosed **Monitoring Report Form: Daily Start-up and Shutdown**, or similar form, shall be used.
 - b. Except for all start-up and shutdown sequences, report all periods where the minimum operating load for each combustion turbine was less than 25 percent of the rated capacity. The report shall include the date, time, and duration of each period.
 - c. A summary of the occurrences and duration of any malfunction in the operation of the combustion turbine generators and air pollution control devices. The summary shall be for each semi-annual reporting period and include the corrective actions taken during the reporting period. Malfunctions occurring in previous reporting periods shall be continually listed in the summary until the corrective actions are completed.
 - d. A report identifying the type of fuel fired in each of the combustion turbines and diesel engines covered under this permit during the semi-annual reporting period. The report shall include the maximum sulfur content (percent by weight) and the average nitrogen content (percent by weight) of the fuel for the reporting period. The report shall identify the means and methods used to verify the sulfur and nitrogen content of each fuel. The enclosed **Monitoring Report Form: Fuel Certification**, or similar form, shall be used.
 - e. Except during the start-up and shutdown sequences, a report detailing all incidences where the air pollution control devices/systems were not fully operational when the combustion turbines were operating. The report for each combustion turbine shall include the date, time, and duration of each incidence. The report shall list the corrective actions taken and the operational procedures used to minimize emissions during the incident.
 - f. The gallons of fuel fired in diesel engine generator D21 on a monthly and twelve (12)

month rolling period. The enclosed **Monitoring Report Form: Fuel Consumption**, or similar form, shall be used.

- g. The total operating hours of the 235 hp emergency diesel engine fire pump. The enclosed **Annual Emissions/Monitoring Report Form: Operating Hours**, or similar form, shall be used.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.334)

7. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **annually** the total tons/yr. emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due **within sixty (60) days following the end of each calendar year**. The enclosed Annual Emissions Forms shall be used.

Upon a written request from the permittee, the deadline for reporting of annual emissions may be extended, if the Department of Health determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

8. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form** pursuant to HAR, Subsection 11-60.1-86. The permittee shall indicate whether or not compliance is being met with each term or condition of this permit. The compliance certification shall include, at a minimum, the following information:

- a. The identification of each term or condition of the permit that is the basis of the certification;
- b. The compliance status;
- c. Whether compliance was continuous or intermittent;
- d. The methods used for determining the compliance status of the source currently and over the reporting period;
- e. Any additional information indicating the source's compliance status with any applicable enhanced monitoring and compliance certification including the requirements of Section 114(a)(3) of the Clean Air Act or any applicable monitoring and analysis provisions of Section 504(b) of the Clean Air Act; and

- f. Any additional information as required by the Department of Health including information to determine compliance.

The compliance certification shall be submitted **within ninety (90) days** after the end of each calendar year, and shall be signed and dated by a responsible official. Upon a written request from the permittee, the deadline for submitting the compliance certification may be extended, if the Department of Health determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90)

Section G. Testing Requirements

1. **Within sixty (60) days** after achieving the maximum production rate of the 16 MW steam turbine, but not later than one hundred eighty (180) days after the initial start-up of the 16 MW steam turbine (as defined in 40 CFR Part 60.2), the permittee shall conduct or cause to be conducted performance tests on the combustion turbine generators operating with SCR in the combined cycle mode.

(Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR 60.335)¹

2. The permittee shall conduct or cause to be conducted, performance tests on the combustion turbine generators in simple cycle and combined cycle operating with SCR on an annual basis or at other times specified by the Department of Health.

(Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR 60.335)¹

3. All performance tests shall be conducted at 25, 50, 75, and 100 percent of the peak load of the combustion turbine generators. The Department of Health may require the permittee to conduct the performance tests at additional operating loads.

(Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR 60.8, 60.335)¹

4. The performance tests on the combustion turbines operating in the simple cycle and combined cycle modes shall be conducted for nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), particulate matter (PM), and volatile organic compounds (VOC).

(Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR 60.335)¹

5. The performance test on the combustion turbines operating in the combined cycle mode

with SCR shall be conducted for nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), particulate matter (PM), volatile organic compounds (VOC), and ammonia (NH₃).

A performance test shall also be conducted for carbon dioxide (CO₂) or oxygen (O₂) concentrations in the gas stream at a point between the exit of the combustion turbine with water injection and the entrance to the SCR system.

(Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR 60.335)¹

6. The Department of Health may define specific water-to-fuel injection ratios for which the performance tests will be conducted.

(Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90)

7. The Department of Health may waive a specific performance test upon prior written request of the permittee. Such a request would need to be justified on the grounds that prior tests had shown compliance by a wide margin, and that adequate means exist to show continuing compliance.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

8. Performance tests for the emissions of SO₂, NO_x, CO, VOC, PM, CO₂, and NH₃ shall be conducted and results reported in accordance with the test methods set forth in 40 CFR Part 60 Appendix A, and 40 CFR Part 60.8. The following test methods or U.S. EPA-approved equivalent methods, or alternate methods with prior written approval from the Department of Health, shall be used:

- a. Performance tests for the emissions of SO₂ shall be conducted using the 40 CFR Part 60, Methods 1-4 and 20.
- b. Performance tests for the emissions of NO_x shall be conducted using 40 CFR Part 60, Methods 1-4 and 20.
- c. Performance tests for the emissions of CO shall be conducted using 40 CFR Part 60, Methods 1-4 and 10.
- d. Performance tests for the emissions of VOC shall be conducted using 40 CFR Part 60, Methods 1-4 and 25A.
- e. Performance tests for the emissions of particulate matter shall be conducted using 40 CFR Part 60, Methods 1-5.

f. Performance tests for the emissions of CO₂ shall be conducted using 40 CFR Part 60, Method 20, Equations 20-2 and 20-5.

g. Performance test for the emissions of NH₃ shall be conducted using U.S. EPA Conditional Test Method 027(CTM-027).

(Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; SIP §11-60.15; 40 CFR 60.335)^{1,2}

9. The performance test shall consist of three (3) separate runs using the applicable test method. For the purpose of determining compliance with an applicable regulation, the arithmetic mean of the results from the three (3) runs shall apply.

(Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; SIP §11-60.15; 40 CFR 60.8)^{1,2}

10. The permittee shall demonstrate compliance with the NO_x emission limit specified in 40 CFR 60.332 by using the test methods and procedures of 40 CFR 60.335(b).

(Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR 60.335)¹

11. **At least thirty (30) calendar days prior** to performing a test, the permittee shall submit a written performance test plan to the Department of Health and U.S. EPA Region 9 that describes the test duration, test locations, test methods, source operation and other parameters that may affect test results. Such a plan shall conform to U.S. EPA guidelines including quality assurance procedures. A test plan or quality assurance plan that does not have the approval of the Department of Health may be grounds to invalidate any test and require a retest.

(Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; SIP §11-60.15; 40 CFR 60.8)^{1,2}

12. The permittee shall provide sampling and testing facilities at its own expense. The tests shall be conducted at the operating capacities identified in Attachment II, Special Condition G.3. The Department of Health may monitor the tests.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90; SIP §11-60.15)²

13. Any deviations from these conditions, test methods, or procedures may be cause for rejection of the test results unless such deviations are approved by the Department of Health before the tests.

(Auth.: HAR §11-60.1-11, §11-60.1-90; SIP §11-60.15)²

14. **Within sixty (60) days** after completion of the performance test, the permittee shall submit to the Department of Health and U.S. EPA Region 9 the test report which shall include the operating conditions of the combustion turbine generators at the time of the test, the analysis of the fuel, the summarized test results, and other pertinent field and laboratory data.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

Section H. Agency Notification

Any document (including reports) required to be submitted by this Covered Source Permit shall be done in accordance with Attachment I, Standard Conditions, Condition 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

¹ The citations to the Code of Federal Regulations (CFR) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the CFR. Due to the integration of the preconstruction and operating permit requirements, permit conditions may incorporate more stringent requirements than those set forth in the CFR.

² The citations to the State Implementation Plan (SIP) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the SIP.

ATTACHMENT IIB: SPECIAL CONDITIONS
COVERED SOURCE PERMIT NO. 0007-01-C
Insignificant Activities
[Issuance Date]

In addition to the Standard Conditions of the Covered Source Permit, the following Special Conditions shall apply to the permitted facility:

In addition to the Standard Conditions of the Covered Source Permit, the following Special Conditions shall apply to the permitted facility:

Section A. Equipment Description

This attachment encompasses insignificant activities listed in HAR, §11-60.1-82(f) and (g) for which provisions of this permit and HAR, Subchapter 2, General Prohibitions apply.

(Auth.: HAR §11-60.1-3)

Section B. Operational Limitations

1. The permittee shall take measures to operate applicable insignificant activities in accordance with the provisions of HAR, Subchapter 2 for visible emissions, fugitive dust, incineration, process industries, sulfur oxides from fuel combustion, storage of volatile organic compounds, volatile organic compound water separation, pump and compressor requirements, and waste gas disposal.

(Auth.: HAR §11-60.1-3, §11-60.1-82, §11-60.1-90)

2. The Department of Health may at any time require the permittee to further abate emissions if an inspection indicates poor or insufficient controls.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-82, §11-60.1-90)

Section C. Monitoring and Recordkeeping Requirements

1. The Department of Health reserves the right to require monitoring, recordkeeping, or testing of any insignificant activity to determine compliance with the applicable requirements.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

2. All records shall be maintained for at least five (5) years from the date of any required monitoring, recordkeeping, testing, or reporting. These records shall be in a permanent form suitable for inspection and made available to the Department of Health or their authorized representative upon request.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90)

Section D. Notification and Reporting

Compliance Certification

1. During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached Compliance Certification Form pursuant to HAR, Subsection 11-60.1-86. The permittee shall indicate whether or not compliance is being met with each term or condition of this permit. The compliance certification shall include at a minimum the following information:
 - a. The identification of each term or condition of the permit that is the basis of the certification;
 - b. The compliance status;
 - c. Whether compliance was continuous or intermittent;
 - d. The methods used for determining the compliance status of the source currently and over the reporting period;
 - e. Any additional information indicating the source's compliance status with any applicable enhanced monitoring and compliance certification including the requirements of Section 114(a)(3) of the Clean Air Act or any applicable monitoring and analysis provisions of Section 504(b) of the Clean Air Act; and
 - f. Any additional information as required by the Department of Health including information to determine compliance.

In lieu of addressing each emission unit as specified in the attached Compliance Certification Form, the permittee may address insignificant activities as a single unit provided compliance is met with all applicable requirements. If compliance is not totally attained, the permittee shall identify the specific insignificant activity and provide the details associated with the noncompliance.

2. The compliance certification shall be submitted **within ninety (90) days after** the end of each calendar year, and shall be signed and dated by a responsible official.
3. Upon written request of the permittee, the deadline for submitting the compliance certification may be extended, if the Department of Health determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90)

Section E. Agency Notification

Any document (including reports) required to be submitted by this Covered Source Permit shall be done in accordance with Attachment I, Standard Condition No. 29.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

**ATTACHMENT III: ANNUAL FEE REQUIREMENTS
COVERED SOURCE PERMIT NO. 0007-01-C**

Amended Date: DATE

Expiration Date: July 1, 2006

The following requirements for the submittal of annual fees are established pursuant to Hawaii Administrative Rules (HAR), Title 11, Chapter 60.1, Air Pollution Control. Should HAR, Chapter 60.1 be revised such that the following requirements are in conflict with the provisions of HAR, Chapter 60.1, the permittee shall comply with the provisions of HAR, Chapter 60.1.

1. Annual fees shall be paid in full:
 - a. Within sixty days after the end of each calendar year; and
 - b. Within thirty days after the permanent discontinuance of the covered source.
2. The annual fees shall be determined and submitted in accordance with Hawaii Administrative Rules, Chapter 11-60.1, Subchapter 6.
3. The annual emissions data for which the annual fees are based shall accompany the submittal of any annual fees and submitted on forms furnished by the Department of Health.
4. The annual fees and the emission data shall be mailed to:

**Clean Air Branch
Environmental Management Division
Hawaii Department of Health
P.O. Box 3378
Honolulu, HI 96801-3378**

**ATTACHMENT IV: ANNUAL EMISSIONS REPORTING REQUIREMENTS
COVERED SOURCE PERMIT NO. 0007-01-C**

Amended Date: DATE

Expiration Date: July 1, 2006

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the State of Hawaii Department of Health the nature and amounts of emissions.

1. Complete the attached forms:
Annual Emissions Report Form: *Combustion Turbines*;
Annual Emissions Report Form: *Ammonia Slip*; and
Annual Emissions/Monitoring Report Form: *Operating Hours*.
2. The reporting period shall be from January 1 to December 31 of each year. All reports shall be submitted to the Department of Health within **sixty (60) days** after the end of each calendar year and shall be mailed to the following address:

**Clean Air Branch
Environmental Management Division
Hawaii Department of Health
P. O. Box 3378
Honolulu, HI 96801-3378**
3. The permittee shall retain the information submitted, including all emission calculations. These records shall be in a permanent form suitable for inspection, retained for a minimum of five (5) years, and made available to the Department of Health upon request.
4. Any information submitted to the Department of Health without a request for confidentiality shall be considered public record.
5. In accordance with HAR, Section 11-60.1-14, the permittee may request confidential treatment of specific information, including information concerning secret processes or methods of manufacture, by submitting a written request to the Director and clearly identifying the specific information that is to be accorded confidential treatment.

**ANNUAL EMISSIONS REPORT FORM
COMBUSTION TURBINES
COVERED SOURCE PERMIT NO. 0007-01-C**

Amended Date: DATE

Expiration Date: July 1, 2006

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature and amounts of emissions.

For Period: _____ Date: _____

Facility Name: HELCO Keahole Generating Station

Equipment Description: 20 MW General Electric LM2500 Combustion Turbine

Serial/ID No.: _____

Responsible Official (Print): _____

Title: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.

Responsible Official (Signature): _____

Type of Fuel Fired	Fuel Usage (Gallons)	% Sulfur Content by weight	% Nitrogen Content by weight
Fuel Oil No. 2			

<u>Type of Air Pollution Control</u>	<u>In Use?</u>	<u>Pollutant(s) Controlled</u>	<u>Control Efficiency, % Reduction</u>
<u>Water Injection</u>	<u>Yes or No</u>	<u>NO_x</u>	_____
<u>SCR</u>	<u>Yes or No</u>	<u>NO_x</u>	_____
_____	<u>Yes or No</u>	_____	_____

**ANNUAL EMISSIONS REPORT FORM
AMMONIA SLIP
COVERED SOURCE PERMIT NO. 0007-01-C**

Amended Date: DATE

Expiration Date: July 1, 2006

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature and amounts of emissions, semi-annually.

For Period: _____ Date: _____

Facility Name: HELCO Keahole Generating Station

Equipment Description: Selective Catalytic Reduction System

Serial/ID No.: Operating with unit CT-4/CT-5

Responsible Official (Print): _____

Title: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.

Responsible Official (Signature): _____

Month	Ammonia Slip (lbs)	Method Used to Calculate Ammonia Slip
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		
TOTAL		

**MONITORING REPORT FORM
DAILY START-UP AND SHUTDOWN
COMBUSTION TURBINE GENERATOR, UNIT NO. CT-4
COVERED SOURCE PERMIT NO. 0007-01-C**

Amended Date: DATE

Expiration Date: July 1, 2006

For Month: _____ Year: _____

Facility Name: HELCO Keahole Generating Station

Equipment Description: 20 MW General Electric LM2500 Combustion Turbine

Responsible Official (PRINT): _____

Title: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.

Responsible Official (Signature): _____

Combustion Turbine Generator Unit No. CT-4								
Day	"Start-up"				"Shut-down"			Turbine Daily Operating Hours
	Start Time	End Time	Duration ¹	Turbine Load at APC ⁽²⁾ Initiation (MW)	Start Time	End Time	Turbine Load at ACP ⁽²⁾ Shutdown (MW)	
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

¹ Log duration in "Minutes.

² APC = Air Pollution Control

**Combustion Turbine Generator
Unit No. CT-4**

Day	"Start-up"				"Shut-down"			Turbine Daily Operating Hours
	Start Time	End Time	Duration ¹	Turbine Load at APC ⁽²⁾ Initiation (MW)	Start Time	End Time	Turbine Load at ACP ⁽²⁾ Shutdown (MW)	
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
TOTAL MONTHLY HOURS:								

¹ Log duration in "Minutes."
² APC = Air Pollution Control

**MONITORING REPORT FORM
DAILY START-UP AND SHUTDOWN
COMBUSTION TURBINE GENERATOR, UNIT NO. CT-5
COVERED SOURCE PERMIT NO. 0007-01-C**

Amended Date: DATE

Expiration Date: July 1, 2006

For Month: _____ Year: _____

Facility Name: HELCO Keahole Generating Station

Equipment Description: 20 MW General Electric LM2500 Combustion Turbine

Responsible Official (PRINT): _____

Title: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.

Responsible Official (Signature): _____

Combustion Turbine Generator Unit No. CT-5								
Day	"Start-up"				"Shut-down"			Turbine Daily Operating Hours
	Start Time	End Time	Duration ¹	Turbine Load at APC ⁽²⁾ Initiation (MW)	Start Time	End Time	Turbine Load at ACP ⁽²⁾ Shutdown (MW)	
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

¹ Log duration in "Minutes.

² APC = Air Pollution Control

**Combustion Turbine Generator
Unit No. CT-5**

Day	"Start-up"				"Shut-down"			Turbine Daily Operating Hours
	Start Time	End Time	Duration ¹	Turbine Load at APC ⁽²⁾ Initiation (MW)	Start Time	End Time	Turbine Load at ACP ⁽²⁾ Shutdown (MW)	
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
TOTAL MONTHLY HOURS:								

¹ Log duration in "Minutes."
² APC = Air Pollution Control

**ANNUAL EMISSIONS/MONITORING REPORT FORM
OPERATING HOURS
COVERED SOURCE PERMIT NO. 0007-01-C**

Amended Date: DATE

Expiration Date: July 1, 2006

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature and amounts of emissions.

For Period: _____ Date: _____

Facility Name: HELCO Keahole Generating Station

Equipment Description: 235 hp Emergency Diesel Engine Fire Pump

Serial/ID No.: _____

Type of Fuel: Fuel Oil #2 %Sulfur Content by Weight: _____

Responsible Official (Print): _____

Title: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.

Responsible Official (Signature): _____

Month	Monthly Operating Hours	Rolling 12-Month Total	Notes
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

**EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE
SUMMARY REPORT**

(PAGE 1 OF 2)

(Make copies for Future Use)

Facility Name: HELCO Keahole Generating Station

Equipment Location: Keahole Generating Station, Keahole, Hawaii

Equipment Description: _____

Covered Source Permit No.: CSP No. 0007-01-C Condition No.: _____

PSD Permit No.: _____ Condition No.: _____

Code of Federal Regulations (CFR): _____

Pollutant Monitored: _____

From: Date _____ - Time _____

To: Date _____ - Time _____

Emission Limit: _____

Date of Last CEMS Certification/Audit _____

Total Source Operating Time _____

EMISSION DATA SUMMARY

- 1. Duration (Hours/Periods) of Excess Emissions in Reporting Period due to:
 - a. Start-Up/Shutdown _____
 - b. Cleaning/Soot Blowing _____
 - c. Control Equipment Failure _____
 - d. Process Problems _____
 - e. Other Known Causes _____
 - f. Unknown Causes _____
 - g. Fuel Problems _____

Number of incidents of excess emissions _____

2. Total Duration of Excess Emissions _____

3. Total Duration of Excess Emissions
(% of Total Source Operating Time) _____

CEMS PERFORMANCE SUMMARY

- 1. CEMS Downtime (Hours/Periods) in Reporting Period Due to:
 - a. Monitor Equipment Malfunctions _____
 - b. Non-Monitor Equipment Malfunctions _____
 - c. Quality Assurance Calibration _____
 - d. Other Known Causes _____
 - e. Unknown Causes _____

Number of incidents of monitor downtime. _____

2. Total CEMS Downtime _____

3. Total CEMS Downtime
(% of Total Source Operating Time) _____

**EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE
SUMMARY REPORT**

(PAGE 2 OF 2)

CERTIFICATION by Responsible Official

Responsible Official (Print): _____

Title: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.

Responsible Official (Signature): _____

**MONITORING REPORT FORM
FUEL CONSUMPTION - DIESEL ENGINE GENERATOR
COVERED SOURCE PERMIT NO. 0007-01-C**

Amended Date: DATE

Expiration Date: July 1, 2006

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature and amounts of emissions.

For Period: _____ Date: _____

Facility Name: HELCO Keahole Generating Station

Equipment Description: 2.5 MW General Motors Diesel Engine Generator

Serial/ID No.: Unit D21

Type of Fuel: Fuel Oil No. 2 %Sulfur Content by Weight: _____

Responsible Official (Print): _____

Title: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.

Responsible Official (Signature): _____

Month	Monthly Fuel Consumption (gallons)	Rolling 12-Month Total (gallons)	Notes
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

**MONITORING REPORT FORM
FUEL CERTIFICATION
COVERED SOURCE PERMIT NO. 0007-01-C**

Issuance Date: DATE

Expiration Date: July 1, 2006

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature of fuel used for the permitted equipment.

For Period: _____ Date: _____

Facility Name: Hawaii Electric Light Co.

Equipment Location: Keahole Generating Station

Responsible Official (Print): _____

Title: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.

Responsible Official (Signature): _____

Unit No.	Equipment Description	Type of Fuel Fired	% Sulfur Content by Weight ¹	% Nitrogen Content by Weight ²
CT-4	20 MW Combustion Turbine	Fuel Oil No. 2		
CT-5	20 MW Combustion Turbine	Fuel Oil No. 2		
BS-1	500 kW Caterpillar Black Start DEG	Fuel Oil No. 2		
N/A	235 hp Emergency Diesel Fire Pump	Fuel Oil No. 2		

1 - Report the maximum sulfur content recorded during the reporting period.

2 - Report the average nitrogen content for the reporting period.

List means and methods used to determine the sulfur content.

List means and methods used to determine the nitrogen content.

**COMPLIANCE CERTIFICATION FORM
COVERED SOURCE PERMIT NO. 0007-01-C**

Issuance Date: DATE

Expiration Date: July 1, 2006

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following certification at least annually, or more frequently as set by an applicable requirement:

For Period: _____ Date: _____

Facility Name: HELCO Keahole Generating Station

Responsible Official (Print): _____

Title: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate, and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by Department of Health as public record.

Responsible Official (Signature): _____

Complete the following information for **each** term or condition of the permit that applies to **each** emissions unit at the source. Also include any additional information as required by the director. The compliance certification may reference information contained in a previous compliance certification submittal to the director, provided such referenced information is certified as being current and still applicable.

1. Current permit number: _____
2. Emissions Unit No./Description: _____
3. Identify the permit term(s) or condition(s) that is/are the basis of this certification:

4. Compliance status during the reporting period:
 - a. Has the emissions unit been in compliance with the identified permit term(s) or condition(s)?
 YES NO
 - b. If YES, was compliance continuous or intermittent?
 Continuous Intermittent

c. If NO, explain.

5. The methods used for determining the compliance status of the emissions unit currently and over the reporting period (e.g., monitoring, recordkeeping, reporting, test methods, etc.):

Provide a detailed description of the methods used to determine compliance: (e.g., monitoring device type and location, test method description, or parameter being recorded, frequency of recordkeeping, etc.)

6. Statement of Compliance with Enhanced Monitoring and Compliance Certification Requirements.

a. Is the emissions unit identified in this application in compliance with applicable enhanced monitoring and compliance certification requirements?

YES NO

b. If YES, identify those requirements:

c. If NO, describe below which requirements are not being met:
