

**PROPOSED**

[Issuance Date]

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**  
( )

03-XXXE CAB  
File No. 0452

Mr. Randall Hee  
Plant Manager  
Kauai Power Partners  
P. O. Box 751  
Lihue, Hawaii 96766

Dear Mr. Hee:

**Subject: Covered Source Permit (CSP) No. 0452-01-C  
Application for a Minor Modification No. 0452-03  
Kauai Power Partners  
One (1) 27 MW Combustion Turbine Generator  
with Heat Recovery Steam Generator, and  
One (1) 600 kW Blackstart Diesel Engine Generator  
Located at TMK 3-8-03 Par 1; Field 390, Lihue, Kauai  
Date of Expiration: March 1, 2006**

The subject Covered Source Permit is issued in accordance with Hawaii Administrative Rules (HAR), Title 11, Chapter 60.1. The issuance of this permit is based on the plans, specifications, and additional information that you submitted as part of your application for a minor modification dated May 22, 2002, and on correspondence dated April 16, 2002, and May 14, 2002. This permit amends, consolidates, and supersedes in its entirety Covered Source Permit No. 0452-01-C issued on March 7, 2001 and the minor modification issued on February 6, 2002.

In addition to consolidating and superseding the conditions of the of the Covered Source Permit issued on March 7, 2002 and the minor modification issued on February 6, 2002, this modification includes the following amendments to the Covered Source Permit:

1. Special Condition no. D.1.a. is re-numbered/re-lettered for clarity.
2. Special Condition No. D.1.a.1) f) is corrected to include language erroneously deleted in the minor modification.

## PROPOSED

Mr. Randall Hee  
[Issuance Date]  
Page 2

3. Special Condition Nos. D.1.a.1) g), D.1.c., E.8.d., and E.10.a., address SO<sub>2</sub> CEMS monitoring, recordkeeping, and reporting requirements.
4. Special Condition Nos. D.1.a.1)f) and D.1.a.1)g) and Special Condition Nos. D.1.a.2) and D.1.a.3) are modified/added for clarity.
5. Special Condition No. D.1.a.4) is added to provide clarity on the frequency for performing quarterly accuracy audits.
6. Special Condition No. D.1.b., allows the permittee to obtain one fuel analysis for each batch of fuel received for the combustion turbine generator using one of two methods.
7. Special Condition No. D.2.b., allows the permittee to obtain one fuel analysis for each batch of fuel received for the diesel engine generator using one of two methods.
8. Special Condition No. E.8.e. is modified for clarity.
9. Special Condition No. E.9. has been added to provide clarity on the due date for quarterly accuracy audit reports.
10. Special Condition No. E.11.c. identifies a report form added for the internal floating roof storage tanks, **Monitoring Report Form: Internal Floating Roof Storage Tanks.**

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 III: Annual Fee Requirements
- Attachment IV: Annual Emissions Reporting Requirements
- Attachment V: Compliance Certification

The forms for submission are as follows:

Excess Emission and Monitoring System Performance Summary Report

**PROPOSED**

Mr. Randall Hee  
[Issuance Date]  
Page 3

- Monitoring Report Form: Combustion Turbine Generator "Startup," "Shutdown," and Air Pollution Control
- Monitoring Report Form: Combustion Turbine Generator Operating Load
- Monitoring Report Form: Combustion Turbine Generator Sulfur Dioxide Emissions and Fuel Certification
- Monitoring Report Form: Blackstart Diesel Engine Generator Operating Hours and Fuel Certification
- Monitoring Report Form: Internal Floating Roof Storage Tanks
- Monitoring Report Form - Visible Emissions, with the following enclosures:
  - a. Visible Emissions Form Requirements State of Hawaii;
  - b. Visible Emissions Form State of Hawaii; and
  - c. Ringelmann Chart
- Annual Emission Report Form: Ammonia Slip
- Annual Emission Report Form: Diesel Engine and Gas Turbine
- Annual Emission Report Form: Internal Floating Roof Petroleum Storage Tanks

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 E. ARIZUMI, P.E., CHIEF  
Environmental Management Division

CL:lk

Enclosures

c: Rodney Yama, EHS - Kauai  
CAB Enforcement Section

**ATTACHMENT I: STANDARD CONDITIONS  
COVERED SOURCE PERMIT NO. 0452-01-C**

**[Issuance Date]**

**Expiration Date: March 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 wilfully defaced, altered, forged, counterfeited, or falsified.  
  
(Auth.: HAR §11-60.1-6; SIP §11-60-11)<sup>2</sup>
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)<sup>2</sup>
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 Regional Administrator for the U.S. Environmental Protection Agency (EPA).  
  
(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 in writing of the following dates:
- 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;
  - The **actual date of construction commencement** within fifteen (15) days after such date; and
  - 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 Administrator 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:
- Identification of the specific equipment to be taken out of service, as well as its location and permit number;
  - The expected length of time that the air pollution control equipment will be out of service;
  - The nature and quantity of emissions of air pollutants likely to be emitted during the shutdown period;
  - Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period; and
  - 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)<sup>2</sup>

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 each 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)<sup>2</sup>

18. A copy of applicable correspondence or records submitted to the Department of Health shall be provided to the U.S. EPA Administrator.

(Auth.: HAR §11-60.1-90)

19. 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)

20. This permit shall become invalid with respect to the authorized construction if construction is not commenced as follows:
- a. Construction shall be commenced within eighteen (18) months after the permit takes effect, shall not be discontinued for a period of eighteen (18) months or more, and shall be 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)
21. The Department of Health may extend the time periods specified in Standard Condition No. 20 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)
22. The permittee shall submit fees in accordance with HAR, Chapter 11-60.1, Subchapter 6.
- (Auth.: HAR §11-60.1-90)
23. All certifications shall be in accordance with HAR, Section 11-60.1-4.
- (Auth.: HAR §11-60.1-4, §11-60.1-90)
24. 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 assure compliance with this permit or applicable requirements of HAR, Chapter 11-60.1.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

25. 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)<sup>2</sup>

26. Each permit renewal application shall be submitted to the Department of Health no fewer than twelve (12) months and no more than eighteen (18) months prior to the permit expiration date. The Department of Health may allow a permit renewal application to be submitted no fewer than six (6) months prior to the permit expiration date, if the Department of Health determines that there is reasonable justification.

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

27. 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)

28. 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 Regional Administrator once per year, or more frequently as set by any applicable requirement.

(Auth.: HAR §11-60.1-90)

29. **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. 0452-01-C**  
**Attachment I**  
**Page 7 of 7**  
**[Issuance Date]**  
**Expiration Date: March 1, 2006**

**PROPOSED**

**Upon request, 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)

---

<sup>1</sup> 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.

<sup>2</sup> 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. 0452-01-C**

**[Issuance Date]**

**Expiration Date: March 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. One (1) 27 MW (nominal) General Electric LM2500 combustion turbine generator with steam injection;
  - b. One (1) unfired heat recovery steam generator (HRSG), with one (1) selective catalytic reduction (SCR) unit;
  - c. One (1) 72 foot high exhaust stack for the combustion turbine generator (diameter of 7 feet, 10-3/4 inches);
  - d. One (1) 600 kW (nominal) blackstart diesel engine generator (or smaller);
  - e. One (1) 6,000 barrel (nominal) capacity petroleum storage tank with internal floating roof; and
  - f. Two (2) each 3,000 barrel (nominal) capacity petroleum storage tanks with internal floating roof.

(Auth.: HAR §11-60.1-3)

2. Except for the stack, the permittee shall permanently attach an identification tag or name plate on each equipment, which identifies the model no., serial or I.D. no., and manufacturer. The identification tag or name plate shall be permanently attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-5)

**Section B. Applicable Federal Regulations**

1. The combustion turbine generator and internal floating roof petroleum storage tanks are subject to the federal regulations of 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart A - General Provisions.

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

2. The combustion turbine generator is subject to the federal regulations entitled Standards of Performance of New Stationary Sources, 40 CFR Part 60, Subpart GG - Standards of Performance for Stationary Gas Turbines.

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

3. The internal floating roof petroleum storage tanks are subject to the provisions of the Standards of Performance for New Stationary Sources, 40 CFR Part 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR 60.110b)<sup>1</sup>

4. The permittee shall comply with all applicable requirements of these standards, including all emission limits, notification, reporting, monitoring, testing and recordkeeping requirements. The major requirements of these standards are detailed in the special conditions of this permit.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161)

### **Section C. Operational and Emission Limitations**

#### 1. Combustion Turbine Generator

##### a. "Startup" and "Shutdown"

- 1) The "startup" time for the combustion turbine generator shall not exceed forty (40) minutes. A "startup" sequence shall be from the time fuel use at the combustion turbine begins, until the time the combustion turbine generator initially attains 50% load.
- 2) The "shutdown" time for the combustion turbine generator shall not exceed twenty-five (25) minutes. A "shutdown" sequence shall be considered from the time when the combustion turbine generator is below 50% load, until fuel use at the combustion turbine generator ceases.

##### b. Minimum Operational Loads

Except during combustion turbine generator "startup" and "shutdown", the minimum combustion turbine generator load shall not be less than 50% of the rated capacity (12.9 MW).

##### c. Air Pollution Control Equipment

- 1) The permittee shall design, install, continuously operate, and maintain the following air pollution control equipment to meet the emission limits as specified in this Attachment, Condition No. C.1.e.1) below:
  - a) A combustor steam injection system; and
  - b) A Selective Catalytic Reduction (SCR) system (with urea injection).

- 2) The combustor steam injection and SCR systems shall be fully operational immediately after the "startup" sequence, and shall continue to operate until the commencement of the "shutdown" sequence of the combustion turbine generator.

d. Fuel Usage and Specifications

- 1) The combustion turbine generator shall be fired on Naphtha, fuel oil no. 2, Jet-A, or Heavy Straight Run gasoline. The maximum sulfur content of any fuel shall not exceed 0.4 percent by weight.
- 2) The combustion turbine generator will be fired on Naphtha as a primary fuel and fuel oil no. 2, Jet-A, or Heavy Straight Run gasoline as alternate fuels. The permittee shall fire a combination of fuels such that sulfur dioxide emissions from the combustion turbine generator does not exceed 200 tons in any rolling twelve (12) month period.

e. Maximum Emission Limits

- 1) Except for the combustion turbine generator's "startup" and "shutdown" sequence, the permittee shall not discharge or cause the discharge into the atmosphere from the combustion turbine generator, nitrogen oxides (NO<sub>x</sub> as NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), PM<sub>10</sub>, carbon monoxide (CO), volatile organic compounds (VOC), and ammonia (NH<sub>3</sub>) in excess of the following specified limits:

Compound	Maximum Emission Limit (3-hour Average)	
	(lbs/hr)	(ppmvd @ 15 percent O <sub>2</sub> )
Nitrogen Oxides (as NO <sub>2</sub> )		
75.01% - ≤100% Load	12.92	15
50.01% - ≤ 75% Load	10.21	15
50% Load	7.75	15
Sulfur Dioxide		
75.01% - ≤100% Load	94.3	79.3
50.01% - ≤ 75% Load	74.5	79.3
50% Load	56.6	79.3
PM <sub>10</sub>	7.5	0.043 <sup>a</sup>

	Maximum Emission Limit (3-hour Average)	
Carbon Monoxide		
100% Load	39.34	75
75% - < 100% Load	41.44	100
50% - < 75% Load	47.16	150
Volatile Organic Compounds <sup>b</sup>		
75.01% - ≤100% Load	19.8	65.8
50.01% - ≤75% Load	9.1	38.2
50% Load	7.8	43.5
Ammonia	3.16	10

<sup>a</sup> gr/dscf @ 12% CO<sub>2</sub>

<sup>b</sup> measured in terms of methane

Emissions, averaged over any rolling three hour period, shall not exceed the limits as specified in the table above, except during the combustion turbine generator's "startup" and "shutdown" periods. The three hour averaging period shall begin immediately after the combustion turbine generator's "startup," and end immediately prior to the combustion turbine generator's "shutdown" period. "Startup" and "shutdown" periods are as defined in this Attachment, Condition No. C.1.a.

The Department of Health may also revise the permit to include operating ammonia-to-NO<sub>x</sub> injection rates, if findings through operating parameters and performance test results show an optimum operating range which minimizes emissions.

- 2) Total sulfur dioxide emissions from the combustion turbine generator shall not exceed two-hundred (200) tons in any rolling 12-month period.

f. Opacity Limits

On and after the date of start-up of the combustion turbine generator, for any six (6) minute averaging period, the combustion turbine generator shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during "startup," "shutdown," or equipment breakdown, the combustion turbine generator 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.

- g. Although not required at this time, the Department of Health, if so desires, may at any time

require the permittee to install and operate an opacity meter, additional continuous emission monitors, or to conduct additional source performance testing or ambient air quality monitoring.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-32, §11-60.1-38, §11-60.1-90, §11-60.1-140; SIP §11-60-24; 40 CFR 60.332, 40 CFR 60.333) <sup>1, 2</sup>

2. Blackstart Diesel Engine Generator

- a. The maximum operating hours of the blackstart diesel engine generator shall not exceed one (1) hour per day.
- b. The maximum operating hours of the blackstart diesel engine generator shall not exceed two-hundred (200) hours in any rolling 12-month period.
- c. The blackstart diesel engine generator shall be fired only on diesel no. 2. The maximum sulfur content of the diesel no. 2 shall not exceed 0.4 percent by weight.
- d. On and after the date of startup of the blackstart diesel engine generator, for any six (6) minute averaging period, the diesel engine generator shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during "startup," "shutdown," or equipment breakdown, the blackstart diesel engine generator 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.

(Auth.: HAR §11-60.1-3, §11-60.1-32, §11-60.1-38, §11-60.1-90; SIP §11-60-24) <sup>2</sup>

3. Internal Floating Roof Storage Tanks

- a. The true vapor pressure of the fuel stored shall be maintained below 11.1 psia (76.6 kPa) at all times. Determination of the true vapor pressure shall be done according to an applicable method specified in NSPS, Subpart Kb.
- b. The storage tanks shall each have a fixed roof with an internal floating roof and shall meet the specification pursuant to 40 CFR Part 60, Section 60.112b(a)(1) consisting of the following:
  - 1) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or

subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

- 2) The petroleum storage tanks shall be equipped with one of the following closure devices between the wall of the storage tank and the edge of the internal floating roof:
  - a) A foam or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal);
  - b) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage tank and the edge of the internal floating roof. The lower seal may be vapor mounted, but both must be continuous; or
  - c) A mechanical shoe seal.
- 3) Each opening in a noncontact internal floating roof, except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.
- 4) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap), except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.
- 5) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof support legs.
- 6) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.
- 7) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.
- 8) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

- 9) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(Auth.: HAR §11-60.1-3, §11-60.1-39, §11-60.1-90, §11-60.1-161; 40 CFR 60.112b) <sup>1</sup>

#### **Section D. Monitoring and Recordkeeping Requirements**

All records, including support information, shall be maintained for at least five (5) years from the date of the monitoring data (e.g., original strip chart or computer CEM recordings), measurements, tests, reports, or applications. Support information includes all calibration and maintenance records, inspection and repair records, and copies of all reports required by this permit. These records shall be in a permanent form suitable for inspection and shall be made available to the Department of Health or their representative upon request.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.113, §60.115b, §60.334) <sup>1</sup>

1. Combustion Turbine Generator
  - a. Continuous Emissions Monitoring System (CEMS)
    - 1) Prior to the date of startup and thereafter, the permittee shall at its own expense install, operate, and maintain the following continuous monitoring systems for the combustion turbine generator to measure and record the following parameters or data. The associated date and time of the monitored data shall also be recorded.
      - a) Operating load in KW or MW;
      - b) "Startup" and "shutdown" times. The start and end times of each sequence shall be recorded. In addition, the operating load (MW) at which the air pollution control equipment was initiated and terminated shall be recorded;
      - c) Steam-to-fuel ratio. The steam-to-fuel monitor/recorder shall be accurate to  $\pm 5$  percent;
      - d) Fuel usage in gallons/hour using a volumetric flow metering system;
      - e) Ammonia injection rate in pounds per hour (lbs/hr), and ammonia to NO<sub>x</sub> ratio. The ratio shall be based on the lbs/hr. of ammonia injected into the SCR, to the lbs/hr NO<sub>x</sub> entering the HRSG with SCR;

- f) NO<sub>x</sub> concentrations in the gas stream between the exit of the combustion turbine generator with steam injection system, and the entrance to the HRSG with SCR. Measurements shall be made by using a continuous emissions monitoring (CEMs) system. The system shall meet U.S. EPA performance specifications as specified in Special Condition Nos. D.1.a.2), D.1.a.3), and D.1.a.4). The emission rates for NO<sub>x</sub> shall be recorded in parts per million by volume dry (ppmvd) at 15 percent O<sub>2</sub> and lbs/hr.; and
  - g) NO<sub>x</sub>, SO<sub>2</sub>, CO, and CO<sub>2</sub> or O<sub>2</sub> concentrations in the stack gases using a CEMs system. If a CO<sub>2</sub> CEM is used, 40 CFR Part 60, Appendix A, Method 20, Equations 20-2 and 20-5 shall be utilized. The system shall meet U.S. EPA performance specifications as specified in Special Condition Nos. D.1.a.2), D.1.a.3), and D.1.a.4). The CEM shall be on-line and fully operational, upon completion and thereafter of the performance specification test. The emission rates for NO<sub>x</sub>, SO<sub>2</sub>, and CO shall be recorded in ppmvd at 15 percent O<sub>2</sub> and lbs/hr.
- 2) The procedures under 40 CFR §60.13 shall be followed for installation, evaluation, and operation of the CEMS.
  - 3) The CEMS shall also be operated according to the performance specifications of 40 CFR Part 60, Appendix B.
  - 4) Quarterly accuracy audits (consisting of Cylinder Gas Audits (CGA) and Relative Accuracy Test Audits (RATA)) and daily calibration drift tests shall be performed in accordance with 40 CFR Part 60, Appendix F. Successive quarterly accuracy audits shall occur no closer than two months apart. Relative Accuracy Test Audits (RATA) must be conducted at least once every four calendar quarters.
- b. Fuel Data. Records on fuel usage and receipt dates of fuel deliveries, type of fuel, quantity of fuel, date batch sample taken, and the analyzed sulfur content (percent by weight), nitrogen content (percent by weight), and higher heating value of the fuel (BTU/gal), including copies of the certificate of analysis for each batch of fuel received shall be maintained.
- 1) Sulfur Content, Nitrogen Content, and Higher Heating Value of the Fuel. The sulfur content of the fuel to be fired in the combustion turbine generator shall be tested in accordance with the most current American Society for Testing and Materials (ASTM) methods. ASTM Method D4294-98 is a suitable alternative to Method D129-00 for determining the sulfur content. For each batch of fuel received, the fuel sulfur content (percent by weight), fuel nitrogen content (percent by weight), and higher heating value

of the fuel (BTU/gal) shall each be verified by either of the following methods:

- a) A representative sample of each batch of fuel received shall be analyzed for its sulfur content (percent by weight), nitrogen content (percent by weight), and higher heating value (BTU/gal); or
- b) A certificate of analysis on the sulfur content (percent by weight), nitrogen content (percent by weight), and higher heating value (BTU/gal), including the supporting laboratory analysis, shall be obtained from the fuel supplier for each batch of fuel received.

Records of the sulfur contents (percent by weight), nitrogen contents (percent by weight) and higher heating value (BTU/gal) of the fuel shall be maintained on a monthly basis.

- 2) Total Fuel Usage. Records on the total amount (gallons) and type of each of the fuels fired in the combustion turbine generator shall be maintained on a daily and monthly basis. The dates of when the fuel is switched between Naphtha, diesel no. 2, Jet-A, and Heavy Straight Run shall be clearly identified.
- c. Sulfur Dioxide Emissions. For the purpose of monitoring compliance with the emission limitation specified in Special Condition No. C.1.e.2) the total tons of SO<sub>2</sub> emitted by the combustion turbine generator shall be monitored and recorded as follows:
- 1) The Continuous Emissions Monitoring System (CEMS) shall record SO<sub>2</sub> emissions; and
  - 2) During all periods the CEMS is not in operation or is not providing valid data, except periods of routine daily calibration, the permittee shall provide SO<sub>2</sub> emissions as follows:
    - a) For periods greater than one hour or an individual hour with varied load, SO<sub>2</sub> emissions shall be calculated using the following mass balance equation:

$$SO_2 = a \times b \times S \times c$$

SO<sub>2</sub> = sulfur dioxide emissions, in pounds

a = volume of fuel fed to the turbine, in gallons

b = maximum projected unit weight of the fuel fed to the turbine, in pounds per gallon

S = fuel sulfur content in percent by weight (for example, for fuel having 0.4% sulfur content, S = 0.004)

S shall represent the highest of the 12 most recent fuel analyses (for the type of

fuel fired during the period in question) determined by the methods specified in Special Condition No. D.1.b.1) or, the maximum sulfur content for the fuel as shown on fuel specification sheets

c = 2, the ratio of pounds of sulfur dioxide to pounds of sulfur

- b) For an individual hour with constant load, the permittee shall substitute the average of the hourly SO<sub>2</sub> emission rate recorded by the CEMS for the unit operating hour immediately before and the unit operating hour immediately after the missing data period.
- c) For a partial day of missing data, the permittee may calculate SO<sub>2</sub> emissions for the day using the mass balance equation of Special Condition No. D.1.c.2)a) and the quantity of fuel consumed over the subject 24-hour period.

Back-up data, calculations, and the resulting sulfur dioxide emissions shall be maintained.

- d. Performance Test. Initial and annual source performance tests shall be conducted pursuant to this Attachment, Section F, Testing Requirements. The Department of Health may require additional source performance tests in the event of fuel switches between Naphtha, diesel no. 2, Jet-A, or Heavy Straight Run. Records of test summaries and results shall be maintained.
- e. Ammonia Slip. Records shall be maintained on the amount of ammonia slip from the operation of the SCR. Estimates of ammonia slip shall be based on the ammonia emission rates measured during the initial and subsequent annual performance test required by this Attachment, Section F. Back-up data, calculations, and the resulting ammonia emissions shall be maintained on a monthly basis.
- f. An inspection, maintenance, and repair log shall be maintained for the combustion turbine generator, and SCR system. Replacement and repairs to the SCR's catalyst shall be well documented.
- g. Visible Emissions (V.E.)
  - 1) The permittee shall conduct **monthly** (*calendar month*) V.E. observations for the combustion turbine generator in accordance with 40 CFR Part 60, Appendix A, Method 9 or by use of a Ringelmann chart as provided. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for the combustion turbine generator. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
  - 2) The permittee shall conduct **annually** (*calendar year*) V.E. observations for the combustion turbine generator by a certified reader in accordance with 40 CFR Part 60,

Appendix A, Method 9. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for the combustion turbine generator. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.

- 3) Upon written request and justification, the Department of Health may waive the requirements for the **annual** V.E. observations. The waiver request is to be submitted prior to the required test and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior tests indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the source have not changed since the previous **annual** V.E. observations. The annual V.E. observations shall not be waived for more than two consecutive years.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-32, §11-60.1-90, §11-60.1-161; SIP §11-60-15, §11-60-24; 40 CFR 60.334) <sup>1,2</sup>

## 2. Blackstart Diesel Engine Generator

- a. Prior to the date of start-up and thereafter, the permittee shall at its own expense install, operate, and maintain a non-resetting hour meter for the permanent recording of the total hours the blackstart diesel engine generator is operated for the purpose of the hourly limitations specified in this Attachment, Condition Nos. C.2.a. and C.2.b.

The following information shall be recorded for the blackstart diesel engine generator when operated:

- 1) Date of meter readings;
  - 2) Beginning and ending meter readings;
  - 3) Total operating hours for that day;
  - 4) Total operating hours for each month; and
  - 5) Total operating hours on a 12-month rolling basis.
- b. Sulfur Content in the Fuel. Receipt dates of fuel deliveries, type of fuel, quantity of fuel, date batch sample taken, and the analyzed sulfur content of the fuel, and copies of the certificate of analysis showing the sulfur content of each batch of fuel received shall be maintained. The sulfur content of the fuel to be fired in the blackstart diesel engine generator shall be tested in accordance with the most current American Society for Testing and Materials (ASTM) methods. ASTM Method D4294-98 is a suitable alternative to

Method D129-00 for determining the sulfur content. For each batch of fuel received, the fuel sulfur content (percent by weight) shall be verified by either of the following methods:

- 1) A representative sample of each batch of fuel received shall be analyzed for its sulfur content (percent by weight); or
- 2) A certificate of analysis on the sulfur content (percent by weight), including the laboratory analysis, shall be obtained from the fuel supplier for each batch of fuel received.

Records of the sulfur content in the fuel shall be maintained on a monthly basis.

- c. Total Fuel Usage. Records on the total amount (gallons) and type of fuel fired in the blackstart diesel engine generator shall be maintained on an annual basis.
- d. Visible Emissions (V.E.)
  - 1) The permittee shall conduct **monthly** (*calendar month*) V.E. observations for the blackstart diesel engine generator in accordance with 40 CFR Part 60, Appendix A, Method 9 or by use of a Ringelmann chart as provided. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for the blackstart diesel engine generator. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
  - 2) The permittee shall conduct **annually** (*calendar year*) V.E. observations for the blackstart diesel engine generator by a certified reader in accordance with 40 CFR Part 60, Appendix A, Method 9. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for the blackstart diesel engine generator. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
  - 3) Upon written request and justification, the Department of Health may waive the requirements for the **annual** V.E. observations. The waiver request is to be submitted prior to the required test and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior tests indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the source have not changed since the previous **annual** V.E. observations. The annual V.E. observations shall not be waived for more than two consecutive years.

3. Internal Floating Roof Storage Tanks

- a. Records showing the dimensions (meters or feet) of each storage tank and the analysis showing the capacity (cubic meters or cubic feet) of each storage tank shall be maintained for the life of the tanks.
- b. For each storage tank, records shall be maintained on the type of fuel stored, the period of storage, and the maximum true vapor pressure (kPa) of the fuel stored during the respective storage period. Determination of the maximum true vapor pressure shall be in accordance with 40 CFR Part 60, Section 116b(e). Records shall be maintained on a monthly basis.
- c. Inspections and repairs of the petroleum storage tanks shall be conducted in accordance with 40 CFR Part 60, Section 60.113b(a)(1), (a)(2), (a)(3), and (a)(4).
- d. The permittee shall keep records of each inspection performed as required by 40 CFR Part 60, Section 60.113b(a)(1), (a)(2), (a)(3) and (a)(4). Records shall include the storage tank identification, the date the tank was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR 60.116b)<sup>1</sup>

**Section E. Notification and Reporting Requirements**

1. Notification and reporting pertaining to the following events shall be done in accordance with Attachment 1, Standard Condition Nos. 14, 16, 17 and 25, 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, §11-60-16)<sup>2</sup>

2. The permittee shall report (in writing) **within five (5) working days** any deviations from the permit requirements, including those attributable to upset conditions, the probable cause of such

deviations and any corrective actions or preventative measures taken. Corrective actions may include a requirement for additional source testing, more frequent monitoring, or the implementation of a corrective action plan.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-16, §11-60.1-90)

3. Following installation of the internal floating roof storage tanks, and **within fifteen (15) days after the actual date of start-up** (operation of the tank(s)), the permittee shall submit to the Department of Health notification of this initial start-up date along with a report that describes the control equipment (identify the type of seal installed) and certification that the control equipment meets the requirements of this permit, including the requirements of 40 CFR Part 60, Sections 112b(a)(1) and 60.113b(a)(1). If a double-seal system is selected, the choice of inspection to be performed pursuant to 40 CFR Part 60, Section 60.113b(a)(3) shall be identified in the report.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR 60.115b)<sup>1</sup>

4. **Within sixty (60) days after initial start-up of the combustion turbine generator**, the permittee shall submit to the Department of Health a quality assurance project plan for the Continuous Emissions Monitoring System (CEMS) conforming to 40 CFR Part 60, Appendix F.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, 40 CFR 60, Appendix F)<sup>1</sup>

5. **At least thirty (30) days prior to initial start-up of the combustion turbine generator**, the permittee shall submit to the Department of Health in writing:
  - a. A monitoring procedure for determining the sulfur content of all fuels fired in the combustion turbine generator. The procedure shall address how fuel sulfur content will be calculated taking into account the variability of each batch of fuel received at the site and shall be used to provide sulfur dioxide emissions to the Department of Health as required in this Attachment, Condition No. E.10. The procedure must receive written approval from the Department of Health prior to initial start-up of the combustion turbine generator.
  - b. The manufacturer, model number, and serial number of the blackstart diesel engine generator and certification that the blackstart diesel engine generator is equivalent or smaller than 600 kW (nominal).

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

6. **At least thirty (30) days prior to** the following events, the permittee shall notify the Department of Health in writing of:

- a. *Conducting a performance specification test on the CEMS.* The testing date shall be in accordance with the performance test date identified in 40 CFR Part 60, Section 60.13.
- b. *Conducting a source performance test* as required by this Attachment, Section F, Testing Requirements.
- c. *Conducting a storage tank inspection* required pursuant to 40 CFR Part 60, Section 113b(a)(1) and (a)(4). If the inspection required by 40 CFR Part 60, Section 113b(a)(4) is unplanned and the required thirty (30) day advance notice cannot be given, the permittee shall notify the Department of Health at least seven (7) days prior to the refilling of a tank. Notification shall be made by telephone followed immediately by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail, so that the Department of Health receives the notice at least seven (7) days prior to the refilling.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR 60.13, 40 CFR 60.113b)<sup>1</sup>

7. The permittee shall furnish the Department of Health a report within **thirty (30) days** of the following inspections:
  - a. If any of the conditions described in 40 CFR Part 60, Section 113b(a)(2) are detected during the annual visual inspection required by 40 CFR Part 60, Section 113b(a)(2). Each report shall identify the storage tank, the nature of the defects, and the date the storage tank was emptied or the nature of and date the repair was made.
  - b. After each inspection required by 40 CFR Part 60, Section 113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 40 CFR Part 60, Section 113b(a)(3)(ii). The report shall identify the storage tank and the reasons it did not meet the specifications of 40 CFR Part 60, Section 112b(a)(1) or 40 CFR Part 60, Section 113b(a)(3) and list each repair made.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.115b)<sup>1</sup>

8. Excess Emissions

- a. The permittee shall submit to the Department of Health an excess emissions and monitoring systems performance report, *of all excess emissions*, pursuant to 40 CFR Part 60, Section 60.7(c) for **every semi-annual calendar period**. The report shall include the following:

- 1) The magnitude of excess emissions computed in accordance with 40 CFR Part 60, Section 60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions, and the corresponding operating load of the combustion turbine generator.
  - 2) Specific identification of each period of excess emissions that occurs during "startups" and "shutdowns," and malfunctions of the combustion turbine generator/heat recovery steam generator. The nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted, shall also be reported.
  - 3) 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.
  - 4) 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.
- b. In addition, the enclosed **Excess Emissions and Monitoring System Performance Summary Report** form or an equivalent form shall be submitted in conjunction with the above excess emissions and monitoring systems performance report.
- c. All reports shall be postmarked by the **30th day following the end of each semi-annual calendar period.**
- d. Excess emissions shall be defined as any rolling three (3) hour period during which the average emissions of NO<sub>x</sub>, SO<sub>2</sub>, and CO, as measured by the continuous emissions monitoring system, exceed the emission limits set forth in this Attachment, Condition No. C.1.e.1).
- e. On and after the date of completion of the source performance test and CEMS certification, excess emissions exceeding the emission limits set forth in this Attachment, Condition No. C.1.e.1) 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:
- 1) During the forty (40) minute "startup" period of the combustion turbine generator; and
  - 2) During the twenty-five (25) minute "shutdown" period of the combustion turbine generator.
- (Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR 60.7, 40 CFR 60.13)<sup>1</sup>
9. Quarterly Accuracy Audits

- a. The test reports for CGA and RATA shall be postmarked by the **30th day following the end of each semi-annual calendar period**.

10. Semi-Annual/Periodic Monitoring Report Form

Combustion Turbine Generator. The permittee shall submit to the Department of Health sulfur dioxide emissions, in tons, from the combustion turbine generator in accordance with the following schedule:

- a. Semi-annual reporting. The permittee shall submit **semi-annually**, total sulfur dioxide emissions from the combustion turbine on a rolling 12-month basis. The report shall be submitted **within sixty (60) days after the end of each semi-annual calendar period (January 1 - June 30 and July 1 - December 31)**. Back-up data, calculations, and the resulting sulfur dioxide emissions obtained for the periods the CEMS was not in operation or was not providing valid data shall be submitted for the reporting period.
- b. Periodic reporting. Should SO<sub>2</sub> emissions exceed one-hundred eighty four (184) tons on a rolling 12-month basis, the permittee shall report those emissions **within twenty (20) calendar days after the end of the month** showing the exceedence along with information on the measures taken to ensure compliance with the 200 tons per rolling 12-month period sulfur dioxide emission limit.

The enclosed **Monitoring Report Form: Combustion Turbine Generator Sulfur Dioxide Emissions and Fuel Certification** or equivalent form, shall be used.  
(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

11. The permittee shall submit **semi-annually** the following written reports to the Department of Health. The reports shall be submitted **within sixty (60) days after the end of each semi-annual calendar period (January 1 - June 30 and July 1 - December 31)**, and shall include the following:
  - a. Combustion Turbine Generator
    - 1) Exceedence of "startup" and "shutdown" durations. Each exceedence of the daily "startup" and "shutdown" limit specified in this Attachment, Condition No. C.1.a. shall be reported as follows:
      - a) All periods of time (date, time, and duration) when the "startup" or "shutdown" sequence exceeds forty (40) minutes and twenty-five (25) minutes, respectively;
      - b) The reason why the time limit was exceeded; and

- c) the report shall so state if no exceedences of the "startup" and "shutdown" time limits have occurred.

The enclosed **Monitoring Report Form: Combustion Turbine Generator "Startup," "Shutdown," and Air Pollution Control** or equivalent form, shall be used.

- 2) Initiation of Air Pollution Controls. The permittee shall report:
  - a) All periods of time (date, time, duration) when the combustor steam injection and SCR systems are not fully operational immediately after the "start-up" sequence and the load at which the air pollution controls become fully operational; and
  - b) All periods of time (date, time, duration) when the combustor steam injection and SCR system fail to remain fully operational until the commencement of the "shutdown" sequence.

The enclosed **Monitoring Report Form: Combustion Turbine Generator "Startup," "Shutdown," and Air Pollution Control** or equivalent form shall be used.

- 3) Minimum combustion turbine generator load. Except for the combustion turbine generator's "startup" and "shutdown" sequence, report all periods of time (date, time, and duration) when the minimum operating load for the turbine is less than 50% (12.9 MW) of the rated capacity. The enclosed **Monitoring Report Form: Combustion Turbine Generator Operating Load** or equivalent form, shall be used.
- 4) Summary of the occurrence and duration of any malfunction in the operation of the combustion turbine generator and air pollution control device, and the corrective actions taken.
- 5) Certification on the types of fuel fired in the combustion turbine generator and certification that the sulfur content of all fuels fired in the combustion turbine generator did not exceed 0.4% by weight, the enclosed **Monitoring Report Form: Combustion Turbine Generator Sulfur Dioxide Emissions and Fuel Certification** or equivalent form, shall be used.
- 6) Any opacity exceedences as determined by the required V.E. monitoring. Each exceedance reported shall include the date, six (6) minute average opacity reading, possible reason for exceedance, duration of exceedance, and corrective actions taken. If there were no exceedences, the permittee shall submit in writing a statement indicating that for each equipment there were no exceedences for that semi-annual period.

The enclosed **Monitoring Report Form: Visible Emissions** or an equivalent form, shall be used.

b. Blackstart Diesel Engine Generator

- 1) Exceedence of the one (1) hour per day operating limit and total hours of operation on a twelve (12) month rolling basis. Each exceedence of the limit specified in this Attachment, Condition No. C.2.a. shall be reported along with the total hours operated on a twelve (12) month rolling basis. The report shall provide:
  - a) All periods of time (date, time, and duration) when the blackstart diesel engine generator was operated for more than one (1) hour per day;
  - b) The report shall so state if no exceedences of the one (1) hour per day limit have occurred; and
  - c) Total hours of operation for each month, and the amount of hours operated on a twelve (12) month rolling basis. The enclosed **Monitoring Report Form: Blackstart Diesel Engine Generator Operating Hours and Fuel Certification** or equivalent form, shall be used.
- 2) Certification on the types of fuel fired in the blackstart diesel engine generator and certification that the sulfur content of all fuels fired in the blackstart diesel engine generator did not exceed 0.4% by weight, the enclosed **Monitoring Report Form: Blackstart Diesel Engine Generator Operating Hours and Fuel Certification** or equivalent form, shall be used.
- 3) Any opacity exceedences as determined by the required V.E. monitoring. Each exceedence reported shall include the date, six (6) minute average opacity reading, possible reason for exceedence, duration of exceedence, and corrective actions taken. If there were no exceedences, the permittee shall submit in writing a statement indicating that for each equipment there were no exceedences for that semi-annual period.

The enclosed **Monitoring Report Form: Visible Emissions** or an equivalent form, shall be used.

c. Internal Floating Roof Storage Tanks

Type of fuel stored in each tank, dates of storage, and maximum true vapor pressure (kPa) of the fuel stored during the respective storage period by month. The enclosed **Monitoring Report Form: Internal Floating Roof Storage Tanks** or equivalent 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, 40 CFR 60.116b)<sup>1</sup>

## 12. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, **Attachment V: Compliance Certification** 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 responsible official.***

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)

## 13. Annual Emissions

As required by Attachment III and in conjunction with the requirements of Attachments IV, Annual Fee Requirements, the permittee shall submit **annually** the total tons per year 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 Emission Report Forms** or equivalent forms, shall be used in reporting emissions.

Upon written request of the permittee, the deadline for reporting 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, §11-60.1-114)

#### **Section F. Testing Requirements**

1. **Within sixty (60) days after achieving the maximum production rate of the combustion turbine generator but not later than one hundred eighty (180) days after initial startup** (as defined in 40 CFR Part 60, Section 60.2), the permittee shall conduct or cause to be conducted performance tests on the combustion turbine generator.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR 60.335)<sup>1</sup>

2. On an annual basis or at other times as specified by the Department of Health, the permittee shall conduct or cause to be conducted performance tests on the combustion turbine generator.

(Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90; 40 CFR 60.335)<sup>1</sup>

3. The initial performance test shall be conducted at 50, 75, 90, and 100 percent operating loads of the combustion turbine generator, or at other operating loads as may be specified by the Department of Health. Subsequent annual tests shall be conducted at 50, 75, and 100 percent operating loads, or at other operating loads as may be specified by the Department of Health. The Department of Health may define the type(s) of fuel for which the performance test will be conducted.

- a. The performance test on the combustion turbine generator shall be conducted for nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), fine particulate matter (PM<sub>10</sub>), volatile organic compounds (VOC), and ammonia (NH<sub>3</sub>).

- b. The performance test on the combustion turbine generator shall be conducted for carbon dioxide (CO<sub>2</sub>) or oxygen (O<sub>2</sub>) concentrations in the gas stream between the exit of the combustion turbine generator with steam injection system, and the entrance to the HRSG with SCR. If CO<sub>2</sub> is measured, 40 CFR Part 60, Appendix A, Method 20, Equations 20-2 and 20-5 shall be utilized. Although not required at this time, the Department of Health, if so desires, may at any time require the permittee to install and operate a continuous emission monitor to measure carbon dioxide (CO<sub>2</sub>) or oxygen (O<sub>2</sub>) in the gas stream between the exit of the combustion turbine generator with steam injection system, and the

entrance to the HRSG with SCR.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161;  
40 CFR 60.335)<sup>1</sup>

4. The performance tests shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR Part 60, Appendix A, and 40 CFR Part 60, Section 60.8. Performance tests for emissions of NH<sub>3</sub> shall be conducted and results reported pursuant to a pre-approved test plan as referenced below. The following test methods, or U.S. EPA approved equivalent methods with prior written consent from the Department of Health shall be used:
  - a. Performance tests for the emissions of SO<sub>2</sub> shall be conducted using the 40 CFR Part 60, Methods 1-4 and 20.
  - b. Performance tests for the emissions of NO<sub>x</sub> 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 fine particulate matter shall be conducted using 40 CFR Part 60, Methods 1-4, and 201A.
  - f. Performance tests for emissions of NH<sub>3</sub> shall be conducted in accordance with an approved test plan. The permittee shall include in the performance test plan required in this Attachment, Condition No. F.6., the proposed test method for determining the ammonia emission rate in pounds per hour, and the ammonia stack gas concentrations in ppmvd @ 15 percent O<sub>2</sub>. In the event 40 CFR Part 51, Appendix M, Method 206 is adopted by EPA, this test method shall be used in determining the emission rate and stack gas concentrations of ammonia.

(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)<sup>1,2</sup>

5. 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) <sup>1,2</sup>

6. **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 that describes the test duration, test locations, test methods, source operation and other parameters (e.g., type of fuel to be fired) 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) <sup>1,2</sup>

7. The permittee shall provide sampling and testing facilities at its own expense. The tests shall be conducted at the operating capacities identified in this Attachment, Condition No. F.1. and the Department of Health may monitor the tests.

(Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90; SIP §11-60-15) <sup>2</sup>

8. Any deviations from these conditions, test methods, or procedures may be cause for rejection of the test results unless such deviations receive written approval by the Department of Health before the tests.

(Auth.: HAR §11-60.1-11, §11-60.1-90; SIP §11-60-15) <sup>2</sup>

9. **Within sixty (60) days after completion of the performance test**, the permittee shall submit to the Department of Health the test report which shall include the operating conditions of the combustion turbine generator at the time of the test, the analysis of the fuel, the summarized test results, comparative results with the permit emission limits, and other pertinent field and laboratory data.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

10. Upon written request and justification, the Department of Health may waive the requirement for a specific annual source test. The waiver request is to be submitted prior to the required test and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior tests indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the source have not changed since the previous source test. The annual source test shall not be waived for more than two consecutive years.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

## **Section G. Agency Notification**

**CSP No. 0452-01-C**  
**Attachment II**  
**Page 24 of 24**  
**[Issuance Date]**  
**Expiration Date: March 1, 2006**

**PROPOSED**

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

(Auth.: HAR §11-60.1-4, §11-60.1-90)

---

<sup>1</sup> 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.

<sup>2</sup> 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.

## PROPOSED

### ATTACHMENT III: ANNUAL FEE REQUIREMENTS COVERED SOURCE PERMIT NO. 0452-01-C

**[Issuance Date]**

**Expiration Date: March 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 (60) days after the end of each calendar year; and
  - b. Within thirty (30) 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**

## PROPOSED

**ATTACHMENT IV: ANNUAL EMISSIONS REPORTING REQUIREMENTS  
COVERED SOURCE PERMIT NO. 0452-01-C**

**[Issuance Date]**

**Expiration Date: March 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.

1. Complete the attached Form(s) for the **Combustion Turbine Generator, Ammonia Slip, Blackstart Diesel Engine Generator, and Internal Floating Roof Storage Tanks.**
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 by submitting a written request to the Director and clearly identifying the specific information that is to be accorded confidential treatment.

ATTACHMENT V: COMPLIANCE CERTIFICATION  
COVERED SOURCE PERMIT NO. 0452-01-C

[Issuance Date]

Expiration Date: March 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:

(Make Copies for Future Use)

For Period: \_\_\_\_\_ Date: \_\_\_\_\_

Facility Name: \_\_\_\_\_

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. I further state that I will assume responsibility for the construction, modification, or operation of the source in accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, and any permit issued thereof.

Responsible Official (PRINT): \_\_\_\_\_

TITLE: \_\_\_\_\_

Responsible Official (Signature): \_\_\_\_\_

Complete the following information for **each** applicable requirement and/or 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 applicable requirement(s), and/or 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 applicable requirement(s) and/or 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:

---

---

---

---

---

**PROPOSED**

**ANNUAL EMISSIONS REPORT FORM  
DIESEL ENGINE AND GAS TURBINE  
COVERED SOURCE PERMIT NO. 0452-01-C**

**[Issuance Date]**

**Expiration Date: March 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.

(Make Copies for Future Use)

*Fill out a separate form for the Blackstart Diesel Engine Generator and the Combustion Turbine Generator.*

For Period: \_\_\_\_\_ Date: \_\_\_\_\_

Company Name: \_\_\_\_\_

Facility Name: \_\_\_\_\_

Equipment Location: \_\_\_\_\_

Equipment Description: \_\_\_\_\_

Serial/ID No.: \_\_\_\_\_

**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 (PRINT): \_\_\_\_\_

TITLE: \_\_\_\_\_

Responsible Official (Signature): \_\_\_\_\_

For the reporting period:

Type of Fuel Fired	Fuel Usage (gallons/year)	% Sulfur Content by weight	Identify % Nitrogen, % Ash, & % Lead, if applicable

Types of Fuel:

- Residual Oil: Specify Grade, No. 6, 5, or 4;
- Distillate Oil (No. 2);
- Liquefied Petroleum Gas, Butane or Propane;
- If Other, specify.

Type of Air Pollution Control	In Use?	Pollutant(s) Controlled	Control Efficiency, % Reduction
_____	_____	_____	_____
_____	_____	_____	_____

---

**ANNUAL EMISSIONS REPORT FORM  
AMMONIA SLIP  
COVERED SOURCE PERMIT NO. 0452-01-C**

**[Issuance Date]**

**Expiration Date: March 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.

(Make Copies for Future Use)

For Period: \_\_\_\_\_ Date: \_\_\_\_\_

Company Name: \_\_\_\_\_

Facility Name: \_\_\_\_\_

Equipment Location: \_\_\_\_\_

Equipment Description: \_\_\_\_\_

Equipment Capacity/Rating (specify units): \_\_\_\_\_

Serial/ID No.: \_\_\_\_\_

**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 (PRINT): \_\_\_\_\_

TITLE: \_\_\_\_\_

Responsible Official (Signature): \_\_\_\_\_

Ammonia Slip Estimate for the Selective Catalytic Reduction (SCR) Unit Operating with the Combustion Turbine Generator

Month	Ammonia Slip <sup>a</sup> (pounds)	Notes
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

<sup>a</sup> Provide method used to calculate ammonia slip.

**ANNUAL EMISSIONS REPORT FORM  
INTERNAL FLOATING ROOF PETROLEUM STORAGE TANK  
COVERED SOURCE PERMIT NO. 0452-01-C  
(PAGE 1 OF 2)**

**[Issuance Date]**

**Expiration Date: March 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.

(Make Copies for Future Use)

For Period: \_\_\_\_\_ Date: \_\_\_\_\_

Facility Name: \_\_\_\_\_

Equipment Location: \_\_\_\_\_

Equipment Description: \_\_\_\_\_

Serial/ID No.: \_\_\_\_\_

**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 (PRINT): \_\_\_\_\_

TITLE: \_\_\_\_\_

Responsible Official (Signature): \_\_\_\_\_

TANK	NUMBER					
	CAPACITY (bbl)					
	DIAMETER (ft) - <b>D</b>					
	COLOR					
	TYPE OF DECK <sup>1</sup>					
	NUMBER OF COLUMNS (DIMENSIONLESS) - <b>N<sub>c</sub></b>					
	TYPE OF RIM SEAL <sup>2</sup>					
	TOTAL NUMBER OF DIFFERENT TYPE DECK FITTINGS <sup>3</sup> (DIMENSIONLESS) - <b>n<sub>f</sub></b>					
PRODUCT	NAME					
	REID VAPOR PRESSURE (psi)					
	TRUE VAPOR PRESSURE (psia) - <b>P<sub>VA</sub></b>					
	STORAGE TEMP. (°F)					
ANNUAL THROUGHPUT (bbl/yr) - <b>Q</b>						

**ANNUAL EMISSIONS REPORT FORM  
INTERNAL FLOATING ROOF PETROLEUM STORAGE TANK  
(CONTINUED, PAGE 2 OF 2)**

- <sup>1</sup> Type A: Column-supported fixed roof with bolted deck  
Type B: Column-supported fixed roof with welded deck  
Type C: Self-supporting fixed roof with bolted deck  
Type D: Self-supporting fixed roof with welded deck
- <sup>2</sup> Type VMP: Vapor-mounted resilient foam-filled primary seal only  
Type LMP: Liquid-mounted resilient foam-filled primary seal only  
Type LFP: Liquid-filled primary seal only  
Type MSP: Mechanical shoe primary seal only  
Type VMPS: Vapor-mounted resilient foam-filled primary seal plus secondary seal  
Type LMPS: Liquid-mounted resilient foam-filled primary seal plus secondary seal  
Type LFPS: Liquid-filled primary seal plus secondary seal  
Type MSPSS: Mechanical shoe primary seal plus secondary seal (shoe mounted)  
Type MSPSR: Mechanical shoe primary seal plus secondary seal (rim mounted)
- <sup>3</sup> For each tank, provide a listing of each type of deck fitting and the corresponding quantity of each fitting.  
[See Table 7.1-12, AP-42, Section 7.1(2/96)]

EXCESS EMISSION AND MONITORING SYSTEM  
PERFORMANCE SUMMARY REPORT

(Make Copies for Future Use)

(PAGE 1 OF 2)

PERMIT NO.: 0452-01-C

CONDITION NO.: \_\_\_\_\_

Facility Name: \_\_\_\_\_

Company Name: \_\_\_\_\_

Equipment Location: \_\_\_\_\_

Equipment Description: \_\_\_\_\_

**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) of Excess Emissions in Reporting Period due to:
  - a. Startup/Shutdown..... \_\_\_\_\_
  - b. Cleaning/Soot Blowdown..... \_\_\_\_\_
  - 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) 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)

**PROPOSED**

**EXCESS EMISSION AND MONITORING SYSTEM  
PERFORMANCE SUMMARY REPORT  
(CONTINUED, PAGE 2 OF 2)**

CERTIFICATION by Responsible Official

**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.**

NAME (Print/Type): \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_





**MONITORING REPORT FORM  
 COMBUSTION TURBINE GENERATOR  
 SULFUR DIOXIDE EMISSIONS AND FUEL CERTIFICATION  
 COVERED SOURCE PERMIT NO. 0452-01-C**

**[Issuance Date]** \_\_\_\_\_

**Expiration Date: March 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 information semi-annually/periodically:

(Make Copies for Future Use)

For Period: \_\_\_\_\_ Date: \_\_\_\_\_

Company Name: \_\_\_\_\_

Facility Name: \_\_\_\_\_

Equipment Location: \_\_\_\_\_

Equipment Description: \_\_\_\_\_

Serial/ID No.: \_\_\_\_\_

**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 (PRINT): \_\_\_\_\_

TITLE: \_\_\_\_\_

Responsible Official (Signature): \_\_\_\_\_

Sulfur Dioxide Emissions:

MONTH	Monthly Sulfur Dioxide Emissions (tons)	Sulfur Dioxide Emissions 12 - Month Rolling Basis (tons)
January		
February		
March		
April		
May		
June		

MONTH	Monthly Sulfur Dioxide Emissions (tons)	Sulfur Dioxide Emissions 12-month Rolling Basis (tons)
July		
August		
September		
October		
November		
December		

Fuel Certification:

Equipment Description	Type of Fuel Fired	Max. % Sulfur Content by Weight

Back-up data, calculations, and the resulting SO<sub>2</sub> emissions obtained for the periods the CEMS was not in operation or was not providing valid data shall be submitted for the reporting period.



**PROPOSED**

Please indicate in the table above if no exceedence to the daily limitation has occurred.

<p><b>MONITORING REPORT FORM</b>  <b>BLACKSTART DIESEL ENGINE GENERATOR</b>  <b>OPERATING HOURS AND FUEL CERTIFICATION</b>  <b>COVERED SOURCE PERMIT NO. 0452-01-C</b>  <b>(CONTINUED, PAGE 2 OF 2)</b></p>	
<p><b>[Issuance Date]</b></p>	<p><b>Expiration Date: <u>March 1, 2006</u></b></p>
<p>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 information semi-annually:</p>	

Operating hours on a 12-month rolling basis:

MONTH	Monthly Operating Hours Blackstart Diesel Engine Generator	Operating Hours 12 - Month Rolling Basis
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

Fuel Certification:

Equipment Description	Type of Fuel Fired	% Sulfur Content by Weight
Blackstart Diesel Engine Generator		

- If not already on file at the Department of Health, provide the suppliers fuel specification sheet for the type of fuel indicated in the above table. The fuel specification sheet shall indicate the % sulfur content by weight.





## PROPOSED

### VISIBLE EMISSIONS FORM REQUIREMENTS STATE OF HAWAII

The following Visible Emissions (V.E.) Form shall be completed **monthly** (*each calendar month*) for each equipment subject to opacity limits in accordance with Method 9 or by use of a Ringelmann Chart as provided. At least **annually** (*calendar year*), V.E. observations shall be conducted for each equipment subject to opacity limits by a certified reader in accordance with Method 9. The V.E. Form shall be completed as follows:

1. Visible emissions observations shall take place during the day only and shall be compared to the Ringelmann Chart provided. The opacity shall be noted in 5 percent increments (i.e., 25%).
2. Orient the sun within a 140 degree sector to your back. Provide a source layout sketch on the V.E. Form using the symbols as shown.
3. Stand at least three (3) stack heights, but not more than a quarter mile from the stack.
4. Two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment.
5. The six (6) minute average opacity reading shall be calculated for each observation.
6. If possible, the observations shall be performed as follows:
  - a. Read from where the line of sight is at right angles to the wind direction.
  - b. The line of sight shall not include more than one (1) plume at a time.
  - c. Read at the point in the plume with the greatest opacity (without condensed water vapor), ideally while the plume is no wider than the stack diameter.
  - d. Read the plume at fifteen (15) second intervals only. Do not read continuously.
  - e. The equipment shall be operating at maximum permitted capacity.
7. If the equipment was shut-down for that period, briefly explain the reason for shut-down in the comment column.

The permittee shall retain the completed V.E. Forms for recordkeeping. 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, or their representative upon request.

**VISIBLE EMISSIONS FORM  
STATE OF HAWAII**

(Make Copies for Future Use For Each Equipment)

Permit No.: **0452-01-C**

Company Name: \_\_\_\_\_

Equipment and Fuel: \_\_\_\_\_

**Site Conditions:**

Stack height above ground (ft): \_\_\_\_\_

Stack distance from observer (ft): \_\_\_\_\_

Emission color (black or white): \_\_\_\_\_

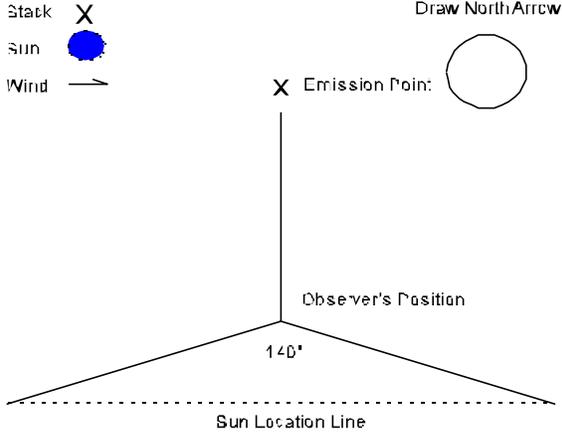
Sky conditions (% cloud cover): \_\_\_\_\_

Wind speed (mph): \_\_\_\_\_

Temperature (°F): \_\_\_\_\_

Observer Name: \_\_\_\_\_

Certified? (Yes/No): \_\_\_\_\_



Observation Date and Start Time: \_\_\_\_\_

SECONDS	0	15	30	45	COMMENTS
MINUTES					
1					
2					
3					
4					
5					
6					
Six (6) Minute Average Opacity Reading (%):					

Observation Date and Start Time: \_\_\_\_\_

SECONDS	0	15	30	45	COMMENTS
MINUTES					
1					
2					
3					
4					
5					
6					
Six (6) Minute Average Opacity Reading (%):					