

PROPOSED

DATE

10-xxxE CAB
File No. 0638

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
(xxx)

Mr. Tim Mobley
President/CEO
Honua Power, LLC
500 Ala Moana Boulevard, Suite 7-220
Honolulu, Hawaii 96813

Dear Mr. Mobley:

Subject: Covered Source Permit (CSP) No. 0638-01-C
Initial Application No. 0638-02
Honua Power, LLC
230 TPD Gasification Plant and 82,365 lb/hr Steam Boiler with
1,474 kW Blackstart Diesel Engine Generator
Located at: TMK 9-1-1-31:32, Kapolei, Oahu
Date of Expiration: [five years from DATE]

The subject Covered Source Permit is issued in accordance with Hawaii Administrative Rules, Title 11, Chapter 60.1. The issuance of this permit is based on the plans and specifications submitted as part of your February 16, 2010 application, and additional information submitted on May 11, 2010, June 18, 2010, July 8, 2010, July 28, 2010, August 2, 2010, August 23, 2010, September 13, 2010, September 15, 2010, September 19, 2010, and October 2, 2010.

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

Attachment I:	Standard Conditions
Attachment IIA:	Special Conditions – Gasifier and Boiler
Attachment IIB:	Special Conditions – Diesel Engine Generators
Attachment II-INSIG:	Special Conditions – Insignificant Activities
Attachment III:	Annual Fee Requirements
Attachment IV:	Annual Emissions Reporting Requirements

PROPOSED

Mr. Tim Mobley
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The following forms are enclosed for some of the monitoring and reporting required by this Covered Source Permit:

Compliance Certification Form
Annual Emissions Report Form: Gasifier-Boiler
Annual Emissions Report Form: Diesel Engine Generator
Monitoring Report Form: Operating Hours: Blackstart Diesel Engine Generator
Monitoring Report Form: Opacity Exceedances
Excess Emission and Monitoring System Performance Summary Report

The following are for use in monitoring visible emissions:

Visible Emissions Form Requirements, State of Hawaii
Visible Emissions Form
The Ringlemann Chart

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 State of Hawaii 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,

STUART YAMADA, P.E., CHIEF
Environmental Management Division

KK:nn
Enclosures

c: CAB Monitoring Section
Solid and Hazardous Waste Branch

**ATTACHMENT I: STANDARD CONDITIONS
COVERED SOURCE PERMIT NO. 0638-01-C**

Issuance Date:

Expiration Date:

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 a stationary source 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 (12) months and no more than eighteen (18) months prior to the permit expiration date. The Director may allow a permit renewal application to be submitted no less than six (6) 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
Hawaii Department of Health
919 Ala Moana Boulevard, Room 203
Honolulu, HI 96814**

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)

¹The 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.

²The 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 IIA: SPECIAL CONDITIONS – GASIFIER AND BOILER
COVERED SOURCE PERMIT NO. 0638-01-C**

Issuance Date:

Expiration Date:

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 attachment encompasses the following equipment and associated appurtenances:

- a. One (1) 82,365 lb/hr boiler with low NO_x burners, fired primarily with syngas;
- b. 230 ton per day (15,908 scfm) gasifier with high temperature cyclone;
- c. Selective Non-Catalytic Reduction System (SNCR) with urea injection;
- d. Alkaline Sorbent Injection System;
- e. Activated Carbon Injection System;
- f. High efficiency bag filter dust collector for exhaust stack;
- g. High efficiency bag filter dust collectors for receiving and char removal areas;
- h. Fabric filters for feedstock silos; and
- i. Conveyor belts.

(Auth.: HAR §11-60.1-3)

2. The permittee shall permanently attach an identification tag or name plate on the equipment listed above which identifies the model no., serial no., and manufacturer. The identification tag or name plate shall be permanently attached to the equipment at a conspicuous location.

(Auth.: HAR §11-60.1-5)

Section B. Applicable Federal Regulations

The boiler is subject to the provisions of the following federal regulations:

1. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions; and
2. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.

The permittee shall comply with all applicable requirements of these standards, including all emission limits, notification, testing, monitoring and reporting 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; 40 CFR §60.1, §60.40c)¹

Section C. Operational Limitations

1. The boiler, gasifier and associated equipment shall be properly maintained and kept in good operating condition at all times. The permittee shall follow a regular maintenance schedule, as recommended by the manufacturer or as needed, to ensure proper operation of the equipment.

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

2. The boiler shall be fired with syngas produced by the gasifier. Propane may also be used as an alternate fuel.

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

3. The gasifier shall process only construction and demolition waste materials. The amount of material processed by the gasifier shall not exceed 230 tons per day. Rubber tires shall not be processed by the gasifier.

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

4. Air Pollution Control Equipment

Honua Power, LLC, shall design, install, continuously operate, and maintain the following air pollution control equipment stack to meet the emission limits specified in Attachment II, Special Condition No. D.1:

- a. A high temperature cyclone. Differential pressure transducers shall be used to measure the upstream and downstream static pressure in the cyclone. The pressure differentials shall be recorded in inches of water. The minimum pressure differentials and the allowable deviation margins shall be determined by the Department after the initial source performance test, and possible subsequent source performance tests, required in Special Condition G.1 of this attachment.
- b. A selective non-catalytic reduction (SNCR) system with urea injection. Sensors shall be installed at the system outlet to measure the NO_x concentration. Temperature sensors shall be installed to monitor the chamber temperature. The temperature set point shall control the flue gas recirculation rate to allow for optimum SNCR performance. The urea injection system shall be equipped with an alarm which triggers if no urea is being injected into the system. The system shall be equipped with a data acquisition system for permanent recording of NO_x emission rates.
- c. A sorbent injection system shall be used to inject a powdered alkaline sorbent into the exhaust gas stream. An alarm shall be triggered if there is a failure of the sorbent injection system to operate properly. The minimum injection rate and the allowable deviation margins shall be determined by the Department after the initial source performance test, and possible subsequent source performance tests, required in Special Condition G.1 of this attachment.

- d. A sorbent injection system shall be used to inject activated carbon into the exhaust gas stream. An alarm shall be triggered if there is a failure of the sorbent injection system to operate properly.
- e. A high efficiency baghouses.
 - i. All boiler exhaust gas shall be routed to the high efficiency baghouse prior to exiting the exhaust stack. Differential pressure transducers shall be used to measure the upstream and downstream static pressure in the baghouse. The pressure differentials shall be recorded in inches of water. The minimum pressure differentials and the allowable deviation margins shall be determined by the Department after the initial source performance test, and possible subsequent source performance tests, required in Special Condition G.1 of this attachment.
 - ii. The receiving and char removal areas shall be equipped with high efficiency baghouses. Differential pressure transducers shall be used to measure the upstream and downstream static pressure in the baghouse. The pressure differentials shall be recorded in inches of water. The minimum pressure differentials and the allowable deviation margins shall be determined by the Department after the initial source performance test, and possible subsequent source performance tests, required in Special Condition G.1 of this attachment.

The air pollution control equipment shall be properly maintained and kept in good operating condition at all times. If the inspection indicates there is a problem affecting the efficiency of these systems, the boiler shall not be operated. The permittee shall correct the problem before resuming operation.

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

5. Fugitive Emissions

- a. The permittee shall take measures to control fugitive dust (e.g., wet suppression, enclosures, etc.) at all material transfer points, stockpiles, and throughout the facility. The Department of Health may at any time require the permittee to further abate fugitive dust emissions if an inspection indicates poor or insufficient control.
- b. The permittee shall not cause or permit fugitive dust to become airborne without taking reasonable precautions and shall not cause or permit the discharge of visible emissions or fugitive dust beyond the lot line of the property on which the emissions originate.
- c. The permittee shall provide access to the Department of Health to inspect all potential sources of fugitive emissions. These source include, but are not limited to: gauge hatches, sampling ports, pressure relief valves, conveyors, and storage vessels.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-33, §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 the boiler exhaust stack pollutants which exceed the following specified limits:

Pollutant	Emission Limit, lb/hr (3-hour average)	Emission Limit, lb/MMBtu (3-hour average)
PM	3.48	0.1
PM ₁₀	3.76	3.82E-02
SO ₂	9.05	9.16E-02
NO _x	16.98	1.72E-01
As	0.11	1.11E-03
Pb	0.47	4.76E-03
Cd	1.81E-03	1.83E-05
Cr	4.81E-04	4.87E-06
Hg	5.96E-04	6.03E-06
HCl	1.94	1.96E-02
Total Dioxins	4.83E-07	4.89E-09
Dioxin TEQ	8.59E-09	8.69E-11
PCB	6.01E-06	6.08E-08

(Auth.: HAR §11-60.1-3, 11-60.1-36, §11-60.1-90, §11-60.1-161; 40 CFR §60.43c)¹

2. The emission limits listed in Special Condition D.1 of this Attachment shall apply at all times of operation including periods of startup, shutdown, or malfunction.

(Auth.: HAR §11-60.1-3, 11-60.1-36§11-60.1-90, §11-60.1-161; 40 CFR §60.43c)¹

3. Except during periods of startup, shutdown or equipment breakdown, the boiler stack shall not exhibit visible emissions of twenty (20) percent or greater (6-minute average), except for one period aggregating not more than six (6) minutes in any sixty (60) minute period, of not more than twenty-seven (27) percent opacity.

During startup, shutdown, or equipment breakdown, the boiler stack 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.

For the purposes of this permit an exceedance of the SO₂ emission limit is also an exceedance of the HCl emission limit.

(Auth.: HAR §11-60.1-3, §11-60.1-32, §11-60.1-90, §11-60.1-161, SIP §11-60-24, 40 CFR §60.43c, §60.47c)^{1,2}

Section E. Monitoring and Recordkeeping Requirements

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

1. Fuel Consumption

- a. The permittee shall maintain records (daily and annual) on the amount of material processed by the gasifier. The feed rate may be determined from the amount measured with a weigh scale or other reasonable method (i.e., truck loads).
- b. The permittee shall maintain records (daily and annual) on the amount of propane used to fuel the boiler.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161, 40 CFR §60.48c)¹

2. Inspection, Maintenance, and Repair Log

An inspection, maintenance, and repair log shall be maintained for the equipment covered under this permit. Replacement of parts and repairs to the boiler, air pollution control equipment, and continuous monitoring systems shall be documented. At a minimum, the following records shall be maintained:

- a. The date of the inspection/repair;
- b. A description of the findings or any maintenance or repair work performed; and
- c. The name and title of the inspector.

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

3. Continuous Emissions Monitoring System

The permittee shall install, calibrate, operate, and maintain a NO_x and SO₂ CEMS on the boiler exhaust stack.

a. Span Values

The span value of the NO_x CEMS at the exhaust stack shall be 500 ppm while firing on syngas or propane.

- b. During each performance evaluation and calibration check for the CEMS, the following methods shall be used:

- i. For NO_x, EPA Reference Method 7, 7A, 7B, 7C, 7D or 7E shall be used;
 - ii. For SO₂, EPA Reference Method 6, 6A, 6B or 6C shall be used; and
 - iii. For O₂ or CO₂, EPA Reference Method 3, 3A, or 3B shall be used.
- c. The procedures under 40 CFR §60.13 shall be followed for installation, evaluation, and operation of the CEMS. The CEMS shall be operated in accordance with 40 CFR Part 60, Appendix B.
 - d. Quarterly accuracy audits and daily calibration drift tests shall be performed in accordance with 40 CFR Part 60, Appendix F. Successive quarterly audits shall occur no closer than two (2) months. RATA must be conducted at least once every four (4) calendar quarters.
 - e. The permittee shall maintain records of all measurements and monitoring data, including the CEMS performance evaluations; calibration checks; and adjustments and maintenance performed on the system or devices and all other information required to be recorded by 40 CFR §60.13 in a permanent form suitable for inspection.

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

4. Continuous Opacity Monitoring System (COMS)

The permittee shall install, calibrate, operate, and maintain a continuous opacity monitoring system on the boiler exhaust stack. The COMS shall be operated in accordance with Performance Specification 1 of appendix B, 40 CFR Part 60. The span value of the opacity COMS shall be between sixty (60) and eighty (80) percent.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40CFR §60.13, §60.47c)¹

Section F. Notification and Reporting Requirements

1. Notification and reporting pertaining to the following events shall be done in accordance with Attachment I, Standard Condition Nos. 14, 16, 17 and 24, respectively:
 - a. *Anticipated date of initial startup, actual date of construction commencement, and actual date of startup;*
 - 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 exceedances due to emergencies); and*
 - d. *Permanent discontinuance of construction, modification, relocation, or operation of the facility, or any petroleum storage tank, 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; 40CFR §60.49b)^{1, 2}

2. The permittee shall submit to the U.S. EPA, Region 9, and Department of Health the source performance test data from the initial source performance test and the performance

evaluation of the CEMS using the applicable performance specifications of 40 CFR Part 60, Appendix B.

(Auth.: HAR §11-60.1-5, §11-60.1-90, §11-60.1-161, 40CFR §60.49b)^{1, 2}

3. Semi-Annual Reports

a. Excess Emissions

The permittee shall submit **semi-annually** a written report of all excess emissions to the U.S. EPA, Region 9, and the Department of Health. The report shall be submitted **within thirty (30) days after the end of each semi-annual calendar period** (January 1 to June 30 and July 1 to December 31), and shall be signed and dated by a responsible official. The written report shall include the following:

- i. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any concurrent data, any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and corrective actions taken;
- ii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the boiler. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted, shall also be reported;
- iii. The date and time identifying each period during which CEMS was inoperable except for zero and span checks. The nature of each system repair or adjustment shall be described;
- iv. The report shall state if no excess emissions has occurred. The report shall also state if the CEMS operated properly during the period and was not subject to any repairs or adjustments except for zero and span checks;
- v. For purposes of this Covered Source Permit, excess emissions shall be defined as follows:
 - A) Any one-hour period during which the average emissions of NO_x, as measured by the CEMS, exceed the emission limits set forth in Special Condition No. D.1 of this attachment.
 - B) Any one-hour period during which the average emissions of SO₂ as measured by the CEMS, exceed the emission limits set forth in Special Condition No. D.1 of this attachment.
 - C) Any one-hour period during which the average pressure drop across the high temperature cyclone is less than the allowable margin determined by the Department of Health in Special Condition C.4 of this attachment.
 - D) Any one hour period during which the sorbent injection rate is less than the allowable margin determined by the Department of Health in Special Condition C.4. of this attachment.

- vi. The enclosed Excess Emission and Monitoring System Performance Summary Report shall be used in conjunction to the reporting of excess emissions.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-32, §11-60.1-38, §11-60.1-90, §11-60.1-161, SIP§11-60-15, §11-60-24, 40 CFR 60.49b)^{1,2}

4. 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 §11-60.1-5, §11-60.1-15, §11-60.1-16, §11-60.1-90, SIP §11-60-16)²

5. Compliance Certification

During the permit term, the permittee shall submit at least annually to the U.S. EPA, Region 9, and the Department of Health 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 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)

6. Annual Emissions

As required by *Attachment IV, Annual Emissions Reporting Requirements* and in conjunction with the requirements of *Attachment III, Annual Fee Requirements*, the permittee shall report **annually** the total tons/year emitted of each regulated air pollutant, including any 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 Report Form: Gasifier and Boiler* or equivalent form shall be used in reporting emissions.

Upon the written request of 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, §11-60.1-90, §11-60.1-114)

7. Source Performance Tests

- a. **At least thirty (30) days prior to conducting a source performance test**, the permittee shall submit a written source performance test plan to the Department of Health 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.
- b. **Within thirty (30) days after completion of the source performance test**, the permittee shall submit to the Department of Health the test report which includes the operating conditions of the facility at the time of the test, the summarized test results, other pertinent support calculations, and field/laboratory data. The results shall be recorded and reported in accordance with 40 CFR Part 60, Appendix A, and 40 CFR §60.8.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, SIP §11-60-15, 40 CFR §60.45b)^{1,2}

Section G. Testing Requirements

1. **Within thirty (30) days** after achieving the maximum production rate of the boiler but not later than one-hundred eighty (180) days after the initial start-up as defined in 40 CFR Part 60.2, and annually thereafter, the permittee shall conduct or cause to be conducted performance tests on the boiler exhaust stack. The performance test shall be conducted for nitrogen oxides (NO_x), sulfur dioxide (SO₂), particulate matter (PM), Arsenic (As), Lead (Pb), Cadmium (Cd), Chromium (Cr), Mercury (Hg), Hydrogen Chloride (HCl), Dioxins (Total and TEQ), Polychlorinated Biphenyls (PCB) and opacity while firing on syngas. The source 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 §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:

Performance tests for the emissions of NO_x and SO₂, shall be conducted using 40 CFR Part 60, Methods 1-4 and 19.

- a. Performance tests for the emissions of particulate matter shall be conducted using the test methods and procedures of 40 CFR §60.46c.
- b. The initial source performance test for the emissions of particulate matter shall be conducted using the test methods and procedures of 40 CFR §60.46c. For this portion of the initial source compliance test, the boiler shall be operated greater than ninety (90) percent of its rated capacity.
- c. Method 9 of 40 CFR Part 60, Appendix A, shall be used to determine the opacity of stack emissions.
- d. Method 12 of CFR Part 60, Appendix A, shall be used to determine lead emissions
- e. Method 26 of CFR Part 60, Appendix A, shall be used to determine Hydrogen Chloride Emissions.
- f. Method 23 of CFR Part 60, Appendix A, shall be used to determine Dioxin and PCB emissions.
- g. Method 29 of CFP Part 60, Appendix A, shall be used to determine emissions of Arsenic, Cadmium, Chromium, Mercury.

(Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90, §11-60.1-161, 40 CFR §60.8, §60.46b)¹

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

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90; SIP§11-60.-15; 40 CFR 60.8)^{1,2}

3. The source performance tests shall be conducted at the maximum expected operating capacity of the boiler.

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

4. The permittee, at its own expense, shall be responsible for installing, providing, and maintaining the necessary ports in stacks or ducts and such other safe and proper sampling and testing facilities as may be necessary for the determination of the air pollutant emissions.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90, SIP§11-60-15)²

5. Particulate emissions shall be reported in two (2) categories:

- a. Front half (filter and probe); and
- b. Front and back half (probe, filter and impingers). When conducting back half clean-up, all connectors and tubing of the back half sampling train up to and including the first impinger shall be properly rinsed with acetone. Connecting glassware after the first

impinger and the other impingers shall be rinsed with water. All rinses shall be included in the analysis for back half.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

6. For each run, the emission rate of particulate matter shall be determined by the equation pounds/hour = $Q_s \times cs$, where Q_s = volumetric flow rate of the total effluent in dscf/hour as determined in accordance with Method 2, and cs = concentration of particulate matter in pounds/dscf as determined in accordance with Method 5.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

7. In addition to the stack test data, the following data shall be recorded during the test and made a part of the final performance test report:
 - a. Pressure drop across the high temperature cyclone;
 - b. Sorbent injection rate (alkaline and carbon); and
 - c. Urea injection rate.

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

8. Any deviation from these conditions, test methods, or procedures may be cause for rejection of the source performance test results unless such deviations are approved by the Department of Health prior to the source performance tests. The Department of Health may monitor any of the required source performance tests.

(Auth.: HAR §11-60.1-11, §11-60.1-90, SIP §11-60-1-15)²

Section H. Agency Notification

Any document (including reports) required to be submitted by this permit shall be done in accordance with Attachment I, Standard 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 – DIESEL ENGINE GENERATORS
COVERED SOURCE PERMIT NO. 0638-01-C**

Issuance Date:

Expiration Date:

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 attachment encompasses the following equipment:
 - a. 1,474 kW Blackstart diesel engine generator (DEG); Caterpillar Model C-32, fired with fuel oil no. 2, 72 gph,

(Auth.: HAR §11-60.1-3)
2. The permittee shall permanently attach an identification tag or name plate on each equipment, which identifies the model no., serial no., and manufacturer. The identification tag or name plate shall be attached to the equipment at a conspicuous location.

(Auth.: HAR §11-60.1-5)

Section B. Applicable Federal Regulations

The black start DEG is subject to the provisions of the following federal regulations:

1. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions;
2. 40 CFR Part 60 Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines;
3. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart A, General Provisions; and
4. 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

The permittee shall comply with all applicable requirements of these standards, including all emission limits, notification, testing, monitoring and reporting 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; 40 CFR §60.4200, §60.4305, §63.6580)¹

Section C. Operational and Emission Limitations

1. The blackstart diesel engine generator shall be certified by the engine manufacturer for compliance with the certification emission standards for new nonroad compression ignition engines in 40 CFR 89.112, 40 CFR 89.112, 40 CFR 1039.111, 40 CFR 1039.102,

40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, AND 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(Auth.: HAR §11-60.1-5, §11-60.1-90, 40 CFR 60.4211(c), §60.4204(b), §60.3201(a))¹

2. The blackstart diesel engine generator shall be installed and configured according to the manufacturer's specifications.

(Auth.: HAR §11-60.1-5, §11-60.1-90, 40 CFR 60.4211(c))¹

3. The total operating hours of the blackstart diesel engine generator shall not exceed 500 hours in any rolling twelve-month (12-month) period.

(Auth.: HAR §11-60.1-5, §11-60.1-38, §11-60.1-90)

4. The blackstart diesel engine generator shall be fired only on fuel oil No. 2 with the following specifications:

- a. Maximum sulfur content of 0.0015% by weight; and
- b. Minimum cetane index of forty (40) or maximum aromatic content of thirty-five (35) percent.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, 40 CFR §60.4200, §60.4305, and §60.4365)¹

5. Visible Emissions

The diesel engine generator shall not exhibit visible emissions of twenty (20) percent opacity or greater for any six (6) minute averaging period, except as follows: during start-up, shut-down, or equipment breakdown, the diesel engine generators 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, §11-60.1-5, §11-60.1-32, §11-60.1-90, SIP §11 60-24)²

6. Alternate Operating Scenarios

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

- a. The permittee may replace the blackstart diesel engine generator with a replacement unit if any repair reasonably warrants the removal (i.e., equipment failure, or any major equipment problems requiring maintenance for efficient operation) of the screen from its site and the following provisions are adhered to:

- i. Written notification identifying the reasons for the replacement DEG(s) from the site of operation is submitted to and approved by the Department of Health prior to the installation;
 - ii. The DEG(s) is replaced with a temporary replacement DEG(s) with equal or less emissions and similar stack parameters;
 - iii. The temporary replacement unit complies with all applicable conditions including all air pollution control equipment requirements, operating restrictions and emission limits;
 - iv. The DEG(s) shall be repaired and returned to service at the same location in a timely manner; and
 - v. Prior to the removal and return of any DEG(s), the permittee shall submit to the Department of Health written documentation on the removal and return dates and on the make, size, model and serial numbers for both the temporary replacement unit and installed unit.
- b. 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.
 - c. The terms and conditions under each alternative operating scenario shall meet all applicable requirements including conditions of this permit.

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

Section D. Monitoring and Recordkeeping Requirements

1. Operational Monitoring

The permittee shall, at its own expense, install, operate, and maintain a non-resetting hour meter on the blackstart diesel engine generator for the permanent recording of its operating hours. The non-resetting meter shall not allow the manual resetting or other manual adjustments of the meter readings. The installation of any new non-resetting meter or meter replacement of any existing non-resetting meters shall be designed to accommodate a minimum of five (5) years of equipment operation, considering any operational limitations, before the meter returns to a zero reading. The following information shall be recorded on the operating hours of the blackstart diesel engine generator.

- a. Date of the meter readings;
- b. Beginning meter readings for each month;
- c. Total operating hours for each month; and
- d. Total spec used oil consumption on a rolling twelve-month (12-month) basis.

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

2. Total Fuel Usage and Specification

Fuel delivery receipts shall be maintained, showing the supplier, fuel type, sulfur content (percent by weight), date of delivery, and amount (in gallons) of fuel delivered to the facility for subsequent transfer to the blackstart DEGs covered under this permit.

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

3. Inspection, Maintenance, and Repair Log

The permittee shall maintain records on inspections, maintenance, and any repair work conducted on the DEGs. At a minimum, these records shall include: the date of the inspection; name and title of the inspector; a short description of the action and/or any such repair work; and a description of the part(s) inspected or repaired.

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

4. Visible Emissions (VE)

- a. Except when annual VE observations are conducted, the permittee shall conduct **monthly** (*calendar month*) VE observations for each equipment subject to opacity limits in accordance with Method 9 or by use of a Ringelmann Chart as provided. For the monthly observation for each equipment, two (2) consecutive six (6) minute observations shall be taken at fifteen (15) second intervals. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
- b. The permittee shall conduct **annually** (*calendar year*) VE observations for each equipment subject to opacity limits by a certified reader in accordance with Method 9. For the annual observation for each equipment, two (2) consecutive six (6) minute observations shall be taken at fifteen (15) second intervals. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
- c. Upon written request and justification by the permittee, the DOH may waive the requirement for a specific annual VE observation. The waiver request is to be submitted prior to the required annual VE observation and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior VE observations indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the source have not changed since the previous annual VE observation.

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

5. Records

All records, including support information, shall be maintained for **at least five (5) years** following the date of the monitoring sample, measurement, test, report, or application. Support information includes all maintenance, inspection, and repair records, and copies of all reports required by this permit. These records shall be true, accurate, and maintained in

a permanent form suitable for inspection and 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)

Section E. Notification and Reporting Requirements

1. Notification and reporting pertaining to the following events shall be done in accordance with Attachment I, Standard Condition Nos. 14, 16, 17 and 24, respectively:
 - a. *Anticipated date of initial startup, actual date of construction commencement, and actual date of startup;*
 - 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 exceedances due to emergencies); and*
 - d. *Permanent discontinuance of construction, modification, relocation, or operation of the facility, or any petroleum storage tank, 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)²

2. Monitoring

The permittee shall submit **semi-annually**, the attached Monitoring Report Form: Operating Hours – Blackstart Diesel Engine Generator to the Department of Health. These reports shall be submitted **within sixty (60) days after** the end of each semi-annual calendar period (January 1 to June 30 and July 1 to December 31), and shall be signed and dated by a responsible official.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

3. 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 a 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)

4. Annual Emissions

- a. As required by *Attachment IV: Annual Emissions Reporting Requirements* and in conjunction with the requirements of *Attachment III: Annual Fee Requirements*, the permittee shall report **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 completion and submittal of *Annual Emissions Report Form: Diesel Engine Generators*, shall be used in reporting fuel usage.
- b. Upon the written request of 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, §11-60.1-11, §11-60.1-90)

Section F. Agency Notification

Any document (including reports) required to be submitted by this permit shall be done in accordance with Attachment I, Standard Condition 29.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

¹The citation to the Code of Federal Regulations (CFR) identified under a particular condition, indicates 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.

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

**ATTACHMENT II - INSIG: SPECIAL CONDITIONS
COVERED SOURCE PERMIT NO. 0638-01-C
INSIGNIFICANT ACTIVITIES**

Issuance Date:

Expiration Date:

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 true, accurate, and maintained 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

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

1. The identification of each term or condition of the permit that is the basis of the certification;
2. The compliance status;
3. Whether compliance was continuous or intermittent;
4. The methods used for determining the compliance status of the source currently and over the reporting period; and
5. 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 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.

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 or authorized representative.

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. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

**ATTACHMENT III: ANNUAL FEE REQUIREMENTS
COVERED SOURCE PERMIT NO. 0638-01-C**

Issuance Date:

Expiration Date:

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
919 Ala Moana Boulevard, Room 203
Honolulu, Hawaii 96814**

**ATTACHMENT IV: ANNUAL EMISSIONS REPORTING REQUIREMENTS
COVERED SOURCE PERMIT NO. 0638-01-C**

Issuance Date:

Expiration Date:

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:

**Gasifier-Boiler; and
Diesel Engine Generator.**

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
State Department of Health
919 Ala Moana Boulevard, Room 203
Honolulu, Hawaii 96814**

PROPOSED

**COMPLIANCE CERTIFICATION FORM
COVERED SOURCE PERMIT NO. 0638-01-C
PAGE 1 OF ____**

Issuance Date: _____

Expiration Date: _____

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 requested by the Department.

(Make Copies of the Compliance Certification Form for Future Use)

For Period: _____ Date: _____

Company/Facility Name: _____

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

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.

PROPOSED

**COMPLIANCE CERTIFICATION FORM
COVERED SOURCE PERMIT NO. 0638-01-C
(CONTINUED, PAGE 2 OF ___)**

Issuance Date:

Expiration Date:

The purpose of this form is to evaluate whether or not the facility was in compliance with the permit terms and conditions during the covered period. If there were any deviations to the permit terms and conditions during the covered period, the deviation(s) shall be certified as *intermittent compliance* for the particular permit term(s) or condition(s). Deviations include failure to monitor, record, report, or collect the minimum data required by the permit to show compliance. In the absence of any deviation, the particular permit term(s) or condition(s) may be certified as *continuous compliance*.

Instructions:

Please certify Sections A, B, and C below for continuous or intermittent compliance. Sections A and B are to be certified as a group of permit conditions. Section C shall be certified individually for each operational and emissions limit condition as listed in the Special Conditions section of the permit (list all applicable equipment for each condition). Any deviations shall also be listed individually and described in Section D. The facility may substitute its own generated form in verbatim for Sections C and D.

A. Attachment I, Standard Conditions

<u>Permit term/condition</u> All standard conditions	<u>Equipment(s)</u> All Equipment(s) listed in the permit	<u>Compliance</u> Continuous Intermittent
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B. Special Conditions - Monitoring, Recordkeeping, Reporting, Testing, and INSIG

<u>Permit term/condition</u> All monitoring conditions	<u>Equipment(s)</u> All Equipment(s) listed in the permit	<u>Compliance</u> Continuous Intermittent
<u>Permit term/condition</u> All recordkeeping conditions	<u>Equipment(s)</u> All Equipment(s) listed in the permit	<u>Compliance</u> Continuous Intermittent
<u>Permit term/condition</u> All reporting conditions	<u>Equipment(s)</u> All Equipment(s) listed in the permit	<u>Compliance</u> Continuous Intermittent
<u>Permit term/condition</u> All testing conditions	<u>Equipment(s)</u> All Equipment(s) listed in the permit	<u>Compliance</u> Continuous Intermittent
<u>Permit term/condition</u> All INSIG conditions	<u>Equipment(s)</u> All Equipment(s) listed in the permit	<u>Compliance</u> Continuous Intermittent

PROPOSED

**COMPLIANCE CERTIFICATION FORM
COVERED SOURCE PERMIT NO. 0638-01-C
(CONTINUED, PAGE ____ OF ____)**

Issuance Date:

Expiration Date:

C. Special Conditions - Operational and Emissions Limitations

Each permit term/condition shall be identified in chronological order using attachment and section numbers (e.g. Attachment II, B.1, Attachment IIA, Special Condition No. B.1.f, etc.). Each equipment shall be identified using the description stated in Section A of the Special Conditions (e.g. unit no., model no., serial no., etc.). Check all methods (as required by permit) used to determine the compliance status of the respective permit term/condition.

<u>Permit term/condition</u>	<u>Equipment(s)</u>	<u>Method</u>	<u>Compliance</u>
		monitoring recordkeeping reporting testing none of the above	Continuous Intermittent
		monitoring recordkeeping reporting testing none of the above	Continuous Intermittent
		monitoring recordkeeping reporting testing none of the above	Continuous Intermittent
		monitoring recordkeeping reporting testing none of the above	Continuous Intermittent
		monitoring recordkeeping reporting testing none of the above	Continuous Intermittent
		monitoring recordkeeping reporting testing none of the above	Continuous Intermittent

(Make Additional Copies if Needed)

PROPOSED

**COMPLIANCE CERTIFICATION FORM
COVERED SOURCE PERMIT NO. 0638-01-C
(CONTINUED, PAGE ___ OF ___)**

Issuance Date:

Expiration Date:

D. Deviations

<u>Permit Term/ Condition</u>	<u>Equipment(s) / Brief Summary of Deviation</u>	<u>Deviation Period time (am/pm) & date (mo/day/yr)</u>	<u>Date of Written Deviation Report to DOH (mo/day/yr)</u>
		Beginning: Ending:	

(Make Additional Copies if Needed)

PROPOSED

**ANNUAL EMISSIONS REPORT FORM
GASIFIER AND BOILER
COVERED SOURCE PERMIT NO. 0638-01-C**

Amended Date: _____

Expiration Date: _____

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: _____

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 Department of Health as public record.

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

Type of Fuel Fired	Fuel Usage (10 ⁶ scf/yr)	Annual Operating Hours
Gasified Feedstock		
Propane		

Control Technology	Pollutant Controlled	Control Efficiency	Fuel Fired	Hours Operated

PROPOSED

**ANNUAL EMISSIONS REPORT FORM
DIESEL ENGINE GENERATOR
COVERED SOURCE PERMIT NO. 0638-01-C**

Issuance Date: _____

Expiration Date: _____

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:

(Make copies for Future Use)

For Period: _____ Date: _____

Facility Name: _____

Equipment Location: _____

Equipment Description: _____

Equipment Capacity/Rating (specify units): _____
(Units such as Horsepower, kilowatt, tons/hour, etc.)

Serial/ID No.: _____

Type of Fuel: _____ Max % Sulfur by weight: _____

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 (PRINT): _____

TITLE: _____

Responsible Official (Signature): _____

Total Fuel Consumed: _____ gallons

PROPOSED

**MONITORING REPORT FORM
OPERATING HOURS: BLACKSTART DIESEL ENGINE GENERATOR
COVERED SOURCE PERMIT NO. 0638-01-C**

Issuance Date:

Expiration Date:

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.

(Make Copies for Future Use)

For Period: _____ Date: _____

Facility Name: _____

Equipment Location: _____

Equipment Description: _____

Equipment Capacity/Rating (specify units): _____
(Units such as Horsepower, kilowatt, tons/hour, etc.)

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): _____

Blackstart Diesel Engine Generator Operating Hours

MONTH	TOTAL OPERATING HOURS	HOURS OF OPERATION 12-MONTH ROLLING AVERAGE	NOTES
January			
February			
March			
May			
June			
July			
August			
September			
October			
November			
December			
TOTAL			

Blackstart Diesel Engine Generator Fuel Certification

Type of Fuel Fired	Maximum % Sulfur Content by Weight

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

**EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE
SUMMARY REPORT**
(Make Copies for Future Use)

Facility Name: _____
Equipment Location: _____
Equipment Description: _____
Covered Source Permit No.: _____ 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

PROPOSED

(% of Total Source Operating Time)

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

(Page 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) _____

**VISIBLE EMISSIONS FORM REQUIREMENTS
STATE OF HAWAII
COVERED SOURCE PERMIT NO. 0638-01-C)**

Issuance Date:

Expiration Date:

The **Visible Emissions (VE) Form** shall be completed **monthly** (*each calendar month*) for each equipment subject to opacity limits in accordance with 40 CFR Part 60, Appendix A, Method 9 or use of a Ringelmann Chart as provided. At least **annually** (*calendar year*), VE observation shall be conducted for each equipment subject to opacity limits by a certified reader in accordance with Method 9. The VE Form shall be completed as follows:

1. VE observations shall take place during the day only and shall be compared to the Ringelmann Chart provided. The opacity shall be noted in five (5) percent increments (e.g., 25%).
2. Orient the sun within a 140 degree sector to your back. Provide a source layout sketch on the VE Form using the symbols as shown.
3. For VE observations of stacks, stand at least three (3) stack heights but not more than a quarter mile from the stack.
4. For VE observations of fugitive emissions from crushing and screening plants, stand at least 4.57 meters (15 feet) from the visible emissions source, but not more than a quarter mile from the visible emission source.
5. Two (2) consecutive six (6) minute observations shall be taken at fifteen (15) second intervals for each stack or emission point.
6. The six (6) minute average opacity reading shall be calculated for each observation.
7. 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 the maximum permitted capacity.
8. 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 VE 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.

Any required initial and annual performance test performed in accordance with Method 9 by a certified reader shall satisfy the respective equipment's VE monitoring requirements for the month the performance test is performed.

PROPOSED

VISIBLE EMISSIONS FORM COVERED SOURCE PERMIT NO. 0638-01-C

Issuance Date: _____

Expiration Date: _____

(Make Copies for Future Use for Each Stack or Emission Point)

Company Name: _____

For stacks, describe equipment and fuel: _____

For fugitive emissions from crushers and screens, describe:

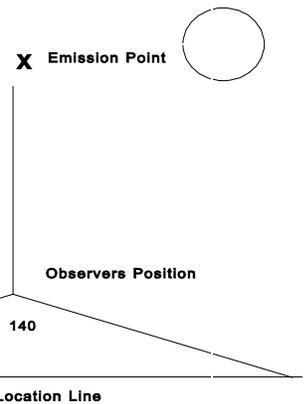
Fugitive emission point: _____

Plant Production (tons/hr): _____

(During observation)



Draw North Arrow



Site Conditions:

Emission point or stack height above ground (ft): _____

Emission point or 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: _____

Method of observation (Ringelmann Chart or Method 9): _____

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

Observation Date and Start Time: _____

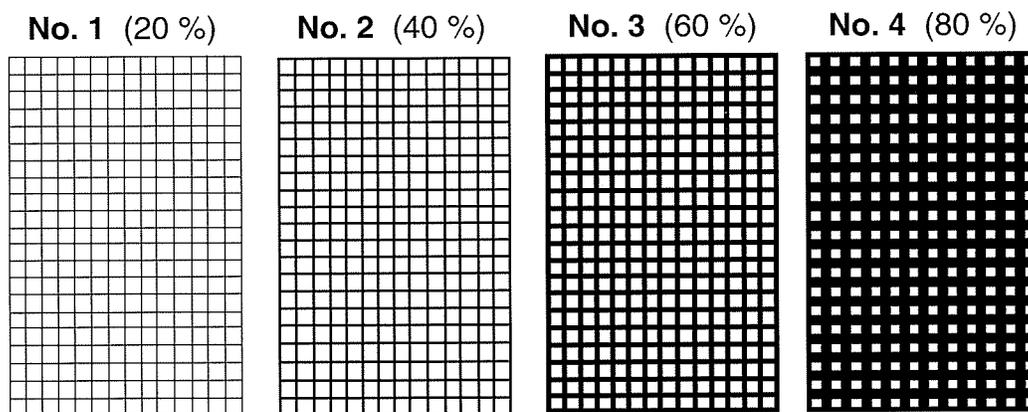
Method of observation (Ringelmann Chart or Method 9): _____

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

The Ringelmann Chart

In the late 1800's in Paris, France, Professor Maximilian Ringelmann developed the **Ringelmann Chart** to measure the combustion efficiency of coal-fired boilers. The shade of the smoke plume shows how well a boiler is operating - the poorer its combustion efficiency, the more unburned carbon particles in the smoke and the darker the plume.

Professor Ringelmann's chart established four measured shades of gray between white, valued at zero, and black, at five. These specific shades of gray, Ringelmann No. 1 to Ringelmann No. 4, can be accurately reproduced by placing a grid of black lines of a given width and spacing on a white background. Viewed from a distance, the grid lines and background merge into the shades of gray, to be compared to the shade of the smoke plume.



Ringelmann Chart (not to scale)

Regulating Visible Emissions

The Ringelmann Chart became one of the first tools used to measure visible emissions. Introduced into the United States in 1897, it was soon accepted as the standard measure of smoke density and was used by engineers for power plant testing and smokeless combustion studies. In 1910, the Chart was officially adopted as part of the Smoke Ordinance for Boston, Mass.

Many city, state, and federal regulations now set smoke density limits based on the Ringelmann Smoke Chart. Although not originally designed as a regulatory tool to control air pollution, it gives good practical results when used by well-trained observers.