



**STATE OF HAWAII
DEPARTMENT OF HEALTH**

P.O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
EMD/SHWB

December 22, 2011

S1227JKF

**CERTIFIED MAIL NO. 7010 2780 0000 4780 4493
RETURN RECEIPT REQUESTED**

Mr. Stephen Langham
Energy Recovery Administrator
Department of Environmental Services
City and County of Honolulu
1000 Uluohia Street, Suite 308
Kapolei, Hawaii 96707

**CERTIFIED MAIL NO. 7010 2780 0000 4780 3151
RETURN RECEIPT REQUESTED**

Mr. Robert Webster, Facility Manager
Covanta Energy
Honolulu Resource Recovery Venture
91-174 Hanua Street
Kapolei, Hawaii 96707

Dear Messrs. Langham and Webster:

SUBJECT: Solid Waste Management Permit No. IN-0049-11
Covanta Honolulu Resource Recovery Venture
Waste to Energy Facility
Located at: 91-174 Hanua Street, Kapolei, Hawaii 96707
(TMK No. 9-1-26:30)

The Department of Health (DOH), Solid and Hazardous Waste Branch (SHWB) received your permit renewal application for a solid waste management permit with no modifications. The renewal application was received on February 7, 2011, and additional information was received on July 19, 2011. The application has been reviewed and approved. The enclosed permit modification is issued under the provisions of Hawaii Revised Statutes (HRS), Chapter 342H, and the Hawaii Administrative Rules, Title 11, Chapter 58.1, "Solid Waste Management Control."

EXHIBIT "H"

Mr. Stephen Langham
Mr. Robert Webster
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Please note that your permit contains the following sections:

Part I – Standard Conditions

Part II - Special Conditions

Section A. Facility and Operational Controls

Section B. Waste Acceptance and Screening

Section C. MSW Storage and Processing

Section D. Sample Collection and Analysis

Section E. Management and Testing of Pre-Combustion Residue

Section F. Management and Testing of Post-Combustion Ash

Section G. Recordkeeping and Reporting

The permittees may appeal to the Director of Health any of the conditions to the subject permit. The appeal must be in writing and submitted to the Director of Health within twenty (20) days after the receipt of this notice.

HRS 342H-14 states that unless the submitted documents and other information secured by the DOH from the permittees contain confidential information, such as secret processes or methods of manufacture, they shall be made available for inspection by the public. Please notify the SHWB within twenty (20) days of the receipt of this letter if you would like to make a claim of confidentiality; otherwise, your entire application will be available for public inspection.

If you have any questions regarding this letter, please contact Ms. Janice Fujimoto of the Solid and Hazardous Waste Branch at (808) 586-4226.

Sincerely,



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

Enclosure: Permit No. IN-0049-11

c: Department of Health, Clean Water Branch (w/o enclosure)

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Operator: Covanta Honolulu Resource
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SOLID WASTE MANAGEMENT PERMIT

This permit is issued under the provisions of Hawaii Revised Statutes (HRS), Chapter 342H, "Solid Waste Pollution," and Hawaii Administrative Rules (HAR), Title 11, Chapter 58.1, "Solid Waste Management Control." The above-named permittees are hereby authorized to operate the facility shown on the approved application, additional submittals, and other approved documents on file with the Department of Health (DOH).

To Operate: A waste-to-energy facility. The facility operations include the acceptance of municipal solid waste (MSW), processing, and incineration for energy recovery and waste reduction.

The operation of Units 1 and 2 includes the operation and maintenance of an MSW processing plant to produce refuse derived fuel (RDF), RDF boiler units, and associated appurtenances. The maximum operating capacity of Units 1 and 2 is 14,760 tons of MSW per week, and the maximum incineration capacity is 12,096 tons of RDF per week.

The operation of Unit 3 includes the construction, operation, and maintenance of a mass burn waterwall municipal waste combustor unit and associated appurtenances. The maximum incineration capacity of Unit 3 is 900 tons of municipal solid waste (MSW) per day.

The operations shall be consistent with the application and operations manual received on February 7, 2011, additional information received on July 19, 2011, other approved documents on file at the Department of Health, and any approved subsequent submissions. Should there be any discrepancies between the submitted materials and permit conditions, the permit conditions shall take precedence.

Location: The facility is located at 91-174 Hanua Street, Kapolei, Hawaii 96707
TMK No. 9-1-026:030

Subject to: HRS Chapters 342H and HAR 58.1, Part I - Standard Conditions, and Part II - Special Conditions.

Acceptance of this permit constitutes an acknowledgment and agreement that the holder will comply with all rules, regulations, and orders of the DOH and the conditions precedent to the granting of this permit.

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This permit supersedes solid waste management permit no. IN-0050-05 in its entirety.



(For) Director of Health
State of Hawaii

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The solid waste management facility is subject to HRS Chapter 342H, "Solid Waste Pollution," HAR Chapter 11-58.1, "Solid Waste Management Control," and the following conditions:

PART I - STANDARD CONDITIONS

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittees and enforceable, pursuant to the authority of HRS Chapter 342H. The DOH will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittees, their agents, employees, servants, or representatives.
2. This permit shall be kept at or near the operation site for which the permit is issued and shall be available upon request [HAR §11-58.1-04(f)]. A request for a duplicate permit shall be made in writing to the director within ten (10) days after the destruction, loss, or defacement of this permit. A fee of \$50 shall be submitted with the request [HAR §11-58.1-04(h)(3)].
3. This permit is non-transferable whether by operation of law or otherwise, either from one location to another, from one solid waste disposal operation to another, or from one person to another without the written approval of the director [HAR §11-58.1-04(e)(2)].
4. This permit (a) shall not in any manner affect the title of the premises upon which the facility is or will be located; (b) does not release the permittees from any liability for any loss due to personal injury or property damage caused by, resulting from, or arising out of the design, installation, construction, operation, maintenance, or closure of the facility; (c) does not release the permittees from compliance with other applicable statutes and regulations of the State of Hawaii or with applicable federal or local laws, regulations, or ordinances; (d) in no way implies or suggests that the State of Hawaii, or its officers, agents, or employees assumes any liability, directly or indirectly, for any losses due to personal injury or property damage caused by, resulting from, or arising out of the design, construction, operation or maintenance of the facility; and (e) shall not constitute nor be construed to be an approval of the design, construction, operation, maintenance, closure and post-closure of the facility beyond the regulatory requirements mandated by HRS Chapter 342H and HAR §11-58.1.
5. The permittees shall submit complete and detailed plans and reports of any significant proposed addition to, modification of, or alteration of any such systems that affects the facility's equipment, operations or procedures, or which could threaten human health and the environment and contain the information requested by the

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DOH in the form prescribed by the DOH. The plans and reports shall be prepared by a competent person acceptable to the DOH, and at the expense of the permittees. This requirement includes, but is not limited to, notification of changes that may affect the long-term operating capacity, combustion efficiency, or ash composition.

6. This permit is valid only for the specific processes and operations applied for and indicated in the submitted application and additional submissions on file with the DOH. Any unauthorized deviation that affects the facility's operations or procedures, or which could threaten human health and the environment, from the submitted application, approved drawings, operations manual, and additional submissions or conditions of this permit may constitute grounds for revocation of this permit, and/or enforcement action by the DOH. Should there be any discrepancies between the submitted documents and the permit conditions, the permit conditions shall take precedence. A copy of the submitted application and additional submissions shall be maintained at the facility.
7. The permittees shall at all times properly operate and maintain the facility and systems of process and control (and related appurtenances) that are installed or used by the permittees to achieve compliance with the conditions of this permit, as required by the DOH rules. The facility shall be designed, constructed, and equipped in accordance with best practicable technology so as to operate without causing a violation of applicable rules and regulations.
8. Issuance of this permit does not preclude the permittees' responsibility to obtain any and all necessary approvals and permits from the appropriate federal, state, and local agencies, including zoning clearances, prior to the start of operations.
9. The DOH may, on its own motion, modify, suspend, or revoke a permit if, after affording the applicant a hearing in accordance with HRS Chapter 91, the DOH determines that any permit condition, rule, or provision of HRS Chapter 342H has been violated or that such is in the public interest [HAR §11-58.1-04(d)].
10. Notification requirements. The permittees are required to notify the DOH, in writing or facsimile, whenever there are incidents such as fire, explosion, or release of regulated material/waste which could threaten human health or the environment (i.e., air, soil, or surface and subsurface waters). Initial notification may be by phone or fax and reported within eight (8) hours, whenever possible, and no more than twenty-four (24) hours. The notification report shall be completed and submitted by an Environmental Compliance Officer or other responsible official within seven (7) days and shall include:
 - a. name, address, and telephone number of the owner and operator;

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- b. name, address, and telephone number of the facility at which the incident occurred;
- c. date, time, and type of incident (i.e., fire, explosion, release, etc.);
- d. name and quantity of material(s) involved;
- e. the extent of injuries, if any;
- f. an assessment of actual or potential hazards to human health or the environment, where this is applicable; and
- g. estimated quantity and disposition of recovered and unrecovered material that resulted from the incident.

Notification requirements for releases only apply to releases of a quantity equal to or exceeding the reportable quantity listed in HAR §11-451.

11. If, for any reason, the permittees do not comply with, or will be unable to comply with, any condition or limitation specified in the permit, the permittees shall notify the DOH verbally within twenty-four (24) hours followed by a written report within seven (7) days of the verbal notification. The written report shall be completed by an Environmental Compliance Officer or other responsible official and shall contain the following information:

- a. description and cause of noncompliance;
- b. period of noncompliance, including exact dates and times; and, if not corrected, the anticipated duration that the noncompliance is expected to continue;
- c. steps that will be taken to correct the area of noncompliance; and
- d. steps being taken to prevent recurrence of the noncompliance.

The permittees may be subject to enforcement action by the DOH, penalties, or revocation of this permit.

The use of an electronic facsimile device (FAX) for notifications is acceptable. Any data transmission or detailed explanations transmitted shall be accompanied by regular mail submittals. Failure to notify in accordance with this requirement may initiate enforcement action.

12. The DOH requires that the permittees provide such facilities as necessary for sampling and testing to determine the degree of pollution from the solid waste facility, in accordance with HAR 11-58.1-04(c)(6)(B). In the event of an incident that requires notification under Special Condition No. 10 or permit noncompliance, the DOH may require complete and detailed plans or reports on existing solid waste management systems.

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13. Unless the submitted documents and other information secured by the DOH from the permittees contain confidential information, such as secret processes or methods of manufacture, they shall be made available for inspection by the public (HRS §342H-14). The permittees shall be responsible for identifying, in writing, the specific information asserted to be confidential. The DOH shall review the permittees' assertion and determine if confidentiality is indeed warranted.
14. The director may, in accordance with HRS §342H-6, enter and inspect the facility for the purpose of (a) investigating an actual or suspected source of solid waste or other pollution; (b) ascertaining compliance or noncompliance with any rule, regulation, permit condition, or standard promulgated by the DOH; and (c) conducting tests in connection therewith (including collecting soil, water, air, ash, and any other material or samples).
15. The permittees shall comply with the following monitoring and recordkeeping requirements:
 - a. Upon request, the permittees shall furnish all records and plans outlined in Special Conditions, Section G of this permit, as required by the DOH. The retention period for all records shall be a minimum of five (5) years; however, there shall be an indefinite retention period for all records associated with any unresolved enforcement action as determined by the DOH.
 - b. The permittees shall retain at the facility or other location designated by this permit, records of all monitoring information (including all calibration and maintenance records and all original recordings of monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The retention period shall be a minimum of five (5) years from the date of the sample, measurement, report, or application unless otherwise specified by the DOH rule.
16. If the DOH determines that the permittees have violated or are violating any provision of HRS Chapter 342H, HAR Chapter 11-58.1, or these permit conditions, the DOH may pursue enforcement action in accordance with HRS §342H-7, *Enforcement*; §342H-9, *Penalties*; §342H-10, *Administrative Penalties*; and §342H-11, *Injunctive and other relief*, or any other pertinent rules.
17. If the governor or the director determines that an imminent peril to the public health and safety is, or will be, caused by the disposal of solid waste or any combination of discharges of other waste that requires immediate action, the governor or the director, without a public hearing, may order the permittees to immediately reduce or

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stop the disposal, discharge, or process, and may take any and all other actions as may be necessary (HRS §342H-8).

18. Should the permittees decide to continue operation of the solid waste facility beyond the expiration date of the permit or propose a modification to the permit, the permittees shall submit a complete permit renewal or modification application at least one hundred eighty (180) days prior to the date of permit expiration or proposed modification.
19. Should the permittees decide to terminate the facility operation (or be facing lease termination or eviction), the permittees shall perform necessary closure activities including, but not limited to, the removal of all remaining solid waste and performing appropriate site assessments and remedial activities. Prior to the termination of the operation, the permittees shall also notify the DOH in writing at least within ninety (90) calendar days of the facility's closure [HAR §11-58.1-04(e)(3)]. The written notification shall include an updated closure plan, which should accomplish the following objectives:
 - a. Provide an assessment of the site's present and future threat to public health and the environment due to contaminants possibly left on site from the facility's operation.
 - b. Provide a plan of action to minimize or mitigate any threats to public health and the environment due to contaminants possibly left on-site by the facility's operation.
 - c. Provide a schedule to implement the plan of action.

Upon DOH approval of the closure plan, the permittees shall implement the plan in accordance with the approved implementation schedule.

20. Compliance with this permit does not in any way relieve the owner or operator of the solid waste management facility from compliance with other federal, state, or local laws, regulations, or requirements.

PART II - SPECIAL CONDITIONS**Section A. Facility and Operational Controls**

1. This facility may receive, store, process, and incinerate MSW for energy recovery. The permittees shall operate the facility in accordance with HAR §11-58.1-20, the application and operations plan received on February 7, 2011, additional information

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received on July 19, 2011, approved subsequent submissions, and the conditions of this permit. Should there be any discrepancies among the aforementioned documents, HAR and permit conditions shall take precedence.

2. If the permittees provide spoken notification of a proposed plan revision that would not trigger a permit modification, within seven (7) days prior to submission, and the DOH does not respond to the proposed plan revision within thirty (30) days of the plan submission, the request is considered to be approved. This automatic approval does not apply to ash/residue sampling, analysis, disposal or reuse.
3. The facility shall be supervised, secured by gates, fences, or other measures to control unauthorized access to the facility.
4. The facility shall have a permanent sign identifying the facility, hours of operation, and a contact in case of emergencies.
5. Suitable means shall be provided to prevent and minimize fire hazards, and shall comply with the Fire Prevention and Response Plan section of the Operation and Maintenance Plan received on February 7, 2011. Access lanes shall be provided to allow for fire response. The permittees shall maintain written documentation of inspections and tests, as referenced in the Operation and Maintenance Plan.
6. The facility shall design and implement methods to control litter, insects, odors, and vectors. The facility shall maintain a neat and orderly appearance and must be screened and buffered to minimize nuisances to neighboring properties. The DOH may require the installation and implementation of additional controls and systems, as appropriate to address nuisances. Access lanes shall be provided to allow for vector control. The permittees shall complete the Grounds Task List, as provided on April 7, 2006, on a daily/weekly basis, or approved subsequent submissions.
7. The permittees shall provide adequate drainage to prevent standing water and to control run-on and run-off of rainwater.
8. Measures shall be taken to prevent waste spills and leachate from being discharged or allowed to enter into sewers, drainage systems, surface or groundwater, water courses, marine waters, or onto the ground. Measures include the use of structural catchment systems or absorbent materials. Discharges of wash water and wastewater from the facility processes and cleaning operations shall be in accordance with all applicable state and local rules and ordinances.

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9. All waste pickup, handling, transport, storage, processing, and disposal shall be in accordance with applicable procedures and operations plan, as set forth in the permittees' application, unless otherwise revised.
10. Scavenging at the facility is prohibited.
11. If contamination of the environment resulting from the storage and processing of MSW, associated waste streams, and by-products is detected, appropriate measures shall be taken to assess and mitigate the contamination.

Section B. Waste Acceptance and Screening

12. MSW that is considered acceptable waste, after meeting screening requirements of Special Conditions Nos. 12 through 14, shall be incinerated for energy recovery. MSW intended for incineration in Units 1 and 2 shall be processed into RDF prior to incineration. Acceptable waste is defined in the operations plan received on February 7, 2011, and approved subsequent submissions. Acceptable waste includes, but is not limited to, garbage, trash, rubbish, and refuse normally disposed of by and collected from residential, commercial, military, institutional and industrial establishments within the City and County of Honolulu.
13. All incoming loads shall be screened to prevent the acceptance of radioactive wastes. Radioactive wastes shall be managed in accordance with HAR 11-58.1-64. In the event that a radioactive load is identified, the facility shall follow the procedures in the Operation and Maintenance Plan, and approved subsequent submissions. The permittees shall complete and submit the Radiation Monitoring Report form, documenting the date, time, actions taken, and resolution of the event.
14. The facility shall make every practicable effort to screen waste and prevent unacceptable waste from entering the facility. The facility shall also screen waste that enters the facility and make every practicable effort to prevent further processing and combustion of unacceptable waste. The facility shall post a sign on the property that lists unacceptable wastes. The facility shall conduct random visual surveillance of loads to spot check for unacceptable wastes. Operators shall receive training on visual surveillance and unacceptable waste handling procedures set forth in the Operation and Maintenance Plan. Unacceptable waste is defined in the operations plan received on February 7, 2011 and approved subsequent submissions, and the following:
 - a. Regulated hazardous waste, as defined in HAR §11-261 through 11-268.

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- b. Radioactive waste, which shall be managed in accordance with HAR 11-58.1-64.
 - c. Electrical transformers with oil or polychlorinated biphenyls or when generated from other than demolition projects, in accordance with HAR 11-58.1-20(e).
 - d. Pesticide containers, unless they meet the requirements of HAR 11-261-7 and 11-261.4(b) household waste.
 - e. Liquids as defined in HAR §11-58.1-03, except wastewater treatment plant sludge handled in accordance with an approved Operations Plan.
 - f. Untreated infectious waste, excluding infectious waste generated within the household, in accordance with HAR 11-58.1-53.
 - g. Greater than 25% of commercially-generated greenwaste and greater than 50% of household-generated greenwaste on an annual basis, in accordance with HAR 11-58.1-65(b).
 - h. Scrap automobiles, white goods, and motor vehicle tires, in accordance with HAR 11-58.1-65(c); however, incidental amounts of motor vehicle tires may be accepted.
 - i. Lead-acid batteries, in accordance with HRS 342I.
 - j. Asbestos-containing material.
15. Waste shall be screened on the tipping floor to identify unacceptable waste and to prevent further processing and incineration of unacceptable waste. Should unacceptable waste be identified at the facility or on the tipping floor, the permittees shall separate the waste and manage it in accordance with the operations plan and applicable laws and rules.
- a. Unacceptable wastes identified at the facility shall not be processed or incinerated for energy recovery.
 - b. Unacceptable waste shall be stored in a manner that will minimize the generation of leachate, will not cause spills or leachate to be released, and will not cause any health or safety hazard, littering, odor, dust, or other nuisances. For example, white goods shall be stored in an upright position and shall not be stacked, and lead-acid batteries shall be placed in a covered storage area on an impervious surface with berms/catch pans or in a covered leak-proof

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container. The waste shall be transported from the facility prior to posing a nuisance, health, or safety concern.

- c. Unacceptable waste shall be transported to a permitted solid waste management facility allowed and willing to accept such waste, or out-of-state recycling/disposal facility.
- d. Unacceptable waste shall be fully containerized or covered during transport from the facility.
- e. The permittees shall maintain a daily log of unacceptable waste turned away from the facility, including date, hauler, and waste type. The permittees shall also maintain records of unacceptable waste removed from the facility. The records shall include the date of removal from facility, waste type, estimated quantity, and recycling/disposal method and destination.

Section C. MSW Storage and Processing

- 16. The facility shall be limited to the following storage and processing capacities:
 - a. MSW delivered to the waste processing area associated with Units 1 and 2 shall be processed into RDF within three (3) days of receipt at the facility.
 - b. MSW delivered to the tipping floor associated with Unit 3 shall be incinerated within three (3) days of receipt at the facility.
 - c. During annual maintenance outages and equipment testing or repair situations, MSW may be stored for longer than three (3) days provided that written notification of such event is provided to the DOH, in accordance with Special Condition No. 20, and the permittees maintain compliance with all other permit conditions.
- 17. The RDF/MSW storage areas shall not exceed three (3) days capacity, or less as necessary for fire prevention and safety. Piles of RDF/MSW shall be managed to prevent hot spots and fires, and protect worker safety. A fire suppression system shall be maintained in the RDF/MSW storage area, with regular inspections and tests to ensure the system is operational.
- 18. Recyclable materials, including pre- and post-combustion metals, shall be separated, stored, and transported as follows. The permittees shall take reasonable measures to separate metals and other recyclable materials from the MSW, RDF, and post-combustion waste streams.

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- a. Recyclable materials shall be stored in a manner that will minimize the generation of leachate, will not cause leachate to be released, and will not cause any health or safety hazard, littering, odor, dust, or other nuisances. Recyclable materials shall be transported from the facility prior to posing a nuisance, health, or safety concern.
 - b. All reasonable efforts shall be made to limit the storage of recyclable material to eighteen (18) full containers and to remove full containers within one week. In the event that on-site storage for more than one week is necessary, the containers may be temporarily stored for up to two weeks, provided they are properly containerized and covered, until said transport can be arranged.
 - c. Recyclable metals shall be transported to a permitted recycling facility allowed to accept such metals (i.e., contaminated post-combustion metal) or out-of-state markets. Other recyclable materials shall be transported to permitted recycling facilities allowed to accept such materials or out-of-state markets.
 - d. Recyclable materials, including metals, shall be fully containerized or covered to prevent the scattering of ash, residue, or dust during storage and transport. Appropriate controls shall be instituted and implemented to prevent the scattering of ash, residue, or dust during loading and unloading of recyclable materials.
19. The permittees shall perform periodic cleaning of the tip floors, MSW/RDF storage area, and other areas of the facility that store or handle MSW/RDF, as may be required in order to maintain the plant in a vector free, sanitary, and clean condition.
 20. In the event that the facility is unable to combust RDF/MSW or process MSW for more than 72 hours, the permittees shall cease from accepting any more MSW at the affected area until the equipment is back in operation. During such times, waste shall be diverted to permitted storage and disposal facilities or to operational areas of the facility. All other permit conditions, including capacity limits, shall be maintained.
 - a. The permittees shall notify the DOH of proposed or actual suspended operation. Initial notification may be by phone prior to, or within 24-hours of suspended operation. Written notification shall be provided prior to, or within seven (7) days, of suspended operation. Facsimile transmissions are acceptable. The permittees shall specify:
 - i. date and time that the facility suspends, or proposes to suspend, operation;

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- ii. reason for suspended operation;
 - iii. actions that will be taken to address the situation;
 - iv. actions that will be taken to address other potential impacts of suspended operation (for example: odor control, litter management, any special operating procedures to respond to the situation);
 - v. anticipated schedule for resuming operation; and
 - vi. any other pertinent information.
- b. The permittees shall notify the DOH when operations resume. Initial notification may be by phone within 24-hours of resuming operations. Written notification shall be provided within seven (7) days of resuming operations. Facsimile transmissions are acceptable. The permittees shall specify:
- i. date and time that the facility resumed operation;
 - ii. estimated quantities of MSW and RDF present at the facility during the period of suspended operation;
 - iii. schedule to process existing MSW, combust existing RDF, and resume acceptance of MSW at the facility;
 - iv. actions that will be taken to prevent future recurrences; and
 - v. any other pertinent information.

Section D. Sample Collection and Analysis

- 21. All sample collection, handling, and management shall be conducted in accordance with EPA SW-846, *Test Methods for Evaluating Solid Waste*, and EPA Office of Solid Waste, *Guidance for the Sampling and Analysis of Municipal Waste Combustion Ash* (June 1995).
- 22. Each sample shall be properly collected, identified, contained, and preserved. The name of the person who collected the sample shall be included in the records. A chain of custody shall be maintained from the time of sample collection through the final analysis and disposition.

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23. Sample analysis shall be conducted by an independent third party with appropriate credentials and performed at the expense of the permittees.
24. Samples shall be analyzed as specified in the operations manual, approved subsequent submissions, and the conditions of this permit. Samples shall be analyzed in accordance with the following EPA SW-846 Methods:
 - a. Method 9045 for pH;
 - b. Method 6010 for total metals;
 - c. Method 7471 for mercury;
 - d. Method 3060A/7199 for hexavalent chromium;
 - e. Method 1311 for toxicity characteristic leaching procedure (TCLP);
 - f. Method 8290 for dioxins/furans; or
 - g. other methods provided in approved application submissions and approved by the DOH.
25. Practical quantitation limits (PQLs) shall be equivalent, or lower, than the PQLs submitted with the operations plan and approved subsequent submissions.

Section E. Management and Testing of Pre-Combustion Residue

26. Pre-combustion residue (residue) shall be managed in accordance with the operations manual and approved subsequent submissions. Residue shall be loaded directly into residue trailers with top covers for immediate transport from the facility. All reasonable efforts shall be made to remove the collected residue from the facility within 24 hours. In the event that temporary on-site storage in excess of 24 hours is necessary, the residue may be temporarily stored along the west wall in the MSW tip floor building, until said transport can be arranged.
27. The residue shall be transported to a permitted landfill for disposal. The residue shall be fully containerized or covered to prevent it from scattering during transport. Appropriate controls shall be instituted and implemented to prevent the scattering of residue or dust during loading and unloading.
28. The permittees shall collect and analyze residue samples in accordance with the Residue Sampling Protocol received on February 7, 2011; Section D, Sample Collection and Analysis; approved subsequent submissions; and other applicable conditions of this permit. Samples shall be collected and analyzed, in accordance with Special Condition No. 29, on an annual basis.

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29. Chemical testing shall be performed on the residue for pH, total metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), and hexavalent chromium.
30. Monitoring reports shall be submitted to the DOH within sixty (60) days of the end of each annual testing period, and in accordance with Section G, Recordkeeping and Reporting.

Section F. Management and Testing of Post-Combustion Ash

31. Post-combustion ash (ash) includes fly ash and bottom ash generated at the facility. Ash shall be managed in accordance with the operations manual and approved subsequent submissions. The ash shall be loaded directly into ash trailers with top covers for immediate transport from the facility. All reasonable efforts shall be made to remove the collected ash from the facility within 24 hours. In the event that temporary onsite storage in excess of 24 hours is necessary, the ash may be temporarily stored in trailers, provided they are properly containerized and covered, until said transport can be arranged.
32. The ash shall be transported to a permitted ash monofill for disposal. The ash shall be fully containerized or covered to prevent it from scattering during transport. Appropriate controls shall be instituted and implemented to prevent the scattering of ash or dust during loading and unloading.
33. The ash and transporting trailer shall not contain excessive moisture that would freely drain from the ash. The permittees shall take adequate measures to ensure the reduction of moisture present in the ash and to drain excessive moisture prior to transport from the facility. Any moisture collected shall be managed in accordance with applicable rules and regulations.
34. The permittees shall collect ash samples from Units 1 and 2 in accordance with Special Conditions No. 34.a or 34.b, as follows. Samples shall be collected and analyzed in accordance with Special Condition Nos. 37 and 38, on a quarterly basis. Compliance with these sampling and analytical requirements does not relieve the permittees from compliance with all other applicable regulations.
 - a. In accordance with Section D, Sample Collection and Analysis, a revised Ash Sampling Protocol as approved by the DOH, and any additional conditions, or
 - b. In accordance with the Ash Sampling Protocol received on February 7, 2011; additional information received on February 13, 2006, Section D, Sample Collection and Analysis; other applicable conditions of this permit, approve subsequent submissions, and as follows.

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- i. The ash samples shall be prepared utilizing a 60% bottom ash/40% fly ash split (by weight), or as otherwise specified by the DOH.
 - ii. The permittees shall collect bottom ash after the bottom ash metals removal system (BAMR).
 - iii. By March 30, 2012, the permittees shall implement the December 1, 2010 engineering study plan to re-evaluate the ratio of fly ash and bottom ash, as approved by the DOH.
 - iv. The permittees shall notify the DOH of the implementation schedule for this study. The DOH personnel shall be allowed to attend the study. The data, results, and facility-specific ratio recommendation shall be provided to the DOH within forty-five (45) days of completion of the study.
 - v. Upon approval of a facility-specific ratio, the permittees shall implement approved ratio at the next quarterly sampling event. If the next quarterly sampling event is scheduled within forty-five (45) days of approval, the facility may use the 60%/40% ratio. All subsequent sampling events shall be performed using the facility-specific ratio approved by the DOH.
35. The permittees shall collect ash samples from Unit 3 in accordance with the Ash Sampling Protocol received on February 7, 2011; additional information received on February 13, 2006, March 27, 2009, April 22, 2009, and April 27, 2009, Section D, Sample Collection and Analysis; other applicable conditions of this permit; and approved subsequent submissions. Samples shall be collected and analyzed, in accordance with Special Condition Nos. 37 and 38, on a quarterly basis. Compliance with these sampling and analytical requirements does not relieve the permittees from compliance with all other applicable regulations.
- a. The permittees shall collect ash samples in accordance with the Ash Sampling Protocol received on February 7, 2011, and additional information received on March 27, 2009, April 22, 2009, and April 27, 2009. Unit 3 will produce a bottom ash waste stream and a blended ash waste stream.
 - b. The blended ash waste stream shall consist of a 64% bottom ash (wet) and 36% conditioned fly ash (wet), $\pm 1\%$, by weight, or other approved ratio. The permittees shall collect the blended ash sample after the rotary drum mixer.
 - c. The bottom ash waste stream sample shall be collected after the BAMR.
 - d. The sampling frequency, sampling interval, and number of samples shall be consistent with the Sampling Protocol for Units 1 and 2. Six (6) sub-samples of blended ash and bottom ash shall be collected in 10-minute

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intervals, over the course of an hour. Fourteen (14) separate samples (1-hour sample period each) shall be collected and analyzed for each waste stream.

36. The permittees shall inspect the truck wash sump and settling basin weekly. The sump waste and settling basin waste (from Unit 3) shall be removed based on the weekly inspection.
 - a. The permittees shall collect and analyze ash from the sump near the truck wash area in accordance with Section D, Sample Collection and Analysis, approved subsequent submissions, and other applicable conditions of this permit. Samples shall be collected and analyzed, in accordance with Special Condition No. 37, on an annual basis. Reporting shall also describe sample collection procedures.
 - b. The permittees may dispose of collected waste from Unit 3 settling basin without additional sampling. Waste from Unit 3 settling basin shall not be recycled, reused, or combined with bottom ash slated for recycling/reuse.
37. Chemical testing shall be performed on the ash for pH, dioxins/furans, total metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), hexavalent chromium, and TCLP (heavy metals).
38. Organics testing shall be performed on the ash in accordance with the Ash Sampling Protocol received on February 7, 2011; analytical method received on December 2, 2005; Section D, Sample Collection and Analysis; other applicable conditions of this permit; and approved subsequent submissions. The ash shall contain less than ten percent organic matter by weight. Reporting shall show that the reported organic fraction, by weight, is representative of the entire ash waste stream and accounts for unburned waste visible in the ash.
39. Following a minimum of two (2) years of accumulated quarterly data for all parameters after the implementation of a new sampling ratio or method, or new waste stream, the permittees may petition the DOH for a reduction in testing. The proposed reduction may be for organics, TCLP, and hexavalent chromium testing frequency, provided that testing shows statistically insignificant variation in organic content by weight and constituent concentrations, respectively. The permittees shall submit the request in writing, including rationale for the change and statistical analysis of existing data. The permittees must receive written approval from the DOH prior to implementation of any change in sampling frequency. If other data analyses show a change in the characteristics of the ash, the DOH may reinstate the original testing and frequency requirements.

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40. Monitoring reports for chemical and organics testing shall be submitted to the DOH within sixty (60) days of each applicable testing period, and in accordance with Section G, Recordkeeping and Reporting. A summary of analytical results shall also be provided to facilities that accept post-combustion metals coated with ash.
41. Should the permittees propose to reuse or recycle the ash, the permittees shall submit a written request to the DOH. The DOH may require additional testing, analysis, risk evaluation, and other applicable information to evaluate any proposed reuse alternative. The facility must receive written approval from the DOH prior to implementation of any reuse or recycling alternative.

Section G. Recordkeeping and Reporting

42. The permittees shall maintain the following records for the existing and expanded areas of the facility:
 - a. daily quantity (tons) of MSW entering each area of the facility;
 - b. daily number of MSW-transporting vehicles entering each area of the facility;
 - c. daily record of hauler, type of hauler (private or commercial), and weight of load;
 - d. daily quantity (tons) of MSW rejected from each area of the facility, reason for rejection, responsible hauler, and waste load number;
 - e. daily quantity (tons) of residue transported from the facility and destination;
 - f. daily quantity (tons) of combined ash from Units 1 and 2, combined ash from Unit 3, and bottom ash from Unit 3 transported from the facility and destination;
 - g. daily records of unacceptable waste rejected from each area of the facility, including date, hauler, and waste type.
 - h. records of unacceptable waste removed from the facility, including date of removal from facility, waste type, estimated quantity, and recycling/disposal method and destination;
 - i. daily/monthly quantity of ferrous metal and non-ferrous metal (pre- and post-combustion) transported from each area of the facility and destination of each type of metal;

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- j. record of other recyclable materials removed from each area of the facility, including removal dates, estimated quantity, and destination for each type of recyclable material;
- k. record of housekeeping practices and nuisance mitigation efforts;
- l. record of fire suppression system inspections and tests;
- m. record of radioactive load detection occurrences;
- n. record of periods when the facility is not in operation. The record shall include items specified in Special Condition No. 20;
- o. record of all sample testing and associated monitoring reports, including date and time of sample collection, type of sample, and analytical results;
- p. daily weight records for bottom ash discharged prior to the rotary drum mixer;
- q. daily weight records for bottom ash and daily weight records for conditioned fly ash that are fed to the rotary drum mixer; and
- r. equipment operating records showing operating parameters (such as equipment processing data, operating temperature and pressure, lime injection rates, residence time, bottom ash/conditioned fly ash ratio of blended ash in the rotary drum mixer; etc.) that may impact operating capacity, combustion efficiency, or ash composition.

The permittees shall maintain records on any conversion factor used to convert volume and weight. The conversion factor shall be clearly documented and maintained with the records.

43. **Monitoring Reports.** The permittees shall submit a monitoring report to the DOH within sixty (60) days of the end of each quarter, or other applicable reporting period. At a minimum, the monitoring reports shall include the following information:
- a. sample collection dates, location, and time of sampling/measurements;
 - b. sample collection methodology;
 - c. the person responsible for performing the sampling or measurements;
 - d. identification of third party entity that performed the sample analysis;
 - e. sampling records, analytical techniques/method used, and analytical results; and
 - f. analysis of test results.

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44. Annual Report. The permittees shall prepare and submit an annual report to the DOH, reviewing the operations for the previous fiscal year (July 1 to June 30). Reports shall be submitted by July 31 of each year and shall include:
- a. type and tonnage or volumes of waste received, recycled, incinerated, and disposed of from each area of the facility;
 - b. tonnage or volumes of ash (identified by type of ash) and residue generated and disposed of from each area of the facility;
 - c. identification of disposition location for each waste stream from each area of the facility; and
 - d. dates, total number of days, and reason that each area of the facility was not accepting MSW or was not in operation.

Reports shall be submitted to:

Department of Health
Environmental Management Division
Office of Solid Waste Management
P.O. Box 3378
Honolulu, Hawaii 96801-3378