

PROPOSED (6/18/04)

[Issuance Date]

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

04-xxxE CAB
File No. 0212-19

Mr. James Kappel
Vice President, Refinery Operations
Tesoro Hawaii Corporation
P. O. Box 3379
Honolulu, Hawaii 96842

Dear Mr. Kappel:

**Subject: Amendment of Covered Source Permit (CSP) No. 0212-01-C
Significant Modification Application No. 0212-19
Package Boiler SG1103
Tesoro Hawaii Corporation
Petroleum Refinery
Located at: 91-325 Komohana Street, Kapolei, Oahu
Date of Expiration: July 1, 2005**

In accordance with Hawaii Administrative Rules, Chapter 11-60.1, and pursuant to your application for a Significant Modification dated October 14, 2003, revised application dated December 26, 2003, and additional information dated May 4, 2004, the Department of Health hereby amends Covered Source Permit (CSP) No. 0212-01-C issued to Tesoro Hawaii Corporation on July 6, 2000. The amendment revises the Cogeneration Unit and Package Boiler attachment of the permit.

The following amended permit conditions supersede the corresponding permit conditions of CSP No. 0212-01-C issued on July 6, 2000, and amended on October 8, 2001, April 15, 2003, and October 13, 2003:

1. Attachment II(I), Special Condition No. C.1 - Fuel Usage and Specifications
 - c. The package boiler SG1103 shall be fired only on liquid fuel with a sulfur content not to exceed 0.5% by weight, RFG or a combination of both fuels.
2. Attachment II(I), Special Condition No. C.3.b - Emission Limits for NO_x (as NO₂)
 - v. When the package boiler SG1103 is firing liquid fuel, the more stringent of 40.3 lbs/hr (2-hour average) or 0.32 lbs/MMBtu (2-hour average).
 - vi. When the package boiler SG1103 is firing refinery fuel gas (RFG) the more stringent of 37.8 lbs/hr (2-hour average) or 0.30 lbs/MMBtu (2-hour average).

3. Attachment II(I), Special Condition No. C.3.c - Emission Limits for CO
 - ii. When the package boiler SG1103 is firing on liquid fuel, - 14.0 lbs/hr (2- hour average).
 - iii. When the package boiler SG1103 is firing refinery fuel gas (RFG), 10.4 lbs/hr (2- hour average).
4. Attachment II(I), Special Condition No. C.4 - Operational and Emission Limitations
 - a. The package boiler SG1103 shall not consume more than 1,073,333 gallons of liquid fuel and 127 million standard cubic feet of RFG per year based on a rolling twelve (12) month average. The maximum fuel consumption limit for RFG is based on a high heating value of (HHV) of 1440 Btu/scf. In the event of significant variation in the HHV, the maximum fuel consumption limit shall be as follows:

Maximum fuel consumption (scf/hr) = 126 MMBtu/hr / HHV of RFG (Btu/scf)

5. Attachment II(I), Special Condition No. D.1 - Monitoring and Recordkeeping Requirements
 - a. The permittee shall maintain and operate a continuous monitoring system to monitor and record the fuel consumption and ratio of water to fuel being fired in the gas turbine TU2301. This system shall be accurate to within ± 5.0 percent. The system shall meet EPA monitoring requirements (40 CFR §60.13).
 - b. The permittee shall maintain and operate non-resetting fuel meters to record the amount of liquid fuel and RFG fired in the package boiler SG1103.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.334)¹

6. Attachment II(I), Special Condition No. D.4 - Monitoring and Recordkeeping Requirements

Sulfur Content in the Liquid Fuel

The sulfur content of the liquid fuel shall be tested in accordance with the most current American Society for Testing and Materials (ASTM) methods. ASTM Method D4294-83 is a suitable alternative to Method D129-64 for determining the sulfur content. The liquid fuel sulfur content shall be verified by having a representative sample of each batch of liquid fuel analyzed for sulfur content by weight or at least once per **month**. When reformat is used as a fuel to TU2301, the sulfur analysis of the feed to the reformer is sufficient to satisfy this requirement. ASTM D4045 is an acceptable analytical method for determining sulfur content of naphtha and reformat.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.335)¹

7. Attachment II(I), Special Condition No. D.6 - Monitoring and Recordkeeping Requirements

- d. Total quantity of liquid fuel (barrels) and RFG (MMSCF) fired by the package boiler SG1103 on a monthly and rolling twelve (12) month basis. The HHV of the RFG fired shall also be recorded.

8. Attachment II(I), Special Condition No. E.2 - Notification and Reporting Requirements

The permittee shall submit **semi-annually** written reports to the Department of Health for monitoring purposes. The 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 include the following:

- a. Any opacity exceedance as determined by the required V.E. monitoring. Each exceedance reported shall include the date, six (6) minute average opacity reading, possible reason for exceedance, duration of exceedance, and corrective actions taken. If there were no exceedances, the permittee shall submit in writing a statement indicating that for each equipment there were no exceedances for that semi-annual period.

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

- b. The sulfur content by weight and hydrogen sulfide content (as applicable for each fuel) of the liquid fuel and RFG burned in the gas turbine TU2301 and package boiler SG1103.
- c. The total quantity of liquid fuel (barrels) and RFG (MMSCF) fired by the package boiler SG1103 on a monthly and rolling twelve (12) month basis. The HHV of the RFG shall also be reported. The enclosed **Monitoring Report Form: Fuel Consumption - Package Boiler** or an equivalent form shall be used.
- d. Any deviations from permit requirements shall be clearly identified.

(Auth.: HAR §11-60.1-3, §11-60.1-32, §11-60.1-90, SIP §11-60-24²)

9. Attachment II(I), Special Condition No. F.1 - Testing Requirements

The permittee shall conduct or cause to be conducted performance tests on the cogeneration gas turbine/duct burner and the package boiler. Performance test shall be conducted for sulfur dioxide (SO₂), nitrogen oxides (NO_x), and carbon monoxide (CO). All performance tests shall be conducted at the maximum operating capacity of the equipment being tested, or at other operating loads as may be specified by the Department of Health. Performance test shall be conducted on an annual basis or at such times as may be specified by the Department of Health.

Performance testing for the package boiler shall be conducted only while firing the package boiler on either liquid or gaseous fuel, but not both at the same time. The fuel type used during testing shall be based on the fuel which represents the majority of the BTU input to the package boiler over the preceding 12-month period.

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

10. Added **Monitoring Report Form: Fuel Consumption - Package Boiler** to the permit.

All other permit conditions of CSP No. 0212-01-C issued on July 6, 2000 and amended on October 8, 2001, April 15, 2003 and October 13, 2003, shall not be affected and shall remain valid.

A receipt for the application filing fee totaling \$1,000.00 is enclosed.

If there are any questions regarding these matters, please contact Mr. Darin Lum of the Clean Air Branch at (808) 586-4200.

Sincerely,

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

DL:lk

Enclosure

c: CAB Enforcement Section

PROPOSED (6/18/04)

**MONITORING REPORT FORM
FUEL CONSUMPTION - PACKAGE BOILER
COVERED SOURCE PERMIT NO. 0212-01-C**

[Issuance Date]

Expiration Date: July 1, 2005

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 on a semi-annual basis:

(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): _____

MONTH	MONTHLY FUEL CONSUMPTION LIQUID FUEL (BARRELS)	ROLLING 12-MONTH FUEL CONSUMPTION LIQUID FUEL (BARRELS)	MONTHLY FUEL CONSUMPTION RFG (MMSCF)	ROLLING 12-MONTH FUEL CONSUMPTION RFG (MMSCF)	RFG HHV
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					