

# PROPOSED

[Issuance Date]

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

09-xxxE CAB  
File No. 0212-01

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Mr. Dan L. Carlson  
Vice President and Refinery Manager  
Tesoro Hawaii Corporation  
91-325 Komohana Street  
Kapolei, Hawaii 96707-1713

Dear Mr. Carlson:

**Subject: Covered Source Permit (CSP) No. 0212-01-C  
Application for Renewal No. 0212-21,  
Minor Modification Nos. 0212-27 and 0212-28  
Tesoro Hawaii Corporation  
Petroleum Refinery  
Located at: 91-325 Komohana Street, Kapolei, Oahu  
Date of Expiration: [Issuance Date + 5 years]**

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 that you submitted as part of your renewal application dated March 28, 2005 and minor modification applications dated February 20, 2008 and August 3, 2009. This permit supersedes Covered Source Permit (CSP) No. 0212-01-C issued on July 6, 2000, and amended on October 8, 2001, April 15, 2003, October 13, 2003, August 4, 2004, November 6, 2007, February 1, 2008, and August 22, 2008, in its entirety. Receipts for the respective application filing fees of \$ 3,000, \$200.00, and \$200.00 are enclosed.

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

- Attachment I: Standard Conditions
- Attachment II(A): Special Conditions - Crude Distillation Unit
- Attachment II(B): Special Conditions - Naphtha Hydrotreater and Catalytic Reformer Unit
- Attachment II(C): Special Conditions - Vacuum Distillation Unit
- Attachment II(D): Special Conditions - Distillate Hydrocracker Unit
- Attachment II(E): Special Conditions - Asphalt Heating and Loading
- Attachment II(F): Special Conditions - Visbreaker Unit
- Attachment II(G): Special Conditions - Hydrogen Generation Unit
- Attachment II(H): Special Conditions - Sulfur Recovery Plant

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Attachment II(I): Special Conditions - Cogeneration Unit  
Attachment II(J): Special Conditions - Wastewater Treatment Unit  
Attachment II(K): Special Conditions - Mercaptan Treatment Units  
Attachment II(L): Special Conditions - Flare  
Attachment II(M): Special Conditions - Petroleum Storage Tanks  
Attachment II(N): Special Conditions - Propane Load Rack and Cylinder Filling Station  
Attachment II(O): Special Conditions - Miscellaneous Emission Sources and Requirements  
Attachment II(INSIG): Special Conditions – Insignificant Activities  
Attachment III: Annual Fee Requirements  
Attachment IV: Annual Emissions Reporting Requirements

The following forms are enclosed for your use and submittal as required:

1. Compliance Certification Form
2. Annual Emissions Report Form:
  - Refinery Equipment - Fuel Consumption
  - Refinery Equipment - Process Rate
  - External/Internal Floating Roof Petroleum Storage Tank
  - Fixed Roof Petroleum Storage Tank
3. Monitoring Report Form:
  - Fuel Consumption
  - Fuel Consumption – Package Boiler
  - Opacity Exceedances
  - Visible Emissions Form Requirements with the following enclosures:
    - a. Visible Emissions Form
    - b. The Ringelmann Chart
  - Propane Load Rack and Cylinder Filling Station
  - Flare Gas Vapor Recovery System
4. Excess Emissions and Monitoring System Performance Summary Report

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

Sincerely,

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

DL:nn  
Enclosures

**PROPOSED**

c: CAB Monitoring Section



**ATTACHMENT I: STANDARD CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-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)<sup>2</sup>
3. This permit is not transferable whether by operation of law or otherwise, from person to person, from place to place, or from one piece of equipment to another without the approval of the Department of Health, except as provided in HAR, Section 11-60.1-91.  
  
(Auth.: HAR §11-60.1-7; SIP §11-60-9)<sup>2</sup>
4. A request for transfer from person to person shall be made on forms furnished by the Department of Health.  
  
(Auth.: HAR §11-60.1-7)
5. In the event of any changes in control or ownership of the facilities to be constructed or modified, this permit shall be binding on all subsequent owners and operators. The permittee shall notify the succeeding owner and operator of the existence of this permit and its conditions by letter, copies of which will be forwarded to the Department of Health and the 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)<sup>2</sup>

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

- a. Identification of each affected emission point and each emission limit exceeded;
- b. Magnitude of each excess emission;
- c. Time and duration of each excess emission;
- d. Identity of the process or control equipment causing 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)<sup>2</sup>

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

(Auth.: HAR §11-60.1-14, §11-60.1-90)

19. This permit shall become invalid with respect to the authorized construction if construction is not commenced as follows:

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

(Auth.: HAR §11-60.1-9, §11-60.1-90)

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

(Auth.: HAR §11-60.1-9, §11-60.1-90)

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

(Auth.: HAR §11-60.1-90)

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

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

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

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

(Auth.: HAR §11-60.1-11, §11-60.1-90)

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

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

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

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

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)

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

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

**ATTACHMENT II(A): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
CRUDE DISTILLATION UNIT**

**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 portion of the Covered Source Permit encompasses the following equipment and associated appurtenances of the Crude Distillation Unit (CDU):
  - a. Crude Heater No. 1, ID no. H101A
    - i. 154 MMBtu/hr heat input
    - ii. Equipped with combustion air preheater
  - b. Crude Heater No. 2, ID no. H101B
    - i. 144 MMBtu/hr heat input
    - ii. Equipped with combustion air preheater
  - c. Stabilizer Heater No. 1, ID no. H102A
    - i. 18 MMBtu/hr heat input
  - d. Stabilizer Heater No. 2, ID no. H102B
    - i. 8 MMBtu/hr heat input
  
2. The permittee shall permanently attach an identification tag or nameplate on each piece of equipment which identifies the model number, serial or I.D. number and manufacturer. The identification tag or nameplate shall be attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-3)

(Auth.: HAR §11-60.1-5, §11-60.1-90)

**Section B. Applicable Federal Regulations**

1. The crude heater no. 2 (H101B) is subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 60, New Source Performance Standards (NSPS)
    - i. Subpart A, General Provisions; and

ii. Subpart J, Standards of Performance for Petroleum Refineries.

The permittee shall comply with all applicable requirements of these standards, including all emission limits, notification, reporting, monitoring, testing and recordkeeping requirements.

The major requirements of these standards are detailed in the special conditions of this permit.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.1, §60.100)<sup>1</sup>

**Section C. Operational and Emission Limitations**

1. Crude heater no. 1(H101A) and stabilizer heaters nos. 1(H102A) and 2 (H102B) shall be fired only on fuel oil with a maximum sulfur content not to exceed 0.5% by weight or refinery fuel gas (RFG) with a maximum sulfur content not to exceed 0.5% by weight. Crude heater no. 2 (H101B) shall be fired only on refinery fuel gas (RFG) with a hydrogen sulfide (H<sub>2</sub>S) content not to exceed 230 mg/dscm (0.10 gr/dscf) or fuel oil with a maximum sulfur content not to exceed 0.5% by weight.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-38, §11-60.1-90, §11-60.1-161; 40 CFR §60.104)<sup>1</sup>

2. Visible Emissions (V.E.)

For any six (6) minute averaging period, the crude heaters and stabilizer heaters shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during startup, shutdown, or equipment breakdown, the crude heaters and stabilizer heaters may exhibit visible emissions greater than twenty (20) percent opacity but not exceeding sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minutes.

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

**Section D. Monitoring and Recordkeeping Requirements**

1. Continuous Emissions Monitoring System (CEMS)
  - a. The permittee shall operate and maintain a continuous emissions monitoring system (CEMS) for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in the RFG before being burned in crude heater no. 2 (H101B).
  - b. The CEMS shall meet the following requirements:
    - i. The span value for the CEMS is 425 mg/dscm (300 ppmv) H<sub>2</sub>S.
    - ii. All fuel gas combustion devices, including crude heater no. 2 (H101B), having a

common source of fuel gas may be monitored at one location, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the RFG being burned.

- iii. Performance evaluations for the H<sub>2</sub>S CEMS shall be in accordance with 40 CFR §60.13. The H<sub>2</sub>S CEMS shall meet 40 CFR Part 60, Appendix B, Performance Specification 7, Specifications and Test Procedures for Hydrogen Sulfide Continuous Emissions Monitoring Systems in Stationary Sources; and Appendix F, Quality Assurance Procedures. 40 CFR Part 60, Appendix A, Method 11 shall be used in conducting any relative accuracy test audit (RATA).
- iv. Cylinder Gas Audits (CGA) shall be conducted on a quarterly basis in accordance with 40 CFR Part 60, Appendix F, Section 5.1.2. Since performance specification test procedures are only intended for the initial test of the H<sub>2</sub>S CEMS, RATAs need not be performed on an annual basis, unless requested by the Department of Health; or there is a significant change or performance deficiency of the CEMS.
- v. Calibration Drift (CD) assessments shall be performed on a daily basis pursuant to 40 CFR Part 60, Appendix F, Section 4.1.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.105)<sup>1</sup>

## 2. Sulfur Content in the Fuel

The sulfur content of the fuel oil to be fired shall be tested in accordance with the most current American Society for Testing and Materials (ASTM) methods. ASTM Method D4294-90 is a suitable alternative to Method D129-64 for determining the sulfur content. The fuel oil sulfur content shall be verified by having a representative sample of each batch of fuel oil analyzed for sulfur content by weight at least once per **month**. Records of the sulfur content of the fuel oil shall be maintained on a **monthly** basis.

The total sulfur content of the RFG to be fired in crude heater no. 1(H101A) and stabilizer heaters nos. 1(H102A) and 2 (H102B) shall be tested in accordance with the most current version of American Society for Testing and Materials (ASTM) Method D5504 or by alternative methods as authorized by the Department of Health. A representative sample of the RFG shall be taken and analyzed for the total sulfur content by weight at least twice per **month**. Records of the total sulfur content of the RFG shall be maintained on a **monthly** basis. Compliance with the total sulfur standard shall be determined by averaging the analytical results obtained throughout the month.

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

## 3. Visible Emissions (V.E.)

- a. The permittee shall conduct **monthly** (*calendar month*) V.E. observations for each equipment subject to opacity limitations in accordance with 40 CFR Part 60, Appendix A, Method 9 or by use of a Ringelmann's chart as provided. For each

period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.

- b. The permittee shall conduct **annually** (*calendar year*) V.E. observations for each equipment subject to opacity limits by a certified reader in accordance with 40 CFR Part 60, Appendix A, Method 9. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
- c. Upon written request and justification, the Department of Health may waive the requirements for the **annual** V.E. observations. The waiver request is to be submitted prior to the required test and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior tests indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the source have not changed since the previous **annual** V.E. observations. The annual V.E. observations shall not be waived for more than two consecutive years.

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

4. The permittee shall maintain a file of all measurements and monitoring data, including the continuous monitoring system performance evaluations; continuous monitoring system calibration checks; adjustments and maintenance performed on the monitoring 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, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7)<sup>1</sup>

5. All records, including support information, shall be true, accurate, and 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 in a permanent form suitable for inspection and made available to the Department of Health or their representatives upon request.

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

#### **Section E. Notification and Reporting Requirements**

1. Excess Emissions
  - a. The permittee shall submit an excess emissions and monitoring systems performance

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report pursuant to 40 CFR §60.7(c) to the Department of Health for **every semi-annual calendar period**. The report shall include the following:

- i. The magnitude of excess emissions computed in accordance with 40 CFR §60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions;
    - ii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of crude heater no. 2 (H101B). The nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted, shall also be reported;
    - iii. The date and time identifying each period during which the continuous emissions monitoring system was inoperative except for zero and span checks. The nature of each system repair or adjustment shall be described; and
    - iv. The report shall so state if no excess emissions have occurred. Also, the report shall so state if the continuous emissions monitoring system operated properly during the period and was not subject to any repairs or adjustments except zero and span checks.
  - b. All reports shall be postmarked by the **30th day following the end of each semi-annual calendar period**. The enclosed **Excess Emissions and Monitoring System Performance Summary Report** form or an equivalent form shall also be submitted in addition to the excess emissions and monitoring systems performance report.
  - c. Excess emissions shall be defined as any rolling 3-hour period during which the average concentration of H<sub>2</sub>S in RFG, as measured by the continuous emissions monitoring system, exceeds 230 mg/dscm (0.10 gr/dscf).
  - d. Excess emissions indicated by the continuous emissions monitoring system shall be considered violations of the applicable emission and concentration limits for the purposes of the permit.
- (Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7, §60.105)<sup>1</sup>
2. 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 exceedances 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: Opacity Exceedances** or an equivalent form shall be used.

- b. Any fuel analysis conducted by the permittee or permittee's laboratory during the reporting period showing the sulfur content of the fuel.
- c. Any deviations from permit requirements shall be clearly identified.

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

3. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. The enclosed **Annual Emissions Report Form: Refinery Equipment - Fuel Consumption** or an equivalent form, shall be used in reporting fuel usage.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

4. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Conditions 16, 17, and 24, respectively. These notifications shall include, but not be limited to:

- a. Intent to shutdown air pollution control equipment for necessary scheduled maintenance;
- b. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and
- c. Permanent discontinuance of construction, modification, relocation or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

5. The permittee shall report in writing **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 preventative measures taken. Corrective actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

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

6. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted within **ninety (90) days after the end of each calendar year**, and shall be signed and dated by a responsible official. 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.

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)

7. The permittee shall notify the Department of Health in writing at **least thirty (30) days** prior to conducting a performance specification test on the CEMS. The testing date shall be in accordance with the performance date identified in 40 CFR §60.13.

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

**Section F. Testing Requirements**

1. Upon the Department of Health's request, or if a significant change or performance deficiency occurs with the CEMS, performance tests for the H<sub>2</sub>S levels in the RFG shall be conducted and results reported in accordance with the instructions and test methods set forth in 40 CFR §60.106, and Appendix A, Method 11.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.106)<sup>1</sup>

2. **At least thirty (30) calendar days** prior to performing a test, the permittee shall submit a written *performance test plan* to the Department of Health that describes the test duration, test locations, test methods, source operation and other parameters 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 or require a retest.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.8)<sup>1</sup>

3. The permittee shall provide required testing at its own expense. The Department of Health may monitor the tests.

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

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

(Auth.: HAR §11-60.1-11, §11-60.1-90)

### **Section G. Agency Notifications**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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

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



**ATTACHMENT II(B): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
NAPHTHA HYDROTREATER AND CATALYTIC REFORMER UNIT**

**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 portion of the Covered Source Permit encompasses the following equipment and associated appurtenances of the Naphtha Hydrotreater (NHT) and Catalytic Reformer Unit (CRU):
  - a. Naphtha Hydrotreater Charge Heater, ID no. H401
    - i. 26 MMBtu/hr heat input
  - b. Naphtha Hydrotreater Reboiler, ID no. H402
    - i. 17 MMBtu/hr heat input
  - c. Catalytic Reformer Charge Heater, ID no. H501
    - i. 124.4 MMBtu/hr heat input
  - d. Interheater, ID no. H502
    - i. 96.4 MMBtu/hr heat input
  - e. Interheater, ID no. H503
    - i. 44.5 MMBtu/hr heat input
  - f. Interheater, ID no. H504
    - i. 21.7 MMBtu/hr heat input
  - g. Methanol Storage Tote
    - i. Vertical Fixed Roof Storage Tote
    - ii. 350 gallons capacity

(Auth.: HAR §11-60.1-3)
2. The permittee shall permanently attach an identification tag or nameplate on each piece of equipment which identifies the model number, serial or I.D. number and manufacturer. The identification tag or nameplate shall be attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

**Section B. Applicable Federal Regulations**

1. The naphtha hydrotreater charge heater H401, naphtha hydrotreater reboiler H402, catalytic reformer charge heater H501, interheater H502, interheater H503, and interheater H504 are subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 60, New Source Performance Standards (NSPS)
    - i. Subpart A, General Provisions; and
    - ii. Subpart J, Standards of Performance for Petroleum Refineries

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

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.1, §60.100)<sup>1</sup>

**Section C. Operational and Emission Limitations**

1. The naphtha hydrotreater charge heater H401 and naphtha hydrotreater reboiler H402 shall be fired only on refinery fuel gas (RFG) with a hydrogen sulfide (H<sub>2</sub>S) content not to exceed 230 mg/dscm (0.10 gr/dscf). Catalytic reformer charge heaters/interheaters H501, H502, H503, and H504 shall be fired only on refinery fuel gas (RFG) with a hydrogen sulfide (H<sub>2</sub>S) content not to exceed 230 mg/dscm (0.10 gr/dscf) or fuel oil with a maximum sulfur content not to exceed 0.5% by weight or a combination of both fuels.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-38, §11-60.1-90, §11-60.1-161; 40 CFR §60.104)<sup>1</sup>

2. Visible Emissions (V.E.)

For any six (6) minute averaging period, the naphtha hydrotreater charge heater H401, the naphtha hydrotreater reboiler H402, and catalytic reformer charge heaters/interheaters H501, H502, H503, and H504 shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during startup, shutdown, or equipment breakdown, these equipment may exhibit visible emissions greater than twenty (20) percent opacity but not exceeding sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minutes.

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

**Section D. Monitoring and Recordkeeping Requirements**

1. Continuous Emissions Monitoring System (CEMS).
  - a. The permittee shall operate and maintain a continuous emissions monitoring system (CEMS) for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in the RFG before being burned in the naphtha hydrotreater charge heater H401, naphtha hydrotreater reboiler H402, catalytic reformer charge heater H501, interheater H502, interheater H503, and interheater H504.
  - b. The CEMS shall meet the following requirements:
    - i. The span value for the CEMS is 425 mg/dscm (300 ppmv) H<sub>2</sub>S.
    - ii. All fuel gas combustion devices, including the naphtha hydrotreater charge heater H401, naphtha hydrotreater reboiler H402, catalytic reformer charge heater H501, interheater H502, interheater H503, and interheater H504, having a common source of fuel gas may be monitored at one location, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the RFG being burned.
    - iii. Performance evaluations for the H<sub>2</sub>S CEMS shall be in accordance with 40 CFR §60.13. The H<sub>2</sub>S CEMS shall meet 40 CFR Part 60, Appendix B, Performance Specification 7, Specifications and Test Procedures for Hydrogen Sulfide Continuous Emissions Monitoring Systems in Stationary Sources; and Appendix F, Quality Assurance Procedures. 40 CFR Part 60, Appendix A, Method 11 shall be used in conducting any relative accuracy test audit (RATA).
    - iv. Cylinder Gas Audits (CGA) shall be conducted on a quarterly basis in accordance with 40 CFR Part 60, Appendix F, Section 5.1.2. Since performance specification test procedures are only intended for the initial test of the H<sub>2</sub>S CEMS, RATAs need not be performed on an annual basis, unless requested by the Department of Health; or there is a significant change or performance deficiency of the CEMS.
    - v. Calibration Drift (CD) assessments shall be performed on a daily basis pursuant to 40 CFR Part 60, Appendix F, Section 4.1.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.105)<sup>1</sup>

## 2. Sulfur Content in the Fuel

The sulfur content of the fuel oil to be fired shall be tested in accordance with the most current American Society for Testing and Materials (ASTM) methods. ASTM Method D4294-90 is a suitable alternative to Method D129-64 for determining the sulfur content. The fuel oil sulfur content shall be verified by having a representative sample of each batch of fuel oil analyzed for sulfur content by weight at least once per **month**. Records of the sulfur content of the fuel oil shall be maintained on a **monthly** basis.

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

3. Visible Emissions (V.E.)

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

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

4. The permittee shall maintain a file of all measurements and monitoring data, including the continuous monitoring system performance evaluations; continuous monitoring system calibration checks; adjustments and maintenance performed on the monitoring 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, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7)<sup>1</sup>

5. All records, including support information, shall be true, accurate, and 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 in a permanent form suitable for inspection and made available to the Department of Health or their representatives upon request.

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

**Section E. Notification and Reporting Requirements**

1. Excess Emissions

- a. The permittee shall submit an excess emissions and monitoring systems performance report pursuant to 40 CFR §60.7(c) to the Department of Health for **every semi-annual calendar period**. The report shall include the following:
  - i. The magnitude of excess emissions computed in accordance with 40 CFR §60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions;
  - ii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the naphtha hydrotreater charge heater H401, naphtha hydrotreater reboiler H402, catalytic reformer charge heater H501, interheater H502, interheater H503, and interheater H504. The nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted, shall also be reported;
  - iii. The date and time identifying each period during which the continuous emissions monitoring system was inoperative except for zero and span checks. The nature of each system repair or adjustment shall be described; and
  - iv. The report shall so state if no excess emissions have occurred. Also, the report shall so state if the continuous emissions monitoring system operated properly during the period and was not subject to any repairs or adjustments except zero and span checks.
- b. All reports shall be postmarked by the **30th day following the end of each semi-annual calendar period**. The enclosed **Excess Emissions and Monitoring System Performance Summary Report** form or an equivalent form shall also be submitted in addition to the excess emissions and monitoring systems performance report.
- c. Excess emissions shall be defined as any rolling 3-hour period during which the average concentration of H<sub>2</sub>S in RFG, as measured by the continuous emissions monitoring system, exceeds 230 mg/dscm (0.10 gr/dscf).
- d. Excess emissions indicated by the continuous emissions monitoring system shall be considered violations of the applicable emission and concentration limits for the purposes of the permit.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7, §60.105)<sup>1</sup>

2. 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 exceedances 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: Opacity Exceedances** or an equivalent form shall be used.

- b. Any fuel analysis conducted by the permittee or permittee's laboratory during the reporting period showing the sulfur content of the fuel.
- c. Any deviations from permit requirements shall be clearly identified.

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

### 3. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. The enclosed **Annual Emissions Report Form: Refinery Equipment - Fuel Consumption** or an equivalent form, shall be used in reporting fuel usage.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

4. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Conditions 16, 17 and 24, respectively. These notifications shall include, but not be limited to:
  - a. Intent to shutdown air pollution control equipment for necessary scheduled maintenance;
  - b. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and
  - c. Permanent discontinuance of construction, modification, relocation or operation of the facility covered by this permit.

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Attachment II(B)  
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Issuance Date:  
Expiration Date:

**PROPOSED**

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

5. The permittee shall report in writing **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 preventative measures taken. Corrective

actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

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

6. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted within **ninety (90) days** *after the end of each calendar year*, and shall be signed and dated by a responsible official. 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.

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)

7. The permittee shall notify the Department of Health in writing at **least thirty (30) days** prior to conducting a performance specification test on the CEMS. The testing date shall be in accordance with the performance date identified in 40 CFR §60.13.

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

**Section F. Testing Requirements**

1. Upon the Department of Health's request, or if a significant change or performance deficiency occurs with the CEMS, performance tests for the H<sub>2</sub>S levels in the RFG shall be

conducted and results reported in accordance with the instructions and test methods set forth in 40 CFR §60.106, and Appendix A, Method 11.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.106)<sup>1</sup>

2. **At least thirty (30) calendar days** prior to performing a test, the permittee shall submit a written *performance test plan* to the Department of Health that describes the test duration, test locations, test methods, source operation and other parameters 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 or require a retest.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.8)<sup>1</sup>

3. The permittee shall provide required testing at its own expense. The Department of Health may monitor the tests.

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

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

(Auth.: HAR §11-60.1-11, §11-60.1-90)

### **Section G. Agency Notifications**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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

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



**ATTACHMENT II(C): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
VACUUM DISTILLATION UNIT**

**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 portion of the Covered Source Permit encompasses the following equipment and associated appurtenances of the Vacuum Distillation Unit (VDU):
  - a. Vacuum Unit Charge Heater, ID no. H175
    - i. 86 MMBtu/hr heat input
  - b. Vacuum Distillation Tower, ID no. T175

(Auth.: HAR §11-60.1-3)
2. The permittee shall permanently attach an identification tag or nameplate on each piece of equipment which identifies the model number, serial or I.D. number and manufacturer. The identification tag or nameplate shall be attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

**Section B. Applicable Federal Regulations**

1. The Vacuum Unit Charge Heater H175 is subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 60, New Source Performance Standards (NSPS)
    - i. Subpart A, General Provisions; and
    - ii. Subpart J, Standards of Performance for Petroleum Refineries.

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

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.1, §60.100) <sup>1</sup>

2. This Covered Source Permit contains conditional requirements from an existing permit issued pursuant to 40 CFR Part 52.21, Prevention of Significant Deterioration of Air Quality.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-132)

**Section C. Operational and Emission Limitations**

1. The vacuum unit charge heater H175 shall be fired on fuel oil with a maximum sulfur content not to exceed 0.5% by weight, or refinery fuel gas (RFG) with a hydrogen sulfide content (H<sub>2</sub>S) content not to exceed 230 mg/dscm (0.10 gr/dscf).

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-38, §11-60.1-90, §11-60.1-161; 40 CFR §60.104)<sup>1</sup>

2. Fuel Consumption

The fuel consumption of the vacuum unit charge heater H175 shall not exceed 527 gallons per hour of fuel oil based on a rolling twelve (12) month average.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

3. Low NO<sub>x</sub> Burners

The permittee shall operate and maintain low NO<sub>x</sub> burners on the vacuum unit charge heater H175.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

4. Maximum Emission Limits

The permittee shall not discharge or cause the discharge into the atmosphere from the vacuum unit charge heater H175 emissions of nitrogen oxides in excess of 0.40 lb/MMBtu (maximum 2-hour average).

(Auth.: HAR §11-60.1-3, §11-60.1-90)

5. Visible Emissions (V.E.)

For any six (6) minute averaging period, the vacuum unit charge heater H175 shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during startup, shutdown, or equipment breakdown, the vacuum unit charge heater may exhibit visible emissions greater than twenty (20) percent opacity but not exceeding sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minutes.

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

6. Vapor Collection System for Vacuum Tower

The permittee shall operate and maintain an operable vapor collection system for the

vacuum distillation tower. All gaseous emissions from the tower shall be collected and used as fuel or flared.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

7. Vapor Collection System for Process Vessel Turn-arounds

All VOC emissions from any pressurized process vessel designated in this Attachment which occur during depressurization of such vessel, and which would otherwise be emitted to the atmosphere, shall be collected and used for fuel or flared until the pressure in the vessel is below 5 pounds per square inch, gauge. Residual liquids, to the extent possible will be pumped out of the vessel to tankage for reprocessing.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

**Section D. Monitoring and Recordkeeping Requirements**

1. The permittee shall operate and maintain a fuel meter to record the amount of fuel oil fired in the vacuum unit charge heater H175.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

2. Continuous Emissions Monitoring System (CEMS)

- a. The permittee shall operate and maintain a continuous emissions monitoring system (CEMS) for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in the RFG before being burned in the vacuum unit charge heater H175.

- b. The CEMS shall meet the following requirements:

- i. The span value for the CEMS is 425 mg/dscm (300 ppmv) H<sub>2</sub>S.
- ii. All fuel gas combustion devices, including the vacuum unit charge heater H175 having a common source of fuel gas may be monitored at one location, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the RFG being burned.
- iii. Performance evaluations for the H<sub>2</sub>S CEMS shall be in accordance with 40 CFR §60.13. The H<sub>2</sub>S CEMS shall meet 40 CFR Part 60, Appendix B, Performance Specification 7, Specifications and Test Procedures for Hydrogen Sulfide Continuous Emissions Monitoring Systems in Stationary Sources; and Appendix F, Quality Assurance Procedures. 40 CFR Part 60, Appendix A, Method 11 shall be used in conducting any relative accuracy test audit (RATA).

- iv. Cylinder Gas Audits (CGA) shall be conducted on a quarterly basis in accordance with 40 CFR Part 60, Appendix F, Section 5.1.2. Since performance specification test procedures are only intended for the initial test of the H<sub>2</sub>S CEMS, RATAs need not be performed on an annual basis, unless requested by the Department of Health; or there is a significant change or performance deficiency of the CEMS.
- v. Calibration Drift (CD) assessments shall be performed on a daily basis pursuant to 40 CFR Part 60, Appendix F, Section 4.1.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.105)<sup>1</sup>

### 3. Sulfur Content in the Fuel

The sulfur content of the fuel oil to be fired shall be tested in accordance with the most current American Society for Testing and Materials (ASTM) methods. ASTM Method D4294-90 is a suitable alternative to Method D129-64 for determining the sulfur content. The fuel oil sulfur content shall be verified by having a representative sample of each batch of fuel oil analyzed for sulfur content by weight at least once per **month**. Records of the sulfur content of the fuel oil shall be maintained on a **monthly** basis.

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

### 4. Visible Emissions (V.E.)

- a. The permittee shall conduct **monthly** (*calendar month*) V.E. observations for each equipment subject to opacity limitations in accordance with 40 CFR Part 60, Appendix A, Method 9 or by use of a Ringelmann's chart as provided. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
- b. The permittee shall conduct **annually** (*calendar year*) V.E. observations for each equipment subject to opacity limits by a certified reader in accordance with 40 CFR Part 60, Appendix A, Method 9. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
- c. Upon written request and justification, the Department of Health may waive the requirements for the **annual** V.E. observations. The waiver request is to be submitted prior to the required test and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior tests indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the source have not changed since the previous **annual** V.E.

observations. The annual V.E. observations shall not be waived for more than two consecutive years.

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

5. The permittee shall record the amount of fuel oil in gallons fired by the vacuum unit charge heater H175 on a monthly and rolling twelve (12) month basis.

(Auth.: HAR §11-60.1-3, §11-60.1-11)

6. The permittee shall maintain a file of all measurements and monitoring data, including the continuous monitoring system performance evaluations; continuous monitoring system calibration checks; adjustments and maintenance performed on the monitoring 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, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7)<sup>1</sup>

7. All records, including supporting information, shall be true, accurate, and maintained at the facility for at least five (5) years from the date of the monitoring sample, 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 in a permanent form suitable for inspection and made available to the Department of Health or their representatives upon request.

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

### **Section E. Notification and Reporting Requirements**

#### 1. Excess Emissions

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

- i. The magnitude of excess emissions computed in accordance with 40 CFR §60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions;
- ii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the vacuum unit charge heater H175. The nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted, shall also be reported;

- iii. The date and time identifying each period during which the continuous emissions monitoring system was inoperative except for zero and span checks. The nature of each system repair or adjustment shall be described; and
- iv. The report shall so state if no excess emissions have occurred. Also, the report shall so state if the continuous emissions monitoring system operated properly during the period and was not subject to any repairs or adjustments except zero and span checks.

- b. All reports shall be postmarked by the **30th day following the end of each semi-annual calendar period**. The enclosed **Excess Emissions and Monitoring System Performance Summary Report** form or an equivalent form shall also be submitted in addition to the excess emissions and monitoring systems performance report.
- c. Excess emissions shall be defined as any rolling 3-hour period during which the average concentration of H<sub>2</sub>S in RFG, as measured by the continuous emissions monitoring system, exceeds 230 mg/dscm (0.10 gr/dscf).
- d. Excess emissions indicated by the continuous emissions monitoring system shall be considered violations of the applicable emission and concentration limits for the purposes of the permit.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7, §60.105)<sup>1</sup>

- 2. 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 exceedances 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: Opacity Exceedances** or an equivalent form shall be used.
  - b. Any fuel analysis conducted by the permittee or permittee's laboratory during the reporting period showing the sulfur content of the fuel.
  - c. Average fuel oil consumption of the vacuum unit charge heater H175 in gal/hr on a monthly and rolling twelve (12) month basis. The enclosed **Monitoring Report Form: Fuel Consumption** 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 §11-60-24)<sup>2</sup>

3. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. The enclosed **Annual Emissions Report Form: Refinery Equipment - Fuel Consumption** or an equivalent form, shall be used in reporting fuel usage.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

4. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Condition 16, 17, and 24, respectively. These notifications shall include, but not be limited to:

- a. Intent to shutdown air pollution control equipment for necessary scheduled maintenance;
- b. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and
- c. Permanent discontinuance of construction, modification, relocation or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

5. The permittee shall report in writing **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 preventative measures taken. Corrective actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

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

6. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to

HAR §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 be submitted within **ninety (90) days** after the end of each calendar year, and shall be signed and dated by a responsible official. 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.

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)

7. **At least thirty (30) calendar days prior** to the following events, the permittee shall notify the Department of Health in writing of :
  - a. Conducting a performance specification test on the CEMS. The testing date shall be in accordance with the performance test date identified in 40 CFR §60.13.
  - b. Conducting a source performance test as required by this Attachment, Section F, Testing Requirements.

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

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

1. The permittee shall conduct or cause to be conducted performance tests on the vacuum unit charge heater H175. Performance tests shall be conducted for nitrogen oxides (NO<sub>x</sub> as NO<sub>2</sub>). All performance tests shall be conducted at the maximum expected operating capacity of the vacuum unit charge heater being tested, or at other operating loads as may be specified by the Department of Health. Performance tests shall be conducted on an annual basis or at such times as may be specified by the Department of Health.

**CSP No. 0212-01-C**  
**Attachment II(C)**  
**Page 9 of 10**  
**Issuance Date:**  
**Expiration Date:**

**PROPOSED**

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

2. Performance tests for the emissions of NO<sub>x</sub> shall be conducted using EPA Method 1 to 4 and 7, or EPA approved equivalent methods with prior written approval from the Department of Health.

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

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

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

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

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

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

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

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

(Auth.: HAR §11-60.1-11, §11-60.1-90)

7. **Within sixty (60) days after completion of the performance test**, the permittee shall submit to the Department of Health and U.S. EPA Region 9 (Attention: AIR-3), the test report which shall include the operating conditions of the vacuum unit charge heater at the time of the test, the sulfur analysis of the fuel, the summarized test results, comparative results with the permit emission limits, and other pertinent field and laboratory data.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

8. Upon written request and justification, the Department of Health may waive the requirement for a specific annual source test. The waiver request is to be submitted prior to the required test and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior tests indicating compliance by a wide margin,

documentation of continuing compliance, and further that operations of the source have not changed since the previous source test. The source performance test shall not be waived for more than two consecutive years.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

9. Upon the Department of Health's request, or if a significant change or performance deficiency occurs with the CEMS, performance tests for the H<sub>2</sub>S levels in the RFG shall be conducted and results reported in accordance with the instructions and test methods set forth in 40 CFR §60.106, and Appendix A, Method 11.

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

### **Section G. Agency Notifications**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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

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



**ATTACHMENT II(D): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
DISTILLATE HYDROCRACKER UNIT**

**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 portion of the Covered Source Permit encompasses the following equipment and associated appurtenances of the Distillate Hydrocracker Unit (DHC):
  - a. Hydrocracker Second Stage Charge Heater, ID no. H601
    - i. 40 MMBtu/hr heat input
  - b. Hydrocracker Fractionator Inlet Heater, ID no. H602
    - i. 77 MMBtu/hr heat input
  - c. Hydrocracker First Stage Charge Heater, ID no. H603
    - i. 76 MMBtu/hr heat input

(Auth.: HAR §11-60.1-3)
2. The permittee shall permanently attach an identification tag or nameplate on each piece of equipment which identifies the model number, serial or I.D. number and manufacturer. The identification tag or nameplate shall be attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

**Section B. Applicable Federal Regulations**

1. The hydrocracker second stage charge heater H601, hydrocracker fractionator inlet heater H602, and hydrocracker first stage charge heater H603 are subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 60, New Source Performance Standards (NSPS)
    - i. Subpart A, General Provisions; and
    - ii. Subpart J, Standards of Performance for Petroleum Refineries.

The permittee shall comply with all applicable requirements of these standards, including all emission limits, notification, reporting, monitoring, testing and recordkeeping requirements.

The major requirements of these standards are detailed in the special conditions of this permit.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.1, §60.100)<sup>1</sup>

2. This Covered Source Permit contains conditional requirements from an existing permit issued pursuant to 40 CFR Part 52.21, Prevention of Significant Deterioration of Air Quality.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-132)

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

1. The hydrocracker second stage charge heater H601, hydrocracker fractionator inlet heater H602, and hydrocracker first stage charge heater H603 shall be fired only on refinery fuel gas (RFG) with a hydrogen sulfide (H<sub>2</sub>S) content not to exceed 230 mg/dscm (0.10 gr/dscf).

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.104)<sup>1</sup>

2. Maximum Fuel Consumption

The maximum fuel consumption for the hydrocracker second stage charge heater H601, the hydrocracker fractionator inlet heater H602, and the hydrocracker first stage charge heater H603 combined shall not exceed 130,908 standard cubic feet per hour (scf/hr) of refinery fuel gas (RFG) based on a rolling twelve (12) month average. This maximum fuel consumption limit is based on a RFG high heating value (HHV) of 1,476 Btu/scf. In the event of significant variations in the HHV of the RFG, the maximum fuel consumption limit shall be as follows:

Maximum fuel consumption (scfh) = 193 MMBtu/hr ÷ HHV of RFG (Btu/scf)

(Auth.: HAR §11-60.1-3, §11-60.1-90)

3. Low NO<sub>x</sub> Burners

The permittee shall operate and maintain low NO<sub>x</sub> burners on the hydrocracker fractionator inlet heater H602 and the hydrocracker first stage charge heater H603.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

4. Maximum Emission Limits

The permittee shall not discharge or cause the discharge into the atmosphere emissions of nitrogen oxides in excess of :

- a. 0.23 lb/MMBtu (maximum 2-hour average) for the hydrocracker second stage charge heater H601, and
- b. 0.17 lb/MMBtu (maximum 2-hour average) for the hydrocracker fractionator inlet heater H602 and hydrocracker first stage charge heater H603.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

5. Visible Emissions (V.E.)

For any six (6) minute averaging period, the hydrocracker second stage charge heater H601, hydrocracker fractionator inlet heater H602, and hydrocracker first stage charge heater H603 shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during startup, shutdown, or equipment breakdown, these equipment may exhibit visible emissions greater than twenty (20) percent opacity but not exceeding sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minutes.

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

6. Scrubbing System for Catalyst Regeneration

In the event that the catalyst in the catalytic hydrocracker is regenerated in place, the permittee shall install, operate and maintain a quench mixer to remove SO<sub>2</sub>, NO<sub>x</sub> and CO from exhaust gases produced as a result of catalyst regeneration. A caustic solution shall be injected into the quench mixer to chemically remove these pollutants. The quench mixer shall be operating at all times while catalyst is being regenerated in place.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

7. Vapor Collection System for Process Vessel Turn-arounds

All VOC emissions from any pressurized process vessel designated in this Attachment which occur during depressurization of such vessel, and which would otherwise be emitted to the atmosphere, shall be collected and used for fuel or flared until the pressure in the vessel is below 5 pounds per square inch, gauge. Residual liquids, to the extent possible will be pumped out of the vessel to tankage for reprocessing.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

**Section D. Monitoring and Recordkeeping Requirements**

1. The permittee shall operate and maintain fuel meters to record the amount of RFG fired in

hydrocracker heaters H601, H602 and H603.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

2. Continuous Emissions Monitoring System (CEMS).
  - a. The permittee shall operate and maintain a continuous emissions monitoring system (CEMS) for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in the RFG before being burned in hydrocracker heaters H601, H602 and H603.
  - b. The CEMS shall meet the following requirements:
    - i. The span value for the CEMS is 425 mg/dscm (300 ppmv) H<sub>2</sub>S.
    - ii. All fuel gas combustion devices, including hydrocracker heaters H601, H602 and H603, having a common source of fuel gas may be monitored at one location, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the RFG being burned.
    - iii. Performance evaluations for the H<sub>2</sub>S CEMS shall be in accordance with 40 CFR §60.13. The H<sub>2</sub>S CEMS shall meet 40 CFR Part 60, Appendix B, Performance Specification 7, Specifications and Test Procedures for Hydrogen Sulfide Continuous Emissions Monitoring Systems in Stationary Sources; and Appendix F, Quality Assurance Procedures. 40 CFR Part 60, Appendix A, Method 11 shall be used in conducting any relative accuracy test audit (RATA).
    - iv. Cylinder Gas Audits (CGA) shall be conducted on a quarterly basis in accordance with 40 CFR Part 60, Appendix F, Section 5.1.2. Since performance specification test procedures are only intended for the initial test of the H<sub>2</sub>S CEMS, RATAs need not be performed on an annual basis, unless requested by the Department of Health; or there is a significant change or performance deficiency of the CEMS.
    - v. Calibration Drift (CD) assessments shall be performed on a daily basis pursuant to 40 CFR Part 60, Appendix F, Section 4.1.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.105)<sup>1</sup>

3. Visible Emissions (V.E.)
  - a. The permittee shall conduct **monthly** (*calendar month*) V.E. observations for each equipment subject to opacity limitations in accordance with 40 CFR Part 60, Appendix A, Method 9 or by use of a Ringelmann's chart as provided. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.

- b. The permittee shall conduct **annually** (*calendar year*) V.E. observations for each equipment subject to opacity limits by a certified reader in accordance with 40 CFR Part 60, Appendix A, Method 9. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
- c. Upon written request and justification, the Department of Health may waive the requirements for the **annual** V.E. observations. The waiver request is to be submitted prior to the required test and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior tests indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the source have not changed since the previous **annual** V.E. observations. The annual V.E. observations shall not be waived for more than two consecutive years.

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

4. The permittee shall record the amount of refinery fuel gas (RFG) in standard cubic feet fired by hydrocracker heaters H601, H602 and H603 on a monthly and rolling twelve (12) month basis. The HHV of the RFG fired shall also be recorded.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

5. The permittee shall maintain a file of all measurements and monitoring data, including the continuous monitoring system performance evaluations; continuous monitoring system calibration checks; adjustments and maintenance performed on the monitoring 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, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7)<sup>1</sup>

6. All records, including supporting information, shall be true, accurate, and maintained at the facility for at least five (5) years from the date of the monitoring sample, 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 in a permanent form suitable for inspection and made available to the Department of Health or their representatives upon request.

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

#### **Section E. Notification and Reporting Requirements**

1. Excess Emissions

- a. The permittee shall submit an excess emissions and monitoring systems performance report pursuant to 40 CFR §60.7(c) to the Department of Health for **every semi-annual calendar period**. The report shall include the following:
  - i. The magnitude of excess emissions computed in accordance with 40 CFR §60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions;
  - ii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the hydrocracker second stage charge heater H601, hydrocracker fractionator inlet heater H602, or hydrocracker first stage charge heater H603. The nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted, shall also be reported;
  - iii. The date and time identifying each period during which the continuous emissions monitoring system was inoperative except for zero and span checks. The nature of each system repair or adjustment shall be described; and
  - iv. The report shall so state if no excess emissions have occurred. Also, the report shall so state if the continuous emissions monitoring system operated properly during the period and was not subject to any repairs or adjustments except zero and span checks.
- b. All reports shall be postmarked by the **30th day following the end of each semi-annual calendar period**. The enclosed **Excess Emissions and Monitoring System Performance Summary Report** form or an equivalent form shall also be submitted in addition to the excess emissions and monitoring systems performance report.
- c. Excess emissions shall be defined as any rolling 3-hour period during which the average concentration of H<sub>2</sub>S in RFG, as measured by the continuous emissions monitoring system, exceeds 230 mg/dscm (0.10 gr/dscf).
- d. Excess emissions indicated by the continuous emissions monitoring system shall be considered violations of the applicable emission and concentration limits for the purposes of the permit.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7, §60.105)<sup>1</sup>

2. 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 exceedances 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: Opacity Exceedances** or an equivalent form shall be used.

- b. Average fuel consumption of hydrocracker heaters H601, H602 and H603 in scf/hr on a monthly and rolling twelve (12) month basis. The enclosed **Monitoring Report Form: Fuel Consumption** or and equivalent form shall be used.
- c. The HHV of the RFG burned in the hydrocracker heaters H601, H602 and H603.
- 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 §11-60-24)<sup>2</sup>

### 3. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. The enclosed **Annual Emissions Report Form: Refinery Equipment - Fuel Consumption** or an equivalent form, shall be used in reporting fuel usage.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

4. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Conditions 16, 17 and 24, respectively. These notifications shall include, but not be limited to:
  - a. Intent to shutdown air pollution control equipment for necessary scheduled maintenance;
  - b. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and
  - c. Permanent discontinuance of construction, modification, relocation or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

5. The permittee shall report in writing **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 preventative measures taken. Corrective actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

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

6. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted within **ninety (90) days after the end of each calendar year**, and shall be signed and dated by a responsible official. 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.

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)

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

- a. Conducting a performance specification test on the CEMS. The testing date shall be in accordance with the performance test date identified in 40 CFR §60.13.
- b. Conducting a source performance test as required by this Attachment, Section F, Testing Requirements.

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

**Section F. Testing Requirements**

1. The permittee shall conduct or cause to be conducted performance tests on the hydrocracker second stage charge heater H601, hydrocracker fractionator inlet heater H602, and hydrocracker first stage charge heater H603. Performance tests shall be conducted for nitrogen oxides (NO<sub>x</sub> as NO<sub>2</sub>). All performance tests shall be conducted at the maximum expected operating capacity of the heater being tested, or at other operating loads as may be specified by the Department of Health. Performance tests shall be conducted on an annual basis or at such times as may be specified by the Department of Health.

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

2. Performance tests for the emissions of NO<sub>x</sub> shall be conducted using EPA Method 1 to 4 and 7, or EPA-approved equivalent methods with prior written approval from the Department of Health.

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

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

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

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

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

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

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

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

Department of Health before the tests.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

7. **Within sixty (60) days after completion of the performance test**, the permittee shall submit to the Department of Health and U.S. EPA Region 9 (Attention: AIR-3), the test report which shall include the operating conditions of the vacuum unit charge heater at the time of the

test, the analysis of the fuel, the summarized test results, comparative results with the permit emission limits, and other pertinent field and laboratory data.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

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

(Auth.: HAR §11-60.1-11, §11-60.1-90)

9. Upon the Department of Health's request, or if a significant change or performance deficiency occurs with the CEMS, performance tests for the H<sub>2</sub>S levels in the RFG shall be conducted and results reported in accordance with the instructions and test methods set forth in 40 CFR §60.106, and Appendix A, Method 11.

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

### **Section G. Agency Notifications**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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

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



**ATTACHMENT II(E): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
ASPHALT HEATING AND LOADING**

**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 portion of the Covered Source Permit encompasses the following equipment and associated appurtenances:
  - a. Asphalt Heater, ID no. H801, 33 MMBtu/hr heat input;
  - b. Asphalt Loading Rack.
2. The permittee shall permanently attach an identification tag or nameplate on each piece of equipment which identifies the model number, serial or I.D. number and manufacturer. The identification tag or nameplate shall be attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

**Section B. Applicable Federal Regulations**

1. The asphalt heater H801 is subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 60, New Source Performance Standards (NSPS)
    - i. Subpart A, General Provisions; and
    - ii. Subpart J, Standards of Performance for Petroleum Refineries.
  - b. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT),
    - i. Subpart A, General Provisions; and
    - ii. Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters.

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

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.1, §60.100, §63.1, §63.7490)<sup>1</sup>

**Section C. Operational and Emission Limitations**

1. The asphalt heater H801 shall be fired only on refinery fuel gas (RFG) with a hydrogen sulfide (H<sub>2</sub>S) content not to exceed 230 mg/dscm (0.10 gr/dscf).

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.104)<sup>1</sup>

2. Maximum Emission Limits

The permittee shall not discharge or cause the discharge into the atmosphere emissions of nitrogen oxides, (NO<sub>x</sub> as NO<sub>2</sub>) in excess of 2.73 lb/hr (3-hour average) and 0.155 lb/MMBtu (3-hour average) for the asphalt heater H801.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

3. Visible Emissions (V.E.)

For any six (6) minute averaging period, the asphalt heater H801 shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during startup, shutdown, or equipment breakdown, these equipment may exhibit visible emissions greater than twenty (20) percent opacity but not exceeding sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minutes.

(Auth.: HAR §11-60.1-3, §11-60.1-32, §11-60.1-90, §11-60.1-161; 40 CFR §60.472)<sup>1</sup>

**Section D. Monitoring and Recordkeeping Requirements**

1. The permittee shall operate and maintain a non-resetting fuel meter on the asphalt heater H801 to record the amount of refinery fuel gas fired in the heater. Records shall be maintained on a monthly and annual basis.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

2. Continuous Emissions Monitoring System (CEMS)

- a. The permittee shall operate and maintain a continuous emissions monitoring system (CEMS) for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in the RFG before being burned in the asphalt heater H801.
- b. The CEMS shall meet the following requirements:
  - i. The span value for the CEMS is 425 mg/dscm (300 ppmv) H<sub>2</sub>S;
  - ii. All fuel gas combustion devices, including heater H801, having a common source of fuel gas may be monitored at one location, if monitoring at this location

- accurately represents the concentration of H<sub>2</sub>S in the RFG being burned;
- iii. Performance evaluations for the H<sub>2</sub>S CEMS shall be in accordance with 40 CFR §60.13. The H<sub>2</sub>S CEMS shall meet 40 CFR Part 60, Appendix B, Performance Specification 7, Specifications and Test Procedures for Hydrogen Sulfide Continuous Emissions Monitoring Systems in Stationary Sources; and Appendix F, Quality Assurance Procedures. 40 CFR Part 60, Appendix A, Method 11 shall be used in conducting any relative accuracy test audit (RATA);
  - iv. Cylinder Gas Audits (CGA) shall be conducted on a quarterly basis in accordance with 40 CFR Part 60, Appendix F, Section 5.1.2. Since performance specification test procedures are only intended for the initial test of the H<sub>2</sub>S CEMS, RATAs need not be performed on an annual basis, unless requested by the Department of Health; or there is a significant change or performance deficiency of the CEMS; and
  - v. Calibration Drift (CD) assessments shall be performed on a daily basis pursuant to 40 CFR Part 60, Appendix F, Section 4.1.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.105)<sup>1</sup>

3. Visible Emissions (V.E.)

- a. The permittee shall conduct **monthly** (*calendar month*) V.E. observations for the asphalt heater H801 in accordance with 40 CFR Part 60, Appendix A, Method 9 or by use of a Ringelmann's chart as provided. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
- b. The permittee shall conduct **annually** (*calendar year*) V.E. observations for the asphalt heater H801 by a certified reader in accordance with 40 CFR Part 60, Appendix A, Method 9. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
- c. Upon written request and justification, the Department of Health may waive the requirements for the **annual** V.E. observations. The waiver request is to be submitted prior to the required test and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior tests indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the source have not changed since the previous **annual** V.E. observations. The annual V.E. observations shall not be waived for more than two consecutive years.

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

4. The permittee shall maintain a file of all measurements and monitoring data, including the continuous monitoring system performance evaluations; continuous monitoring system calibration checks; adjustments and maintenance performed on the monitoring 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, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7) <sup>1</sup>

5. All records, including supporting information, shall be true, accurate, and maintained at the facility for at least five (5) years from the date of the monitoring sample, 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 representatives upon request.

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

#### **Section E. Notification and Reporting Requirements**

##### 1. Excess Emissions

- a. The permittee shall submit an excess emissions and monitoring systems performance report pursuant to 40 CFR §60.7(c) to the Department of Health for **every semi-annual calendar period**. The report shall include the following:
  - i. The magnitude of excess emissions computed in accordance with 40 CFR §60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions;
  - ii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the asphalt heater H801. The nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted, shall also be reported;
  - iii. The date and time identifying each period during which the continuous emissions monitoring system was inoperative except for zero and span checks. The nature of each system repair or adjustment shall be described; and
  - iv. The report shall so state if no excess emissions have occurred. Also, the report shall so state if the continuous emissions monitoring system operated properly during the period and was not subject to any repairs or adjustments except zero and span checks.
- b. All reports shall be postmarked by the **30th day following the end of each semi-annual calendar period**. The enclosed **Excess Emissions and Monitoring System**

**Performance Summary Report** form or an equivalent form shall also be submitted in addition to the excess emissions and monitoring systems performance report.

- c. Excess emissions shall be defined as any rolling 3-hour period during which the average concentration of H<sub>2</sub>S in RFG, as measured by the continuous emissions monitoring system, exceeds 230 mg/dscm (0.10 gr/dscf).
- d. Excess emissions indicated by the continuous emissions monitoring system shall be considered violations of the applicable emission and concentration limits for the purposes of the permit.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7, §60.105)<sup>1</sup>

- 2. 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 exceedances 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: Opacity Exceedances** or an equivalent form shall be used.

- b. Any deviations from permit requirements shall be clearly identified.

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

### 3. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. The enclosed **Annual Emissions Report Form: Refinery Equipment - Fuel Consumption** or an equivalent form, shall be used in reporting fuel usage.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

4. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Conditions 16, 17 and 24, respectively. These notifications shall include, but not be limited to:
  - a. Intent to shutdown air pollution control equipment for necessary scheduled maintenance;
  - b. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and
  - c. Permanent discontinuance of construction, modification, relocation or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

5. The permittee shall report in writing **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 preventative measures taken. Corrective actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

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

6. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted within **ninety (90) days** after the end of each calendar year, and shall be signed and dated by a responsible official. 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

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information to determine compliance.

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)

7. **At least thirty (30) calendar days prior** to the following events, the permittee shall notify the Department of Health in writing of:
  - a. Conducting a performance specification test on the CEMS. The testing date shall be in accordance with the performance test date identified in 40 CFR §60.13.
  - b. Conducting a source performance test as required by this Attachment, Section F, Testing Requirements.

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

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

1. The permittee shall conduct or cause to be conducted performance tests on the asphalt heater H801. Performance tests shall be conducted for nitrogen oxides (NO<sub>x</sub> as NO<sub>2</sub>). All performance tests shall be conducted at the maximum expected operating capacity of the source being tested, or at other operating loads as may be specified by the Department of Health. Performance tests shall be conducted on an annual basis or at such times as may be specified by the Department of Health.

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

2. Performance tests for the emissions of nitrogen oxides (NO<sub>x</sub> as NO<sub>2</sub>) shall be conducted using EPA Method 1 to 4 and 7, or EPA-approved equivalent methods with prior written approval from the Department of Health.

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

3. For each run, the refinery gas feed rate in dry standard cubic feet per hour (dscf/hr) shall be provided. The permittee shall document the methodology by which each refinery gas feed rate was determined. The refinery gas shall be sampled and analyzed for the heating value per dscf on the day of the test.

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

4. The performance test shall consist of three (3) separate runs using the applicable test method. For the purpose of determining compliance with an applicable regulation, the

arithmetic mean of the results from the three (3) runs shall apply. For Method 7, each run shall consist of four (4) separate samples collected at approximately 15 minute intervals.

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

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

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

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

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

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

(Auth.: HAR §11-60.1-11, §11-60.1-90)

8. **Within sixty (60) days after completion of the performance test**, the permittee shall submit to the Department of Health and U.S. EPA Region 9 (Attention: AIR-3), the test report which shall include the operating conditions of the vacuum unit charge heater at the time of the test, the analysis of the fuel, the summarized test results, comparative results with the permit emission limits, and other pertinent field and laboratory data.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

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

(Auth.: HAR §11-60.1-11, §11-60.1-90)

10. Upon the Department of Health's request, or if a significant change or performance deficiency occurs with the CEMS, performance tests for the H<sub>2</sub>S levels in the RFG shall be conducted and results reported in accordance with the instructions and test methods set forth in 40 CFR §60.106, and Appendix A, Method 11.

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

**Section G. Agency Notification**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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

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

**ATTACHMENT II(F): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
VISBREAKER UNIT**

**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 portion of the Covered Source Permit encompasses the following equipment and associated appurtenances of the Visbreaker Unit (VBK):

- a. Visbreaker Heater, ID no. H901
  - i. 75 MMBtu/hr heat input
- b. Visbreaker Offgas Treater
- c. Sulfix Storage Tank, TK 913
  - i. Vertical Fixed Roof
  - ii. 6000 gallons capacity
- d. Sulfix Injection Tank, TK 912
  - i. Vertical Fixed Roof
  - ii. 750 gallons capacity

(Auth.: HAR §11-60.1-3)

2. The permittee shall permanently attach an identification tag or nameplate on each piece of equipment which identifies the model number, serial or I.D. number and manufacturer. The identification tag or nameplate shall be attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

**Section B. Applicable Federal Regulations**

1. The visbreaker heater H901 is subject to the provisions of the following federal regulations:

- a. 40 CFR Part 60, New Source Performance Standards (NSPS)
  - i. Subpart A, General Provisions; and
  - ii. Subpart J, Standards of Performance for Petroleum Refineries.

The permittee shall comply with all applicable requirements of these standards, including all emission limits, notification, reporting, monitoring, testing and recordkeeping requirements.

The major requirements of these standards are detailed in the special conditions of this permit.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.1, §60.100) <sup>1</sup>

**Section C. Operational and Emission Limitations**

1. The visbreaker heater shall be fired only on refinery fuel gas (RFG) with a hydrogen sulfide (H<sub>2</sub>S) content not to exceed 230 mg/dscm (0.10 gr/dscf).

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.104) <sup>1</sup>

2. At all times the permittee shall operate and maintain a visbreaker offgas treater to treat mercaptans, carbonyl sulfide and other reduced sulfur compounds generated by the visbreaker. The total of all sulfur compounds in the refinery fuel gas (RFG) burned in the refinery shall not exceed the total sulfur equivalent of 258 ppm.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, 40 CFR §60.104) <sup>1</sup>

3. Maximum Emission Limits

- a. The visbreaker heater shall not discharge or cause the discharge into the atmosphere emissions of nitrogen oxides (as NO<sub>2</sub>) in excess of 0.12 lb/MMBtu.
- b. The visbreaker heater shall not discharge or cause the discharge into the atmosphere emissions of sulfur dioxides (SO<sub>2</sub>) in excess of 20 ppm (dry basis, zero percent excess air).

(Auth.: HAR §11-60.1-3, §11-60.1-90)

4. The visbreaker heater is exempt from a Prevention of Significant Deterioration (PSD) review due to the emissions restrictions listed above. Any relaxation in these limits that results in an emissions increase above the significant PSD threshold will require a full PSD review of the source.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

5. Visible Emissions (V.E.)

For any six (6) minute averaging period, the visbreaker heater shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during startup, shutdown, or equipment breakdown, the visbreaker heater may exhibit visible emissions greater than twenty (20) percent opacity but not exceeding sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minutes.

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

**Section D. Monitoring and Recordkeeping Requirements**

1. Compliance, on a continuous basis, with the sulfur limits imposed in Special Condition No. C.2. of this Attachment shall be determined by total sulfur analysis in the RFG using ASTM methods D5504-94, D5453-93 or other methods approved by the Department of Health. A representative sample of the RFG shall be analyzed a minimum of twice a month to ensure continuing compliance. Records of the total sulfur content of the RFG shall be maintained on a **monthly** basis. Compliance with the total sulfur standard shall be determined by averaging the analytical results obtained throughout the month.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

2. Continuous Emissions Monitoring System (CEMS)

- a. The permittee shall operate and maintain a continuous emission monitoring system (CEMS) for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in the RFG before being burned in the visbreaker heater.
- b. The CEMS shall meet the following requirements:
  - i. The span value for the CEMS is 425 mg/dscm (300 ppmv) H<sub>2</sub>S;
  - ii. All fuel gas combustion devices, including the visbreaker heater, having a common source of fuel gas may be monitored at one location, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the RFG being burned;
  - iii. Performance evaluations for the H<sub>2</sub>S CEMS shall be in accordance with 40 CFR §60.13. The H<sub>2</sub>S CEMS shall meet 40 CFR Part 60, Appendix B, Performance Specification 7, Specifications and Test Procedures for Hydrogen Sulfide Continuous Emissions Monitoring Systems in Stationary Sources; and Appendix F, Quality Assurance Procedures. 40 CFR Part 60, Appendix A, Method 11 shall be used in conducting any relative accuracy test audit (RATA);
  - iv. Cylinder Gas Audits (CGA) shall be conducted on a quarterly basis in accordance with 40 CFR Part 60, Appendix F, Section 5.1.2. Since performance specification test procedures are only intended for the initial test of the H<sub>2</sub>S CEMS, RATAs need not be performed on an annual basis, unless requested by the Department of Health; or there is a significant change or performance deficiency of the CEMS; and
  - v. Calibration Drift (CD) assessments shall be performed on a daily basis pursuant to 40 CFR Part 60, Appendix F, Section 4.1.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.105) <sup>1</sup>

3. Visible Emissions (V.E.)

- a. The permittee shall conduct **monthly** (*calendar month*) V.E. observations for each equipment subject to opacity limitations in accordance with 40 CFR Part 60, Appendix A, Method 9 or by use of a Ringelmann's chart as provided. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive

minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.

- b. The permittee shall conduct **annually** (*calendar year*) V.E. observations for each equipment subject to opacity limits by a certified reader in accordance with 40 CFR Part 60, Appendix A, Method 9. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
- c. Upon written request and justification, the Department of Health may waive the requirements for the **annual** V.E. observations. The waiver request is to be submitted prior to the required test and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior tests indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the source have not changed since the previous **annual** V.E. observations. The annual V.E. observations shall not be waived for more than two consecutive years.

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

4. The permittee shall report any period in which the visbreaker offgas treater is not operating while the visbreaker is in operation, in accordance with Standard Condition No. 17 of Attachment I.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

5. The permittee shall maintain a file containing records of the concentration of hydrogen sulfide in RFG, as measured by the continuous emission monitoring system.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7)<sup>1</sup>

6. The permittee shall maintain a file of all measurements and monitoring data, including the continuous monitoring system performance evaluations; continuous monitoring system calibration checks; adjustments and maintenance performed on the monitoring 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, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7)<sup>1</sup>

7. All records, including supporting information, shall be true, accurate, and maintained at the facility for at least five (5) years from the date of the monitoring sample, 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 in a permanent form suitable for inspection and made available to the Department of Health or

their representatives upon request.

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

### **Section E. Notification and Reporting Requirements**

#### 1. Excess Emissions

- a. The permittee shall submit an excess emissions and monitoring systems performance report pursuant to 40 CFR §60.7(c) to the Department of Health for **every semi-annual calendar period**. The report shall include the following:
  - i. The magnitude of excess emissions computed in accordance with 40 CFR §60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions;
  - ii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the visbreaker heater. The nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted, shall also be reported;
  - iii. The date and time identifying each period during which the continuous emissions monitoring system was inoperative except for zero and span checks. The nature of each system repair or adjustment shall be described; and
  - iv. The report shall so state if no excess emissions have occurred. Also, the report shall so state if the continuous emissions monitoring system operated properly during the period and was not subject to any repairs or adjustments except zero and span checks.
- b. All reports shall be postmarked by the **30th day following the end of each semi-annual calendar period**. The enclosed **Excess Emissions and Monitoring System Performance Summary Report** form or an equivalent form shall also be submitted in addition to the excess emissions and monitoring systems performance report.
- c. Excess emissions shall be defined as any rolling 3-hour period during which the average concentration of H<sub>2</sub>S in RFG, as measured by the continuous emissions monitoring system, exceeds 230 mg/dscm (0.10 gr/dscf).
- d. Excess emissions indicated by the continuous emissions monitoring system shall be considered violations of the applicable emission and concentration limits for the purposes of the permit.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7, §60.105)<sup>1</sup>

2. 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. The average 1-hour H<sub>2</sub>S concentration on a daily, monthly and annual basis. All total sulfur lab results along with a semi-annual average thereof.
- b. Any opacity exceedances 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: Opacity Exceedances** or an equivalent form shall be used.

- c. Any deviations from permit requirements shall be clearly identified.

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

### 3. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. The enclosed **Annual Emissions Report Form: Refinery Equipment - Fuel Consumption** or an equivalent form, shall be used in reporting fuel usage.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

### 4. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Conditions 16, 17 and 24, respectively. These notifications shall include, but not be limited to:

- a. Intent to shutdown air pollution control equipment for necessary scheduled maintenance;
- b. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and
- c. Permanent discontinuance of construction, modification, relocation or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

5. The permittee shall report in writing **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 preventative measures taken. Corrective

actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

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

6. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted within **ninety (90) days after the end of each calendar year**, and shall be signed and dated by a responsible official. 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.

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)

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

- a. Conducting a performance specification test on the CEMS. The testing date shall be in accordance with the performance test date identified in 40 CFR §60.13.

- b. Conducting a source performance test as required by this Attachment, Section F, Testing Requirements.

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

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

1. The permittee shall conduct or cause to be conducted performance tests on the visbreaker heater. Performance tests shall be conducted for nitrogen oxides (NO<sub>x</sub> as NO<sub>2</sub>) and sulfur dioxides (SO<sub>2</sub>) while fired on refinery fuel gas (RFG). All performance tests shall be conducted at the maximum expected operating capacity of the visbreaker heater, 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.

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

2. Performance tests for the emissions of NO<sub>x</sub> and SO<sub>2</sub> shall be conducted using EPA Method 1 to 4, 6 and 7, or EPA-approved equivalent methods with prior written approval from the Department of Health. Performance tests for SO<sub>2</sub> may be conducted at any fuel gas combustion device having a common source of fuel gas.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, 40 CFR §60.105(a)(3))

3. For each run, the emissions of nitrogen oxides (as NO<sub>2</sub>) expressed in lbs/MMBtu shall be determined by the following procedure:

$$E = (C_d F_d)(46.01)(K_1)[(20.9)/(20.9 - \% O_{2d})]$$

Where:

- (a) E = pollutant emission (lb/MMBtu)  
(b) C<sub>d</sub> = pollutant concentration, dry basis (ppmv)  
(c) % O<sub>2d</sub> = oxygen content by volume (expressed as percent), dry basis, as determined by Method 3.  
(d) F<sub>d</sub> = a factor representing a ratio of the volume of dry flue gases generated to the calorific value of the fuel combusted. For the refinery fuel gas, the factor is F<sub>d</sub> = 8740 dscf/MMBtu at standard conditions of 68 °F and 29.92 in. Hg. or the actual value of the F<sub>d</sub> factor may be used as determined by laboratory methods by the permittee.  
(e) K<sub>1</sub> = 2.59 E-09 Conversion Factor (lb-mole/dscf \* MM)

For each run, the emission of sulfur dioxide (SO<sub>2</sub>) expressed in ppm at zero percent excess oxygen shall be determined by the following procedure:

$$C_{adj} = C_{meas} [20.9 / (20.9 - \%O_2)]$$

Where:

$C_{adj}$  = pollutant concentration adjusted zero percent oxygen, ppm or g/dscm

$C_{meas}$  = pollutant concentration measured dry basis, ppm or g/dscm

20.9 = oxygen concentration in air, percent

$\%O_2$  = oxygen concentration measured dry basis, percent

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR 60.106)<sup>1</sup>

4. For each run, the refinery fuel gas feed rate in dry standard cubic feet per hour (dscf/hr) shall be provided. The permittee shall document the methodology by which each refinery gas feed rate was determined. The refinery gas shall be sampled and analyzed for the heating value per dscf on the day of the test. The heater fuel gas firing rate on the basis of HHV in the terms of MMBtu/hr shall be determined and included in the source test report.

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

5. The performance test shall consist of three (3) separate runs using the applicable test method. For the purpose of determining compliance with an applicable regulation, the arithmetic mean of the results from the three (3) runs shall apply. For Method 7, each run shall consist of four (4) separate samples collected at approximately 15 minute intervals.

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

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

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

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

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

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

Department of Health before the tests.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

9. **Within sixty (60) days after completion of the performance test**, the permittee shall submit to the Department of Health and U.S. EPA Region 9 (Attention: AIR-3), the test report which shall include the operating conditions of the visbreaker heater at the time of the test, the

analysis of the fuel, the summarized test results, comparative results with the permit emission limits, and other pertinent field and laboratory data.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

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

(Auth.: HAR §11-60.1-11, §11-60.1-90)

11. Upon the Department of Health's request, or if a significant change or performance deficiency occurs with the CEMS, performance tests for the H<sub>2</sub>S levels in the RFG shall be conducted and results reported in accordance with the instructions and test methods set forth in 40 CFR §60.106, and Appendix A, Method 11.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

### **Section G. Agency Notification**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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

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**Expiration Date:**

**PROPOSED**

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



**ATTACHMENT II(G): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
HYDROGEN GENERATION UNIT**

**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 portion of the Covered Source Permit encompasses the following equipment and associated appurtenances of the Hydrogen Generation Unit (HGU):
  - a. Hydrogen Reformer Furnace, ID no. H2001
    - i. 172.8 MMBtu/hr heat input

(Auth.: HAR §11-60.1-3)
2. The permittee shall permanently attach an identification tag or nameplate on each piece of equipment which identifies the model number, serial or I.D. number and manufacturer. The identification tag or nameplate shall be attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

**Section B. Applicable Federal Regulations**

1. The hydrogen reformer furnace H2001 is subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 60, New Source Performance Standards (NSPS)
    - i. Subpart A, General Provisions; and
    - ii. Subpart J, Standard of Performance for Petroleum Refineries.

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

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.1, §60.100)<sup>1</sup>

2. This Covered Source Permit contains conditional requirements from an existing permit issued pursuant to 40 CFR Part 52.21, Prevention of Significant Deterioration of Air Quality.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-132)

**Section C. Operational and Emission Limitations**

1. The hydrogen reformer furnace H2001 shall be fired only on refinery fuel gas (RFG) with a hydrogen sulfide (H<sub>2</sub>S) content not to exceed 230 mg/dscm (0.10 gr/dscf).

Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.104)<sup>1</sup>

2. Maximum Fuel Consumption

The maximum fuel consumption for the hydrogen reformer furnace H2001 shall not exceed 90,000 standard cubic feet per hour (scf/hr) of refinery fuel gas (RFG) based on a rolling twelve (12) month average. The maximum fuel consumption limit is based on a RFG high heating value (HHV) of 1,476 Btu/scf. In the event of significant variations in the HHV of the RFG, the maximum fuel consumption limit shall be as follows:

Maximum fuel consumption (scf/hr) = 172.8 MMBtu/hr ÷ HHV of RFG (Btu/scf)

(Auth.: HAR §11-60.1-3, §11-60.1-90)

3. Maximum Emission Limits

The hydrogen reformer furnace H2001 shall not discharge or cause the discharge into the atmosphere emissions of the following:

- a. Nitrogen oxides (NO<sub>x</sub> as NO<sub>2</sub>) in excess of 0.20 lb/MMBtu (maximum 2-hour average).
- b. Total suspended particulates (TSP) in excess of 1.4 lb/hr.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

4. Visible Emissions (V.E.)

For any six (6) minute averaging period, the hydrogen reformer furnace H2001 shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during startup, shutdown, or equipment breakdown, the hydrogen reformer furnace may exhibit visible emissions greater than twenty (20) percent opacity but not exceeding sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minutes.

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

**Section D. Monitoring and Recordkeeping Requirements**

1. Excess Oxygen Control Systems

The permittee shall operate and maintain continuous oxygen analyzers to monitor the oxygen content of the combustion gases. The excess oxygen level shall be recorded.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

2. Continuous Emissions Monitoring System (CEMS).

a. The permittee shall operate and maintain a continuous emissions monitoring system (CEMS) for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in the RFG before being burned in the hydrogen reformer furnace H2001.

b. The CEMS shall meet the following requirements:

i. The span value for the CEMS is 425 mg/dscm (300 ppmv) H<sub>2</sub>S.

ii. All fuel gas combustion devices, including the hydrogen reformer furnace H2001, having a common source of fuel gas may be monitored at one location, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the RFG being burned.

iii. Performance evaluations for the H<sub>2</sub>S CEMS shall be in accordance with 40 CFR §60.13. The H<sub>2</sub>S CEMS shall meet 40 CFR Part 60, Appendix B, Performance Specification 7, Specifications and Test Procedures for Hydrogen Sulfide Continuous Emissions Monitoring Systems in Stationary Sources; and Appendix F, Quality Assurance Procedures. 40 CFR Part 60, Appendix A, Method 11 shall be used in conducting any relative accuracy test audit (RATA).

iv. Cylinder Gas Audits (CGA) shall be conducted on a quarterly basis in accordance with 40 CFR Part 60, Appendix F, Section 5.1.2. Since performance specification test procedures are only intended for the initial test of the H<sub>2</sub>S CEMS, RATAs need not be performed on an annual basis, unless requested by the Department of Health; or there is a significant change or performance deficiency of the CEMS.

v. Calibration Drift (CD) assessments shall be performed on a daily basis pursuant to 40 CFR Part 60, Appendix F, Section 4.1.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.105)<sup>1</sup>

3. Visible Emissions (V.E.)

a. The permittee shall conduct **monthly** (*calendar month*) V.E. observations for each

equipment subject to opacity limitations in accordance with 40 CFR Part 60, Appendix A, Method 9 or by use of a Ringelmann's chart as provided. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.

- b. The permittee shall conduct **annually** (*calendar year*) V.E. observations for each equipment subject to opacity limits by a certified reader in accordance with 40 CFR Part 60, Appendix A, Method 9. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
- c. Upon written request and justification, the Department of Health may waive the requirements for the **annual** V.E. observations. The waiver request is to be submitted prior to the required test and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior tests indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the source have not changed since the previous **annual** V.E. observations. The annual V.E. observations shall not be waived for more than two consecutive years.

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

4. The permittee shall record the amount of refinery fuel gas (RFG) in standard cubic feet fired by the hydrogen reformer furnace H2001 on a monthly and rolling twelve (12) month basis. The HHV of the RFG fired shall also be recorded.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

5. The permittee shall maintain a file of all measurements and monitoring data, including the continuous monitoring system performance evaluations; continuous monitoring system calibration checks; adjustments and maintenance performed on the monitoring 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, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7)<sup>1</sup>

6. All records, including supporting information, shall be true, accurate, and maintained at the facility for at least five (5) years from the date of the monitoring sample, 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 in a permanent form suitable for inspection and made available to the Department of Health or their representatives upon request.

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

**Section E. Notification and Reporting Requirements**

1. Excess Emissions

- a. The permittee shall submit an excess emissions and monitoring systems performance report pursuant to 40 CFR §60.7(c) to the Department of Health for **every semi-annual calendar period**. The report shall include the following:
  - i. The magnitude of excess emissions computed in accordance with 40 CFR §60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions;
  - ii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the hydrogen reformer furnace H2001. The nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted, shall also be reported;
  - iii. The date and time identifying each period during which the continuous emissions monitoring system was inoperative except for zero and span checks. The nature of each system repair or adjustment shall be described; and
  - iv. The report shall so state if no excess emissions have occurred. Also, the report shall so state if the continuous emissions monitoring system operated properly during the period and was not subject to any repairs or adjustments except zero and span checks.
- b. All reports shall be postmarked by the **30th day following the end of each semi-annual calendar period**. The enclosed **Excess Emissions and Monitoring System Performance Summary Report** form or an equivalent form shall also be submitted in addition to the excess emissions and monitoring systems performance report.
- c. Excess emissions shall be defined as any rolling 3-hour period during which the average concentration of H<sub>2</sub>S in RFG, as measured by the continuous emissions monitoring system, exceeds 230 mg/dscm (0.10 gr/dscf).
- d. Excess emissions indicated by the continuous emissions monitoring system shall be considered violations of the applicable emission and concentration limits for the purposes of the permit.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7, §60.105)<sup>1</sup>

2. 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 exceedances 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: Opacity Exceedances** or an equivalent form shall be used.

- b. Average fuel consumption of the hydrogen reformer furnace H2001 in scf/hr on a monthly and rolling twelve (12) month basis. The enclosed **Monitoring Report Form: Fuel Consumption** or an equivalent form shall be used.
- c. The HHV of the RFG burned in the hydrogen reformer furnace H2001.
- 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 §11-60-24)<sup>2</sup>

### 3. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. The enclosed **Annual Emissions Report Form: Refinery Equipment - Fuel Consumption** or an equivalent form, shall be used in reporting fuel usage.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

4. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Conditions 16, 17 and 24, respectively. These notifications shall include, but not be limited to:
  - a. Intent to shutdown air pollution control equipment for necessary scheduled maintenance;
  - b. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and
  - c. Permanent discontinuance of construction, modification, relocation or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

5. The permittee shall report in writing **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 preventative measures taken. Corrective actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

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

6. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted within **ninety (90) days** *after the end of each calendar year*, and shall be signed and dated by a responsible official. 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.

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)

7. **At least thirty (30) calendar days prior** to the following events, the permittee shall notify the Department of Health in writing of :
  - a. Conducting a performance specification test on the CEMS. The testing date shall be in

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accordance with the performance test date identified in 40 CFR §60.13.

- b. Conducting a source performance test as required by this Attachment, Section F, Testing Requirements.

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

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

1. The permittee shall conduct or cause to be conducted performance tests on the hydrogen reformer furnace H2001. Performance tests shall be conducted for nitrogen oxides (NO<sub>x</sub> as NO<sub>2</sub>) and total suspended particulates (TSP) while fired on refinery fuel gas (RFG). All tests shall be conducted at the maximum operating capacity of the hydrogen reformer, or at other operating loads as may be specified by the Department of Health. The tests for nitrogen oxides and total suspended particulates shall be conducted on at least an annual basis or at such times as may be specified by the Department of Health.

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

2. Performance tests for the emissions of NO<sub>x</sub> and TSP shall be conducted using EPA Method 1 to 4, 5 and 7, or EPA-approved equivalent methods with prior written approval from the Department of Health.

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

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

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

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

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

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

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

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

(Auth.: HAR §11-60.1-11, §11-60.1-90)

7. **Within sixty (60) days after completion of the performance test**, the permittee shall submit to the Department of Health and U.S. EPA Region 9 (Attention: AIR-3), the test report which shall include the operating conditions of the visbreaker heater at the time of the test, the analysis of the fuel, the summarized test results, comparative results with the permit emission limits, and other pertinent field and laboratory data.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

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

(Auth.: HAR §11-60.1-11, §11-60.1-90)

9. Upon the Department of Health's request, or if a significant change or performance deficiency occurs with the CEMS, performance tests for the H<sub>2</sub>S levels in the RFG shall be conducted and results reported in accordance with the instructions and test methods set forth in 40 CFR §60.106, and Appendix A, Method 11.

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

### **Section G. Agency Notification**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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

<sup>2</sup> The citations to the State Implementation Plan (SIP) identified under a particular condition, indicate that

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the permit condition complies with the specified provision(s) of the SIP.



**ATTACHMENT II(H): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
SULFUR RECOVERY PLANT**

**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 portion of the Covered Source Permit encompasses the following equipment and associated appurtenances of the Sulfur Recovery Plant:
  - a. Claus Sulfur Recovery Unit No. 2 (SRU #2), ID no. BR1371
    - i. 2.5 MMBtu/hr heat input
    - ii. 14 long tons per day (LTPD) capacity without oxygen injection (nominal)
  - b. Claus Sulfur Recovery Unit No. 3 (SRU #3), ID no. BR1381
    - i. 3.9 MMBtu/hr heat input
    - ii. 20 long tons per day (LTPD) capacity without oxygen injection (nominal)
  - c. SCOT Tail Gas Unit, ID no. BR1393
    - i. 1.0 MMBtu/hr heat input
  - d. Tail Gas Incinerator, ID no. H1353
    - i. 3.8 MMBtu/hr heat input
  - e. Tail Gas Incinerator, ID no. H1391
    - i. 4.4 MMBtu/hr heat input
  
2. The permittee shall permanently attach an identification tag or nameplate on each piece of equipment which identifies the model number, serial or I.D. number and manufacturer. The identification tag or nameplate shall be attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-3)

(Auth.: HAR §11-60.1-5, §11-60.1-90)

**Section B. Applicable Federal Regulations**

1. The SRU #2, SRU #3, SCOT Tail Gas Unit, Tail Gas Incinerator H1353, and Tail Gas Incinerator H1391 are subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 60, New Source Performance Standards (NSPS)
    - i. Subpart A, General Provisions; and
    - ii. Subpart J, Standards of Performance for Petroleum Refineries.

The permittee shall comply with all applicable requirements of these standards, including all emission limits, notification, reporting, monitoring, testing and recordkeeping requirements.

The major requirements of these standards are detailed in the special conditions of this permit.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.1, §60.100)<sup>1</sup>

2. This Covered Source Permit contains conditional requirements from an existing permit issued pursuant to 40 CFR Part 52.21, Prevention of Significant Deterioration of Air Quality.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-132)

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

1. Tail Gas Incinerators H1353 and H1391 shall be fired only on refinery fuel gas (RFG) with a hydrogen sulfide (H<sub>2</sub>S) content not to exceed 230 mg/dscm (0.10 gr/dscf) or hydrogen.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.104)<sup>1</sup>

2. The permittee shall operate and maintain SRU #2 and/or SRU #3, and the SCOT Tail Gas Unit to remove hydrogen sulfide contained in the sour offgases from the Sour Water Stripper (SWS) and the Distillate Hydrocracker Unit (DHC), which are treated and concentrated in the Amine Treatment Unit (ATU). In addition, the permittee shall operate and maintain the Tail Gas Incinerator H1391 to oxidize hydrogen sulfide and other reduced sulfur compounds not removed by the SRUs and the SCOT Tail Gas Unit to sulfur dioxide. Tail gas from the Sulfur Recovery Plant (SRP) shall be routed through the SCOT Tail Gas Unit and Tail Gas Incinerator H1391 at all times.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

3. The permittee shall not discharge or cause the discharge into the atmosphere sulfur dioxide (SO<sub>2</sub>) in excess of the following emission limits:

<u>Operating Unit(s) w/ SCOT Tail Gas Unit</u>	<u>Rolling 12-hour average</u>
SRU #3 only without O <sub>2</sub> injection	7.63lb/hr (250 ppm by volume*)
SRU #3 without O <sub>2</sub> injection, plus SRU #2 without O <sub>2</sub> injection	12.97 lb/hr (250 ppm by volume*)
SRU #2 only without O <sub>2</sub> injection	5.34 lb/hr (250 ppm by volume*)

\* At 0% O<sub>2</sub> on a dry basis

- (Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.104)<sup>1</sup>
4. At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the Sulfur Recovery Plant including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Department of Health which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.11)<sup>1</sup>

5. Visible Emissions (V.E.)

For any six (6) minute averaging period, the Tail Gas Incinerators H1353 and H1391 shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during startup, shutdown, or equipment breakdown, the Tail Gas Incinerators H1353 and H1391 may exhibit visible emissions greater than twenty (20) percent opacity but not exceeding sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minutes.

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

6. The SRU #3 and SCOT Tail Gas Unit are exempt from a Prevention of Significant Deterioration (PSD) review and Best Available Control Technology (BACT) analysis due to the operating and emissions restrictions listed above. Any relaxation in these limits that increases the potential to emit above the applicable PSD and Significant Level threshold will require a full PSD and BACT review of the source as though construction had not yet commenced on the source.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

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

1. The permittee shall operate and maintain continuous emission monitoring systems (CEMS) to measure and record the SO<sub>2</sub> emission concentrations and volumetric flow rates of exhaust stack gases from the Tail Gas Incinerator H1391. The systems shall meet EPA performance specifications (40 CFR §60.13 and 40 CFR 60, Appendices B and F).

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.105)<sup>1</sup>

2. Continuous Emission Monitoring System (CEMS) for H<sub>2</sub>S.

- a. The permittee shall operate and maintain a continuous emissions monitoring system (CEMS) for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in the RFG before being burned in Tail Gas Incinerators H1391 and H1353.
- b. The CEMS shall meet the following requirements:
  - i. The span value for the CEMS is 425 mg/dscm (300 ppmv) H<sub>2</sub>S.
  - ii. All fuel gas combustion devices, including the Tail Gas Incinerators H1391 and H1353, having a common source of fuel gas may be monitored at one location, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the RFG being burned.
  - iii. Performance evaluations for the H<sub>2</sub>S CEMS shall be in accordance with 40 CFR §60.13. The H<sub>2</sub>S CEMS shall meet 40 CFR Part 60, Appendix B, Performance Specification 7, Specifications and Test Procedures for Hydrogen Sulfide Continuous Emissions Monitoring Systems in Stationary Sources; and Appendix F, Quality Assurance Procedures. 40 CFR Part 60, Appendix A, Method 11 shall be used in conducting any relative accuracy test audit (RATA).
  - iv. Cylinder Gas Audits (CGA) shall be conducted on a quarterly basis in accordance with 40 CFR Part 60, Appendix F, Section 5.1.2. Since performance specification test procedures are only intended for the initial test of the H<sub>2</sub>S CEMS, RATAs need not be performed on an annual basis, unless requested by the Department of Health; or there is a significant change or performance deficiency of the CEMS.
  - v. Calibration Drift (CD) assessments shall be performed on a daily basis pursuant to 40 CFR Part 60, Appendix F, Section 4.1.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.105)<sup>1</sup>

3. Visible Emissions (V.E.)

- a. The permittee shall conduct **monthly** (*calendar month*) V.E. observations for each equipment subject to opacity limitations in accordance with 40 CFR Part 60, Appendix A, Method 9. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
- b. The permittee shall conduct **annually** (*calendar year*) V.E. observations for each equipment subject to opacity limits by a certified reader in accordance with 40 CFR Part 60, Appendix A, Method 9. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions*

*Form Requirements.*

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

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

4. The permittee shall maintain a file of all measurements and monitoring data, including the continuous monitoring system performance evaluations; continuous monitoring system calibration checks; adjustments and maintenance performed on the monitoring 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, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7)<sup>1</sup>

5. All records, including supporting information, shall be true, accurate, and maintained at the facility for at least five (5) years from the date of the monitoring sample, 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 in a permanent form suitable for inspection and made available to the Department of Health or their representatives upon request.

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

**Section E. Notification and Reporting Requirements**

1. Excess Emissions

- a. The permittee shall submit an excess emissions and monitoring systems performance report pursuant to 40 CFR §60.7(c) to the Department of Health for **every semi-annual calendar period**. The report shall include the following:
  - i. The magnitude of excess emissions computed in accordance with 40 CFR §60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions;
  - ii. The operating status of SRU #3 and SRU #2, and whether O<sub>2</sub> injection was being used;

- iii. Specific identification of each period of excess emissions that occur during startups, shutdowns, and malfunctions of SRU #3 and SRU #2; and each period of excess emissions that occur during malfunctions of the SCOT Tail Gas Unit. The nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted, shall also be reported;
      - iv. The date and time identifying each period during which the continuous emissions monitoring system was inoperative except for zero and span checks. The nature of each system repair or adjustment shall be described; and
      - v. The report shall so state if no excess emissions have occurred. Also, the report shall so state if the continuous emission monitoring system operated properly during the period and was not subject to any repairs or adjustments except zero and span checks.
    - b. All reports shall be postmarked by the **30th day following the end of each semi-annual calendar period**. The enclosed **Excess Emissions and Monitoring System Performance Summary Report** form or an equivalent form shall also be submitted in addition to the excess emissions and monitoring systems performance report.
    - c. Excess emissions shall be defined as follows:
      - i. Any rolling 12-hour period during which the average SO<sub>2</sub> emission concentrations or mass emissions, as measured by the continuous emission monitoring system, exceed the emission limits set forth in Special Condition No. C.3. of this Attachment.
      - ii. Any rolling 3-hour period during which the average concentration of H<sub>2</sub>S in RFG, as measured by the continuous emission monitoring system, exceeds 230 mg/dscm (0.10 gr/dscf).
    - d. Excess emissions indicated by the continuous emission monitoring system shall be considered violations of the applicable emission and concentration limits for the purposes of the permit.
- (Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7, §60.105)<sup>1</sup>
2. 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 exceedances 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: Opacity Exceedances** or an equivalent form shall be used.

- b. Any deviations from permit requirements shall be clearly identified.

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

3. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. The enclosed **Annual Emissions Report Form: Refinery Equipment - Fuel Consumption** or an equivalent form, shall be used in reporting fuel usage.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

4. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Conditions 16, 17 and 24, respectively. These notifications shall include, but not be limited to:

- a. Intent to shutdown air pollution control equipment for necessary scheduled maintenance;
- b. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and
- c. Permanent discontinuance of construction, modification, relocation or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

5. The permittee shall report in writing **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 preventative measures taken. Corrective actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

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

6. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted within **ninety (90) days after the end of each calendar year**, and shall be signed and dated by a responsible official. 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.

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)

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

- a. Conducting a performance specification test on the CEMS. The testing date shall be in accordance with the performance test date identified in 40 CFR §60.13.
- b. Conducting a source performance test as required by this Attachment, Section F, Testing Requirements.

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

**Section F. Testing Requirements**

1. The permittee shall conduct or cause to be conducted performance tests on the SRU #3 and/or SRU #2 with the SCOT Tail Gas Unit and Tail Gas Incinerator H1391. Performance tests shall be conducted for sulfur dioxide (SO<sub>2</sub>). Performance tests shall be conducted on an annual basis or at such times as may be specified by the Department of Health. The tests shall be conducted at maximum or maximum expected capacity, or at other operating loads as may be specified by the Department of Health.

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

2. Performance tests for the emissions of SO<sub>2</sub> shall be conducted using EPA Methods 1-4 and 6. In lieu of the above mentioned test methods, EPA-approved equivalent methods with prior written approval from the Department of Health may be used.

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

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

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

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

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

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

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

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

(Auth.: HAR §11-60.1-11, §11-60.1-90)

7. **Within sixty (60) days after completion of the performance test**, the permittee shall submit to the Department of Health and the U.S. EPA Region 9 (Attention: AIR-3) the test report which shall include the operating conditions of the SRU #2 and/or SRU #3 with the SCOT

Tail Gas Unit, the summarized test results, comparative results with the permit emission limits, and other pertinent field and laboratory data.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

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

(Auth.: HAR §11-60.1-11, §11-60.1-90)

9. Upon the Department of Health's request, or if a significant change or performance deficiency occurs with the CEMS, performance tests for the H<sub>2</sub>S levels in the RFG shall be conducted and results reported in accordance with the instructions and test methods set forth in 40 CFR §60.106, and Appendix A, Method 11.

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

### **Section G. Agency Notification**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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

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

**ATTACHMENT II(I): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
COGENERATION UNIT**

**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 portion of the Covered Source Permit encompasses the following equipment and associated appurtenances:
  - a. Cogeneration Gas Turbine (ID No. TU2301)
    - i. General Electric LM2500
    - ii. 230 MMBtu/hr heat input
    - iii. NO<sub>x</sub> Control Device:  
(1) Water Injection System
  - b. Cogeneration Duct Burner
    - i. 37 MMBtu/hr heat input
  - c. Waste Heat Boiler (heat recovery steam generator) (ID No. SG2301)
  - d. Package Boiler (ID No. SG1103)
    - i. 126 MMBtu/hr heat input
  - e. Boiler (steam generator) (ID No. SG1102)
    - i. 82 MMBtu/hr heat input

(Auth.: HAR §11-60.1-3)
2. The permittee shall permanently attach an identification tag or nameplate on each piece of equipment which identifies the model number, serial or I.D. number and manufacturer. The identification tag or nameplate shall be attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

**Section B. Applicable Federal Regulations**

1. The cogeneration gas turbine TU2301 is subject to the provisions of the following federal regulations:

- a. 40 CFR Part 60, New Source Performance Standards (NSPS)
  - i. Subpart A, General Provisions;
  - ii. Subpart J, Standards of Performance for Petroleum Refineries; and
  - iii. Subpart GG, Standards of Performance for Stationary Gas Turbines.

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

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.1, §60.100, §60.330)<sup>1</sup>

2. The package boiler SG1103 and boiler SG1102 are subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 60, New Source Performance Standards (NSPS)
    - i. Subpart A, General Provisions; and
    - ii. Subpart J, Standards of Performance for Petroleum Refineries.

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

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.1, §60.100)<sup>1</sup>

3. This Covered Source Permit contains conditional requirements from an existing permit issued pursuant to 40 CFR Part 52.21, Prevention of Significant Deterioration of Air Quality.  
  
(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-132)

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

1. Fuel Usage and Specifications
  - a. The gas turbine TU2301 shall be fired on liquid fuel with a sulfur content not to exceed 0.25% by weight.
  - b. The duct burner shall be fired only on refinery fuel gas (RFG) with a hydrogen sulfide (H<sub>2</sub>S) content not to exceed 230 mg/dscm (0.10 gr/dscf).
  - c. The package boiler SG1103 and boiler SG1102 shall be fired only on liquid fuel with a sulfur content not to exceed 0.5% by weight, refinery fuel gas (RFG) with a hydrogen

sulfide (H<sub>2</sub>S) content not to exceed 230 mg/dscm (0.10 gr/dscf), or a combination of both fuels.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-38, §11-60.1-90, §11-60.1-161; 40 CFR §60.104, §60.333)<sup>1</sup>

2. Air Pollution Control Equipment

- a. The permittee shall continuously operate and maintain a water injection system for the control of NO<sub>x</sub> emissions from the gas turbine TU2301. The system shall be fully operational upon startup. The ratio of water to fuel being fired in the gas turbine TU2301 shall not be less than 0.50 lb water/lb fuel.
- b. All emissions from the gas turbine/heat recovery boiler shall be discharged from a stack not less than 40 feet tall.

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

3. Maximum Emission Limits

The permittee shall not discharge or cause the discharge into the atmosphere from the gas turbine TU2301 and package boiler SG1103 exhaust stacks emissions in excess of the following:

- a. Emission Limits for SO<sub>2</sub>
  - i. From the gas turbine TU2301- the more stringent of 58.3 lbs/hr (2-hour average) or 0.27 lbs/MMBtu (2-hour average) without the duct burner or 0.24 lbs/MMBtu (2-hour average) with the duct burner operating.
  - ii. From the package boiler SG1103 - the more stringent of 69.2 lbs/hr (2-hour average) or 0.53 lbs/MMBtu (2-hour average).
- b. Emission Limits for NO<sub>x</sub> (as NO<sub>2</sub>)
  - i. When the gas turbine TU2301 is firing liquid fuel and the duct burner is not in operation, the more stringent of 66.8 lbs/hr (2-hour average) or 0.30 lbs/MMBtu (2-hour average).
  - ii. When the gas turbine TU2301 is firing liquid fuel and the duct burner is in operation, the more stringent of 71.0 lbs/hr (2-hour average) or 0.28 lbs/MMBtu (2-hour average, total heat input).
  - iii. 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).

- iv. 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).
- v. The NO<sub>x</sub> concentrations shall not exceed the standards set forth in 40 CFR §60.332(a)(2). Note: the most stringent application of the NO<sub>x</sub> standard applicable to the Cogeneration Unit is 150 ppm NO<sub>2</sub> on a dry basis at 15% excess oxygen.

c. Emission Limits for CO

- i. From the gas turbine TU2301 - 50.3 lbs/hr (2-hour average)
- 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).

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161; 40 CFR §60.332, §60.333)<sup>1</sup>

4. Operating 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:

$$\text{Maximum fuel consumption (scf/hr)} = 126 \text{ MMBtu/hr} / \text{HHV of RFG (Btu/scf)}$$

- b. The gas turbine TU2301 may be operated utilizing the hot gas bypass stack under the following conditions:
  - i. During periods of startup and shutdown; and
  - ii. During periods when the waste heat boiler cannot be operated due to safety, operational or maintenance concerns if the following conditions are met:
    - (1) A portion of the flue gas continues to exit through the NO<sub>x</sub> continuous emission monitoring system (CEMS) measuring NO<sub>x</sub> concentration, and the CEMS continues to operate;
    - (2) Fuel flow is monitored continuously and the fuel flowmeter calibration is current;
    - (3) Pounds per hour (PPH) NO<sub>x</sub> is calculated using f factors and recorded;
    - (4) PPH NO<sub>x</sub> is calculated using the applicable current water flow, flue gas

- oxygen content and fuel composition;
- (5) Periods when this alternative method is used are reported in excess emissions reports along with all assumptions used and the reason the waste heat boiler could not be operated; and
  - (6) The duct burners are not in use.

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

5. Visible Emissions (V.E.)

For any six (6) minute averaging period, the gas turbine TU2301, package boiler SG1103 and boiler SG1102 shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during start-up, shutdown, or equipment breakdown, the gas turbine, package boiler and boiler may exhibit visible emissions greater than twenty (20) percent opacity but not exceeding sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minutes.

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

6. Gas Turbine Overhaul

Substitution of the General Electric LM2500 engine with an identical LM2500 engine shall be considered routine maintenance to the extent that routine repair/replacement does not meet the definition of modification or reconstruction. This condition shall not be construed as allowing any other engine to be used except a General Electric LM2500 engine with the same emission characteristics as those submitted with the covered source permit application. The replacement unit shall comply with all applicable requirements of the originally permitted unit.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

**Section D. Monitoring and Recordkeeping Requirements**

1. Fuel Consumption Monitoring

- 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  $\pm 5.0$  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)<sup>1</sup>

2. The permittee shall maintain and operate the following continuous monitoring system in the cogeneration gas turbine TU2301 exhaust stack:

A continuous emission monitoring system (CEMS) to measure stack gas NO<sub>x</sub> concentrations and stack flow rates. These parameters shall be used to continuously determine the NO<sub>x</sub> emission rate in terms of lbs per hour. This system shall meet EPA monitoring performance specifications (40 CFR §60.13, 40 CFR Part 60, Appendix B, Performance Specifications and 40 CFR Part 60, Appendix F, Quality Assurance Procedures).

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

3. Continuous Emission Monitoring System (CEMS) for H<sub>2</sub>S

a. The permittee shall operate and maintain a continuous emissions monitoring system (CEMS) for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in the RFG before being burned in the gas turbine TU2301, package boiler SG1103 and boiler SG1102.

b. The CEMS shall meet the following requirements:

i. The span value for the CEMS is 425 mg/dscm (300 ppmv) H<sub>2</sub>S.

ii. All fuel gas combustion devices, including the gas turbine TU2301, package boiler SG1103 and boiler SG1102, having a common source of fuel gas may be monitored at one location, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the RFG being burned.

iii. Performance evaluations for the H<sub>2</sub>S CEMS shall be in accordance with 40 CFR §60.13. The H<sub>2</sub>S CEMS shall meet 40 CFR Part 60, Appendix B, Performance Specification 7, Specifications and Test Procedures for Hydrogen Sulfide Continuous Emissions Monitoring Systems in Stationary Sources; and Appendix F, Quality Assurance Procedures. 40 CFR Part 60, Appendix A, Method 11 shall be used in conducting any relative accuracy test audit (RATA).

iv. Cylinder Gas Audits (CGA) shall be conducted on a quarterly basis in accordance with 40 CFR Part 60, Appendix F, Section 5.1.2. Since performance specification test procedures are only intended for the initial test of the H<sub>2</sub>S CEMS, RATAs need not be performed on an annual basis, unless requested by the Department of Health; or there is a significant change or performance deficiency of the CEMS.

v. Calibration Drift (CD) assessments shall be performed on a daily basis pursuant to 40 CFR Part 60, Appendix F, Section 4.1.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.105)<sup>1</sup>

4. 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 D4294-90 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) <sup>1</sup>

5. Visible Emissions (V.E.)

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

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

6. The permittee shall maintain a file containing records on the following items:

- a. Total quantity of liquid fuel (barrels) fired by the gas turbine TU2301 on a monthly and annual basis;

- b. Total quantity of RFG (million cubic feet) fired by the duct burner on a monthly and annual basis;
- c. 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.
- d. Continuous ratio of water injection rate to fuel being fired in the gas turbine TU2301; and
- e. The sulfur content by weight of the liquid fuel and hydrogen sulfide content of the RFG burned in the gas turbine TU2301, package boiler SG1103 and boiler SG1102 (as applicable).

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

7. The permittee shall maintain a file of all measurements and monitoring data, including the continuous monitoring system performance evaluations; continuous monitoring system calibration checks; adjustments and maintenance performed on the monitoring systems 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, §11-60.1-11, §11-60.1-90, §11-60.1-161, 40 CFR §60.7)<sup>1</sup>

8. All records, including support information, shall be true, accurate, and 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 in permanent form suitable for inspection and made available to the Department of Health or their representatives upon request.

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

### **Section E. Notification and Reporting Requirements**

#### 1. Excess Emissions

- a. The permittee shall submit an excess emissions and monitoring systems performance report pursuant to 40 CFR §60.7(c) to the Department of Health on a **semi-annual calendar period basis** for the average water-to-fuel ratio, average concentration of H<sub>2</sub>S in RFG and average emissions of NO<sub>x</sub>. The report shall include the following:
  - i. The magnitude of excess emissions computed in accordance with 40 CFR

- §60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions;
- ii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the gas turbine TU2301, package boiler SG1103 and boiler SG1102. The nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted, shall also be reported;
  - iii. The date and time identifying each period during which the continuous emissions monitoring system was inoperative except for zero and span checks. The nature of each system repair or adjustment shall be described; and
  - iv. The report shall so state if no excess emissions have occurred. Also, the report shall so state if the continuous emissions monitoring system operated properly during the period and was not subject to any repairs or adjustments except zero and span checks.
- b. All reports shall be postmarked by the **30th day following the end of each respective semi-annual or quarterly calendar period**. The enclosed **Excess Emissions and Monitoring System Performance Summary Report** form or an equivalent form shall also be submitted in addition to the excess emissions and monitoring systems performance report.
- c. Excess emissions shall be defined as follows:
- i. Any 2-hour period during which the average emissions of NO<sub>x</sub>, as measured by the continuous emission monitoring system, exceed the emission limits set forth in Special Condition No. C.3.b. of this Attachment; or
  - ii. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the emission limits set forth in Special Condition No. C.2. of this Attachment; or
  - iii. Any rolling 3-hour period during which the average concentration of H<sub>2</sub>S in RFG, as measured by the continuous emission monitoring system, exceeds 230 mg/dscm (0.10 gr/dscf).
- d. Excess emissions indicated by the continuous emissions monitoring system shall be considered violations of the applicable emission and concentration limits for the purposes of the permit.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161, 40 CFR §60.7, §60.105, §60.334)<sup>1</sup>

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2. 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: Opacity Exceedances** or an equivalent form shall be used.

- b. The sulfur content by weight of the liquid fuel and hydrogen sulfide content of the RFG burned in the gas turbine TU2301, package boiler SG1103 and boiler SG1102 (as applicable).
- 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 §11-60-24<sup>2</sup>)

### 3. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. The enclosed **Annual Emissions Report Form: Refinery Equipment - Fuel Consumption** or an equivalent form, shall be used in reporting fuel usage.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

4. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Conditions 16, 17 and 24, respectively. These notifications shall include, but not be limited to:

- a. Intent to shutdown air pollution control equipment for necessary scheduled maintenance;
- b. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and
- c. Permanent discontinuance of construction, modification, relocation or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-5, §11-60.1-8, §11-60.1-15, §11-60.1-16)

5. The permittee shall report in writing **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 preventative measures taken. Corrective actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

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

#### 6. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted within **ninety (90) days after the end of each calendar year**, and shall be signed and dated by a responsible official. 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.

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)

7. **At least thirty (30) calendar days prior** to the following events, the permittee shall notify the Department of Health in writing of :
- Conducting a performance specification test on the CEMS. The testing date shall be in accordance with the performance test date identified in 40 CFR §60.13.
  - Conducting a source performance test as required by this Attachment, Section F, Testing Requirements.

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

8. Gas Turbine Overhaul
- The permittee shall submit overhaul notifications to the Department of Health at least **twenty-four (24) hours** prior to gas turbine overhaul.
  - Within fifteen (15) days of the complete turbine overhaul**, the permittee shall notify the Department of Health in writing of the actual completion date, and any problems incurred during the overhaul.

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

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

1. 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 (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), 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. The 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)

2. Performance tests for the emissions of NO<sub>x</sub> shall be conducted using EPA Methods 1-4 and 7. Performance tests for the emissions of SO<sub>2</sub> shall be conducted using EPA Methods 1-4 and 8. Performance tests for the emissions of CO shall be conducted using EPA Methods 1-4

and 10. In lieu of the above mentioned test methods, EPA-approved equivalent methods with prior written approval from the Department of Health may be used.

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

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

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

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

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

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

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

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

(Auth.: HAR §11-60.1-11, §11-60.1-90)

7. **Within sixty (60) days after completion of the performance test**, the permittee shall submit to the Department of Health the test report which shall include the operating conditions of the cogeneration gas turbine/duct burner and packaged boiler, the analysis of the fuel, the summarized test results, comparative results with the permit emission limits, and other pertinent field and laboratory data.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

8. Upon written request and justification, the Department of Health may waive the requirement for a specific annual source test. The waiver request is to be submitted prior to the required test and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior tests indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the

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source have not

changed since the previous source test. The annual source test shall not be waived for more than two consecutive years.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

9. Upon the Department of Health's request, or if a significant change or performance deficiency occurs with the CEMS, performance tests for the H<sub>2</sub>S levels in the RFG shall be conducted and results reported in accordance with the instructions and test methods set forth in 40 CFR §60.106, and Appendix A, Method 11.

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

### **Section G. Agency Notification**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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

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

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**ATTACHMENT II(J): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
WASTEWATER TREATMENT UNIT**

**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 portion of the Covered Source Permit encompasses the following equipment and associated appurtenances of the Wastewater Treatment Unit (WTU):
  - a. Oil-Water Separator System
    - i. Gross oil water separator with fixed roof \*
    - ii. API gravity separator with fixed roof \*
    - iii. API effluent tank with fixed roof \*
    - iv. Induced air floatation (IAF) unit with fixed roof \*
  - b. Recovered Oil System
    - i. Oil skimming tank with fixed roof \*
    - ii. IAF float thickener with fixed roof \*
    - iii. Two emulsion breaking tanks with fixed roof \*
    - iv. Two air strippers \*
  - c. Oily Sludge Dewatering System
    - i. Oily sludge tank with fixed roof \*
    - ii. Oily sludge conditioning tank with fixed roof \*
    - iii. Oily sludge filter press
  - d. Air Pollution Control Equipment
    - i. Thermal Oxidizer - 6.5 MMBtu/hr heat input or 3.0 MMBtu/hr heat input
  - e. Activated Sludge System
    - i. Splitter box
    - ii. Two aeration tanks
    - iii. Two biosystem clarifier tanks
    - iv. Clarifier effluent tank
    - v. WTU effluent tank
    - vi. Biosludge thickener tank
    - vii. Aerobic digester tank

- f. Biosludge Dewatering System
  - i. Biosludge storage tank
  - ii. Biosludge conditioning tank
  - iii. Biosludge filter press
- g. Demineralizer Wastewater Treatment
  - i. Demineralizer Waste Clarifier
- h. Wastewater Storage and Collection System
  - i. Three WTU process/stormwater sumps \*
  - ii. One (1) 474,024 gallon (nominal) vertical fixed roof storage tank no. 517
  - iii. One (1) - 302,234 gallon (nominal) external floating roof storage tank identified as Wastewater Equalization Tank 3520
  - iv. One (1) - 616,805 gallon (nominal) external floating roof storage tank identified as Wastewater Equalization Tank 3526

**\*Indicates equipment whose emissions are vented through the thermal oxidizer.**

(Auth.: HAR §11-60.1-3)

- 2. The permittee shall permanently attach an identification tag or nameplate on each piece of equipment which identifies the model number, serial or I.D. number and manufacturer. The identification tag or nameplate shall be attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

## **Section B. Applicable Federal Regulations**

- 1. The Wastewater Treatment Unit (WTU) is subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 60, Standards of Performance of New Stationary Sources (NSPS)
    - i. Subpart A, General Provisions; and
    - ii. Subpart QQQ, Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems.
  - b. 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants (NESHAPS)

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- i. Subpart A, General Provisions; and
- ii. Subpart FF, National Emission Standard for Benzene Waste Operations

- c. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT)
  - i. Subpart A, General Provisions; and
  - ii. Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries.

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

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, §11-60.1-174, §11-60.1-180; 40 CFR §60.1, §60.690, §61.01, §61.340, §63.1, §63.640)<sup>1</sup>

2. The Thermal Oxidizer is subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 60, Standards of Performance of New Stationary Sources (NSPS)
    - i. Subpart A, General Provisions; and
    - ii. Subpart J, Standards of Performance for Petroleum Refineries.

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

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.1, §60.100)<sup>1</sup>

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

1. The wastewater processed by the WTU shall not exceed 233 million gallons per year in any rolling 365 day period as measured at the collective inlet of the gross oil water separator Z3511.

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

2. The following conditions pertain to the oil-water separator system:
  - a. All equipment with a fixed roof equipped with access doors or openings shall be gasketed, latched, and kept closed at all times during operation of the WTU, except during inspection and maintenance.

- b. Any pressure relief valve shall be set at the maximum pressure necessary for proper system operation, but such that the valve will not vent continuously.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.692-3)<sup>1</sup>

3. The following conditions pertain to the thermal oxidizer:

- a. The thermal oxidizer shall be operated to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C.
- b. The thermal oxidizer shall provide a minimum efficiency of 98% destruction of all VOC emissions directed to it.
- c. The thermal oxidizer shall be fired only on refinery fuel gas (RFG) as a supplementary fuel to the VOC stream. The hydrogen sulfide (H<sub>2</sub>S) content of the RFG shall not exceed 230 mg/dscm (0.10 gr/dscf).

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.104, §60.692-5)<sup>1</sup>

4. Except during maintenance of the thermal oxidizer, or during periods when the thermal oxidizer malfunctions, all volatile organic compound (VOC) emissions from the gross oil water separator, API gravity separator, API effluent tank, IAF unit, air strippers, oil skimming tank, IAF float thickener, emulsion breaking tanks, oil sludge tank, oil sludge conditioning tank, and three WTU process/stormwater sumps shall be exhausted through the thermal oxidizer at all times wastewater is being process through the WTU. During scheduled maintenance of the thermal oxidizer, the air strippers shall be shut down and all VOC emissions from the closed vent system shall be redirected to a portable air pollution control device. During periods of thermal oxidizer malfunctions, the VOC emissions from the closed vent system shall be redirected immediately to a portable air pollution control device. If the system cannot be restarted within thirty (30) minutes, the air strippers shall be shut down. The portable air pollution device shall maintain a minimum VOC removal efficiency of 95%.

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

5. The closed vent system of the WTU facility shall be operated with no detectable VOC emissions, measuring less than 500 ppm above background. The closed vent system encompasses the portion of the WTU facility that is not open to the atmosphere. It includes the gross oil water separator, API gravity separator, oil skimming tank, IAF unit, air strippers, and the associated piping, connections, and flow inducing devices that transport gas or vapor from the emission sources to the thermal oxidizer.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.692-5)<sup>1</sup>

6. A pressure indicator shall be operated and maintained at the outlet vent stream of the gross

oil water separator, API gravity separator, oil skimming tank, IAF unit, and each air stripper to ensure that the VOC vapors are being routed to the thermal oxidizer. The pressure indicator shall be in the vent stream at the nearest feasible point to the control device inlet, but before being combined with other vent streams.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.692-5)<sup>1</sup>

7. The normal operating pressure for each pressure indicator associated with the gross oil water separator, API gravity separator, oil skimming tank, IAF unit, and the two air strippers which all exhaust to the thermal oxidizer shall be maintained in order to facilitate detection of abnormal flow of the VOC vapors.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

8. All gauging and sampling devices for the closed vent system shall be gas-tight, except when gauging or sampling is taking place.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.692-5)<sup>1</sup>

9. When emissions from the closed vent system are detected, first effort to initiate repair in eliminating emissions shall be made as soon as practical, but not later than **thirty (30) calendar days** from the date emissions are detected, unless the permittee can demonstrate in writing to the Department of Health that repair is technically impossible without a complete or partial refinery or WTU shutdown. Repair of the necessary equipment shall be made before the end of the next refinery or WTU shutdown.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.692-5)<sup>1</sup>

10. Visible Emissions (V.E.)

For any six (6) minute averaging period, the thermal oxidizer shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during startup, shutdown, or equipment breakdown, the thermal oxidizer may exhibit visible emissions greater than twenty (20) percent opacity but not exceeding sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minutes.

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

11. If annual test results required under NESHAPS, Subpart FF for benzene concentration of the refinery wastewater exceed 10 megagrams per year (Mg/yr), all applicable requirements of Subpart FF, including the provisions for air controls, monitoring, and reporting shall be required for the refinery's wastewater process system.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-173; 40 CFR §61.342)<sup>1</sup>

12. The Department of Health reserves the right to require installation of odor controls, or more stringent air controls if during operation, unanticipated odors which present a nuisance are present, or higher levels of VOC's are emitted due to increased concentration of VOC in the waste stream or nonperforming air controls.

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

**Section D. Monitoring and Recordkeeping Requirements**

1. A continuous flow meter shall be operated and maintained at the inlet of the gross oil water separator to measure and record the gallons per year in any rolling 365-day period the wastewater processed.

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

2. The following conditions pertain to the oil-water separator system:

- a. Roof seals, access doors, and other openings shall be checked by visual inspection semi-annually to ensure that no cracks or gaps occur between the roof and tank wall, and that access doors and other openings are closed and gasketed properly.
- b. When a broken seal or gasket or other problem is identified, first efforts at repair shall be made as soon as possible, but not later than **fifteen (15) calendar days** after it is identified, except if the permittee can demonstrate in writing to the Department of Health that repair is technically impossible without a complete or partial refinery or WTU shutdown. Repair of the necessary equipment shall be made before the end of the next refinery or WTU shutdown.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.692-3)<sup>1</sup>

3. The following conditions pertain to the thermal oxidizer:

- a. A temperature monitoring device equipped with a continuous recorder shall be operated and maintained to measure and record the temperature of the gas stream in the combustion zone of the thermal oxidizer. The temperature monitoring device shall have an accuracy of one (1) percent of the temperature being measured in °C or ± 0.5 °C (± 1.0 °F), whichever is greater.
- b. The permittee shall operate and maintain a continuous emission monitoring system (CEMS) for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in the RFG before being burned in the thermal oxidizer.
  - i. The CEMS shall meet the following requirements:

- (1) The span value for the CEMS is 425 mg/dscm (300 ppmv) H<sub>2</sub>S.
- (2) All fuel gas combustion devices, including the thermal oxidizer, having a common source of fuel gas may be monitored at one location, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the RFG being burned.
- (3) Performance evaluations for the H<sub>2</sub>S CEMS shall be in accordance with 40 CFR §60.13. The H<sub>2</sub>S CEMS shall meet 40 CFR Part 60, Appendix B, Performance Specification 7, Specifications and Test Procedures for Hydrogen Sulfide Continuous Emissions Monitoring Systems in Stationary Sources; and Appendix F, Quality Assurance Procedures. 40 CFR Part 60, Appendix A, Method 11 shall be used in conducting any relative accuracy test audit (RATA).
- (4) Cylinder Gas Audits (CGA) shall be conducted on a quarterly basis in accordance with 40 CFR Part 60, Appendix F, Section 5.1.2. Since performance specification test procedures are only intended for the initial test of the H<sub>2</sub>S CEMS, RATAs need not be performed on an annual basis, unless requested by the Department of Health; or there is a significant change or performance deficiency of the CEMS.
- (5) Calibration Drift (CD) assessments shall be performed on a daily basis pursuant to 40 CFR Part 60, Appendix F, Section 4.1.

- c. The permittee shall operate and maintain a fuel meter to monitor the standard cubic feet (SCF) of RFG fired by the thermal oxidizer.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.105, §60.695)<sup>1</sup>

#### 4. Visible Emissions (V.E.)

- a. The permittee shall conduct **monthly** (*calendar month*) V.E. observations for each equipment subject to opacity limitations in accordance with 40 CFR Part 60, Appendix A, Method 9 or by use of a Ringelmann's chart as provided. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
- b. The permittee shall conduct **annually** (*calendar year*) V.E. observations for each equipment subject to opacity limits by a certified reader in accordance with 40 CFR Part 60, Appendix A, Method 9. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.

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

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-32, §11-60.1-90, SIP §11-60-15, §11-60-24)<sup>2</sup>

5. The permittee shall maintain a file containing records of the following:
  - a. The location, date, and corrective action of the required inspections for the oil-water separator system. Include documentation of any problems identified that could result in VOC emissions.
  - b. The location, date, and corrective action of the required inspections for the closed vent system. Include dates of each measurement of detectable emissions and the corresponding background levels of VOC measured during each detectable emissions. The maximum instrument reading measured during each detectable emission measurement shall also be recorded. Include documentation of any problems identified that could result in detectable VOC emissions.
  - c. Reasons for delays for any repair or correction of an emission point by the specified time, with the expected and actual date of repair completion. The documentation shall be signed by a responsible official (or designee) who determined that the repair could not be done without a refinery or WTU shutdown.
  - d. Dates of startup and shutdown of the closed vent system and thermal oxidizer, and periods where the system is not operated as designed. Document any problems with the flow of VOC's to the thermal oxidizer as determined by the pressure indicators installed in each vent stream to the thermal oxidizer.
  - e. Maintain continuous records of the temperature of the gas stream in the combustion zone of the thermal oxidizer, and record all 3-hour periods of operation during which the average temperature of the gas stream in the combustion zone is more than 28 °C (50 °F) below the required combustion zone temperature.
  - f. Record the concentration of hydrogen sulfide in the RFG, as measured by the continuous monitoring system. The data shall be summarized as an average 1-hour H<sub>2</sub>S concentration on a daily, monthly, and annual basis.
  - g. The SCF of RFG fired in the thermal oxidizer each month.

- h. Test results of benzene concentrations in the wastestreams as required by NESHAPS, Subpart FF.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, §11-60.1-173; 40 CFR §60.107, §60.697, §61.356)<sup>1</sup>

- 6. A copy of the design specifications and drawings for all equipment in the WTU used to comply with the conditions of this permit shall be kept for the life of the WTU in a readily accessible location. The design specifications include:
  - a. Detailed schematics, and piping and instrumentation diagrams;
  - b. Dates and description of any changes in the design specifications;
  - c. Operating and maintenance information on the closed vent system, thermal oxidizer, and the portable air pollution control devices; and
  - d. Documentation that the thermal oxidizer and the closed vent system will achieve the required control efficiency of 98% VOC destruction during the maximum loading conditions, and is capable of achieving a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C (1500 °F). The documentation shall include a general description of the gas streams that enter the thermal oxidizer, including flow and VOC content under varying wastewater level conditions (dynamic and static) and the manufacturer's design specifications for the thermal oxidizer. Include parameter(s) to be monitored which ensures that the thermal oxidizer and closed vent system are operated in conformance with the permit requirements and design specifications. Provide an explanation of the criteria used for selecting the parameters.
  - e. Documentation that the portable air pollution control device used during scheduled maintenance can achieve a minimum VOC removal of 95%.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.697)<sup>1</sup>

- 7. The permittee shall maintain a file of all measurements and monitoring data, including the continuous monitoring system performance evaluations; continuous monitoring system calibration checks; adjustments and maintenance performed on the monitoring systems 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, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7)<sup>1</sup>

- 8. All records, including support information, shall be true, accurate, and 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 representatives upon request.

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

**Section E. Notification and Reporting Requirements**

1. Excess Emissions

- a. The permittee shall submit an excess emissions and monitoring systems performance report pursuant to 40 CFR §60.7(c) to the Department of Health for **every semi-annual calendar period**. The report shall include the following:
  - i. The magnitude of excess emissions computed in accordance with 40 CFR §60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions;
  - ii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the thermal oxidizer. The nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted, shall also be reported;
  - iii. The date and time identifying each period during which the continuous emissions monitoring system was inoperative except for zero and span checks. The nature of each system repair or adjustment shall be described; and
  - iv. The report shall so state if no excess emissions have occurred. Also, the report shall so state if the continuous emissions monitoring system operated properly during the period and was not subject to any repairs or adjustments except zero and span checks.
- b. All reports shall be postmarked by the **30th day following the end of each semi-annual calendar period**. The enclosed **Excess Emissions and Monitoring System Performance Summary Report** form or an equivalent form shall also be submitted in addition to the excess emissions and monitoring systems performance report.
- c. Excess emissions shall be defined as any rolling 3-hour period during which the average concentration of H<sub>2</sub>S in RFG, as measured by the continuous emission monitoring system, exceeds 230 mg/dscm (0.10 gr/dscf).
- d. Excess emissions indicated by the continuous emissions monitoring system shall be considered violations of the applicable emission and concentration limits for the purposes of the permit.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.7, §60.105)<sup>1</sup>

2. 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. For the WTU:
    - i. The gallons of wastewater processed for the semi-annual period and all exceedances measured greater than 233 million gallons per year on a rolling 365-day period as measured by the continuous flow meter.
    - ii. A certification that all required inspections for the oil-water separator system and closed vent system have been performed as required, and the summary of results for these inspections.
  - b. For the thermal oxidizer:
    - i. All 3-hour periods of operation during which the average temperature of the gas stream in the combustion zone of the thermal oxidizer as measured by the temperature monitoring device, is more than 28 °C (50 °F) below the required combustion zone temperature.
    - ii. Amount of RFG fired in the thermal oxidizer on a monthly and semi-annual basis.
  - c. For the closed vent system:
    - i. All instrument readings 500 ppm above background as measured pursuant to Special Condition No. C.5. of this Attachment.
  - d. Any opacity exceedances 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: Opacity Exceedances** or an equivalent form shall be used.
  - e. Any deviations from permit requirements shall be clearly identified.

(Auth.: HAR §11-60.1-3, §11-60.1-32, §11-60.1-90, §11-60.1-161; 40 CFR §60.698, SIP §11-60-24)<sup>2</sup>

3. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. The enclosed **Annual Emissions Report Form: Refinery Equipment - Process Rate** or an equivalent form, shall be used in reporting wastewater process rate.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

4. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Conditions Nos. 16, 17 and 24, respectively. These notifications shall include, but not be limited to:

- a. Intent to shutdown air pollution control equipment for necessary scheduled maintenance;
- b. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and
- c. Permanent discontinuance of construction, modification, relocation or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

5. The permittee shall report in writing **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 preventative measures taken. Corrective actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

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

6. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted within **ninety (90) days after the end of each calendar year**, and shall be signed and dated by a responsible official. 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.

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)

7. The permittee shall notify the Department of Health in writing at least **thirty (30) calendar days** prior to conducting a performance specification test on the CEMS. The testing date shall be in accordance with the performance test date identified in 40 CFR §60.13.

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

8. If compliance with any provisions of this permit is delayed to initiate corrective actions, the notification required under 40 CFR §60.7(a)(4) shall include the estimated date of the next scheduled refinery or WTU shutdown after the date of notification and the reason why compliance with the standards is technically impossible without a refinery or WTU shutdown.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR §60.698)<sup>1</sup>

9. The permittee shall submit the test results of total benzene quantity in the wastestreams pursuant to NESHAPS, Subpart FF, on an annual basis and whenever there is a change in the process generating the wastestream that could cause the total annual benzene quantity from the refinery waste to increase to 10 Mg/yr or more.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-173; 40 CFR §61.357)<sup>1</sup>

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

1. Upon the Department of Health's request, or if a significant change or performance

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deficiency occurs with the CEMS, performance tests for the H<sub>2</sub>S levels in the RFG shall be

conducted and results reported in accordance with the instructions and test methods set forth in 40 CFR §60.106, and Appendix A, Method 11.

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

2. At least **thirty (30) calendar days** prior to performing a test, the permittee shall submit a written performance test plan to the Department of Health that describes the test duration, test locations, test methods, source operation and other parameters 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 or require a retest.

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

3. The permittee shall provide required testing at its own expense. The Department of Health may monitor the tests.

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

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

(Auth.: HAR §11-60.1-11, §11-60.1-90)

5. Inspection and measurement of emissions concentrations for the closed vent system shall be made on a **semi-annual basis**, in accordance with 40 CFR §60.696 and 40 CFR, Appendix A, Method 21. The instrument used for emission measurements shall be calibrated before each use. The calibration gases shall be zero air (less than 10 ppm of hydrocarbon in air), and a mixture of either methane or n-hexane and air at a concentration of approximately, but less than 10,000 ppm methane or n-hexane.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-161; 40 CFR §60.696)<sup>1</sup>

### **Section G. Agency Notification**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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

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

**ATTACHMENT II(K): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
MERCAPTAN TREATMENT UNITS**

**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 portion of the Covered Source Permit encompasses the following equipment and associated appurtenances of the Mercaptan Treatment Units:

- a. Mercaptan Treatment Units.
  - i. LPG Mercaptan Extraction Unit
  - ii. Deisopentanizer (DIP) Overhead Sweetening Unit
  - iii. Deisopentanizer (DIP) Bottoms Sweetening Unit
  - iv. Kerosene Sweetening Unit

(Auth.: HAR §11-60.1-3)

2. The permittee shall permanently attach an identification tag or nameplate on each piece of equipment which identifies the model number, serial or I.D. number and manufacturer. The identification tag or nameplate shall be attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

**Section B. Applicable Federal Regulations**

1. The Mercaptan Treatment Units are subject to the provisions of the following federal regulations:

- a. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT)
  - i. Subpart A , General Provisions; and
  - ii. Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries.

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

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-174; 40 CFR §63.1, §63.640)<sup>1</sup>

**Section C. Operational and Emission Limitations**

1. A flare, incinerator, boiler or process heater shall be used as a control device for the LPG Mercaptan Extraction Unit process vent stream.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

2. If the emission rate of total volatile organic compounds (TOC) discharged from the LPG Mercaptan Extraction Unit process vent is greater than or equal to 33.0 kg/day prior to any control device and prior to discharge into the atmosphere, the provisions of a Group 1 miscellaneous process vent per 40 CFR §63.643 shall be complied with, including any additional monitoring and testing requirements as specified in 40 CFR §63.644 and 40 CFR §63.645.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-174; 40 CFR §63.641)<sup>1</sup>

**Section D. Monitoring and Recordkeeping Requirements**

1. The permittee shall record in a log kept in a readily accessible location for the use in determining exemptions from the requirements of 40 CFR Part 61, Subpart J and V, information as specified in 40 CFR §61.246(i) including:

- a. An analysis demonstrating the design capacity of the process unit, and
- b. An analysis demonstrating that equipment is not in VHAP service.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-173; 40 CFR §61.246)<sup>1</sup>

2. All records, including support information, shall be true, accurate, and 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 in a permanent form suitable for inspection and made available to the Department of Health or their representatives upon request.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-174; 40 CFR §63.654)<sup>1</sup>

**Section E. Notification and Reporting Requirements**

1. If the recalculated emission rate of total volatile organic compounds (TOC) discharged from the LPG Mercaptan Extraction Unit process vent is greater than 33 kg/day, the permittee shall submit a report as specified in 40 CFR §63.654(d), (e), (f), or (h).

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-174; 40 CFR §63.10, §63.654)<sup>1</sup>

2. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. The enclosed **Annual Emissions Report Form: Refinery Equipment - Process Rate** or an equivalent form, shall be used in reporting process emissions.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

3. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Conditions 16, 17 and 24, respectively. These notifications shall include, but not be limited to:

- a. Intent to shutdown air pollution control equipment for necessary scheduled maintenance;
- b. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and
- c. Permanent discontinuance of construction, modification, relocation or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

4. The permittee shall report in writing **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 preventative measures taken. Corrective actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

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

5. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted within **ninety (90) days after the end of each calendar year**, and shall be signed and dated by a responsible official. 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.

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. 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 deviations from permit requirements shall be clearly identified.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

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

1. The testing method to determine the TOC mass flow rate for Special Condition No. C.2. shall be in accordance with 40 CFR §63.645 - Test Methods and procedures for miscellaneous process vents. The TOC mass flow rate shall be calculated on an annual basis, or recalculated, as necessary, whenever process changes are made. Process changes include, but are not limited to, changes in production capacity, production rate, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-174; 40 CFR §63.645)<sup>1</sup>

2. Upon written request and justification, the Department of Health may waive the requirement for a specific annual source test. The waiver request is to be submitted prior to the

**CSP No. 0212-01-C**

**Attachment II(K)**

**Page 5 of 5**

**Issuance Date:**

**Expiration Date:**

**PROPOSED**

required source test and must include documentation justifying such action.

Documentation should include, but is not limited to, the results of the prior test indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the source

have not changed since the previous source test. The source performance test shall not be waived for more than two consecutive years.

(Auth.: HAR §11-60.1-11, §11-60.1-90)

**Section G. Agency Notifications**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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

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

**ATTACHMENT II(L): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
FLARE**

**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 portion of the Covered Source Permit encompasses the following equipment and associated appurtenances:
  - a. Flare (air or steam-assisted)  
  
(Auth.: HAR §11-60.1-3)
2. The permittee shall permanently attach an identification tag or nameplate on each piece of equipment which identifies the model number, serial or I.D. number and manufacturer. The identification tag or nameplate shall be attached to the equipment in a conspicuous location.  
  
(Auth.: HAR §11-60.1-5, §11-60.1-90)

**Section B. Applicable Federal Regulations**

1. The flare is subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 60, New Source Performance Standards (NSPS)
    - i. Subpart A, General Provisions; and
    - ii. Subpart GGG, Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries.
  - b. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT)
    - i. Subpart A, General Provisions; and
    - ii. Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries.

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

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, §11-60.1-174; 40 CFR §60.1, §60.590, §63.1, §63.640)<sup>1</sup>

**Section C. Operational and Emissions Limitations**

1. The maximum sulfur content of any supplementary fuel shall not exceed 2.0 % by weight.  
  
(Auth.: HAR §11-60.1-3, §11-60.1-38, §11-60.1-90)
2. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.  
  
(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, §11-60.1-174; 40 CFR §60.18, §60.592, §63.11, §63.643)<sup>1</sup>
3. The flare shall be operated with a flame present at all times.  
  
(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, §11-60.1-174; 40 CFR §60.18, §60.592, §63.11, §63.643)<sup>1</sup>
4. The net heating value of the gas being combusted must be greater than 300 Btu/scf (11.2 MJ/sm).  
  
(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, §11-60.1-174; 40 CFR §60.18, §60.592, §63.11, §63.643)<sup>1</sup>
5. The flare gas vapor recovery system (VRS) shall recover no less than 85 MMSCF of offgas per any rolling twelve (12) month period.  
  
(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)<sup>1</sup>

**Section D. Monitoring and Recordkeeping Requirements**

1. The permittee shall monitor the flare for visible emissions on a continuous basis. If visible emissions are observed, the permittee shall determine compliance of the flare with Special Condition No. C.2. of this Attachment using 40 CFR Part 60, Appendix A, Reference Method 22. The observation period is 2 hours and shall be used according to Reference Method 22. This test shall be performed as soon as practicable and would be cause for the permittee to take corrective actions.

The permittee shall keep records including the time and date in which visible emissions were observed, the subsequent Method 22 visible emissions test, and the corrective actions taken. Reference Method 22 field records shall be recorded in accordance with 40 CFR Part 60, Appendix A, Method 22, Section 5.2.1.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161, §11-60.1-174;

40 CFR §60.18, §60.592, §63.11, §63.643)<sup>1</sup>

2. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. The thermocouple or other equivalent device shall be periodically maintained to ensure continued compliance.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-161, §11-60.1-174;  
40 CFR §60.18, §60.592, §63.11, §63.643, §63.644)<sup>1</sup>

3. The permittee shall install and maintain a device for recording the amount of offgas being recovered by the flare gas vapor recovery system (VRS).

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90)<sup>1</sup>

4. The permittee shall keep records of the quantity of offgas recovered by the flare gas vapor recovery system (VRS) in MMSCF on a monthly and rolling twelve (12) month basis.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90)<sup>1</sup>

5. All records, including support information, shall be true, accurate, and 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 in a permanent form suitable for inspection and made available to the Department of Health or their representatives upon request.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-174; 40 CFR §63.654)<sup>1</sup>

### **Section E. Notification and Reporting Requirements**

#### 1. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. The enclosed **Annual Emissions Report Form: Refinery Equipment - Process Rate** or an equivalent form, shall be used in reporting flare emissions.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

2. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Conditions 16, 17 and 24, respectively. These notifications shall include, but not be limited to:
  - a. Intent to shutdown air pollution control equipment for necessary scheduled maintenance;
  - b. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and
  - c. Permanent discontinuance of construction, modification, relocation or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

3. The permittee shall report in writing **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 preventative measures taken. Corrective actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

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

4. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted within **ninety (90) days** after the end of each calendar year, and shall be signed and dated by a responsible official. 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.

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)

5. The permittee shall submit **semi-annually** written reports to the Department of Health for monitoring purposes. The report 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. Results of any Method 22 visible emissions test performed. Include the time and date of test and the corrective actions taken.
  - b. The monthly and rolling twelve (12) month quantity of offgas recovered by the flare gas vapor recovery system (VRS) in MMSCF. The **Monitoring Report Form: Flare Gas Vapor Recovery System**, shall be used for reporting the quantity of offgas recovered.
  - c. Any deviations from permit requirements shall be clearly identified.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-174; 40 CFR §63.654)<sup>1</sup>

#### **Section F. Agency Notification**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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

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



**ATTACHMENT II(M): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
PETROLEUM STORAGE TANKS**

**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 portion of the Covered Source Permit encompasses the following equipment and associated appurtenances:
  - a. Eight (8) Crude Oil Storage Tanks
    - i. One (1) - 9,868,877 gallon (nominal) external floating roof storage tank identified as Tank 101;
    - ii. Four (4) - 13,989,087 gallon (nominal) external floating roof storage tanks identified as Tanks 103, 104, 105 and 106;
    - iii. Two (2) - 18,298,590 gallon (nominal) external floating roof storage tanks identified as Tanks 107 and 108;
    - iv. One (1) – 16,140,316 gallon (nominal) external floating roof storage tank identified as Tank 102.
  - b. Seven (7) Recovered Oil/Wastewater Storage Tanks
    - i. One (1) - 1,107,535 gallon (nominal) internal floating roof storage tank identified as Tank 109;
    - ii. One (1) - 2,650,792 gallon (nominal) internal floating roof storage tank identified as Tank 111;
    - iii. One (1) - 2,283,940 gallon (nominal) external floating roof storage tank identified as Tank 902;
    - iv. One (1) - 302,234 gallon (nominal) external floating roof storage tank identified as Wastewater Equalization Tank 3520;
    - v. One (1) - 509,305 gallon (nominal) external floating roof storage tank identified as Recovered Oil Tank 3522;
    - vi. One (1) - 616,805 gallon (nominal) external floating roof storage tank identified as Wastewater Equalization Tank 3526.
    - vii. One (1) - 1,107,535 gallon (nominal) external floating roof storage tank identified as Tank 110.
  - c. Fifteen (15) Naphtha/Gasoline Storage Tanks
    - i. Four (4) - 1,015,085 gallon (nominal) external floating roof storage tanks identified as Tanks 201, 202, 203 and 204;
    - ii. Two (2) - 3,289,626 gallon (nominal) external floating roof storage tanks identified as Tanks 405 and 509;

- iii. One (1) - 2,134,215 gallon (nominal) external floating roof storage tank identified as Tank 406;
  - iv. Two (2) - 2,283,940 gallon (nominal) internal floating roof storage tanks identified as Tanks 407 and 408;
  - v. Two (2) - 1,998,448 gallon (nominal) external floating roof storage tanks identified as Tanks 501 and 502;
  - vi. One (1) - 5,296,298 gallon (nominal) internal floating roof storage tank identified as Tank 510;
  - vii. One (1) - 4,605,476 gallon (nominal) internal floating roof storage tank identified as Tank 605;
  - viii. Two (2) - 3,095,209 gallon (nominal) internal floating roof storage tanks identified as Tanks 610 and 611.
- d. Forty-One (41) Heavy Oil Storage Tanks
- i. One (1) - 2,650,792 gallon (nominal) vertical fixed roof storage tank identified as Tank 112;
  - ii. One (1) - 68,159 gallon (nominal) vertical fixed roof storage tank identified as Tank 200;
  - iii. Four (4) - 1,015,085 gallon (nominal) vertical fixed roof storage tanks identified as Tanks 205, 206, 301 and 302;
  - iv. Two (2) - 1,804,595 gallon (nominal) vertical fixed roof storage tanks identified as Tanks 207 and 303;
  - v. Two (2) - 2,141,194 gallon (nominal) vertical fixed roof storage tanks identified as Tanks 304 and 305;
  - vi. Five (5) - 4,605,476 gallon (nominal) vertical fixed roof storage tanks identified as Tanks 306, 307, 603, 606 and 607;
  - vii. One (1) - 455,942 gallon (nominal) vertical fixed roof storage tank identified as Tank 311;
  - viii. Two (2) - 1,804,595 gallon (nominal) external floating roof storage tanks identified as Tanks 401 and 402;
  - ix. Two (2) - 1,804,595 gallon (nominal) external floating roof storage tanks identified as Tanks 403 and 404;
  - x. Two (2) - 1,998,448 gallon (nominal) external floating roof storage tanks identified as Tanks 503 and 504;
  - xi. Four (4) - 1,998,448 gallon (nominal) vertical fixed roof storage tanks identified as Tanks 505, 506, 507 and 508;
  - xii. One (1) - 5,526,571 gallon (nominal) internal floating roof storage tank identified as Tank 511;
  - xiii. One (1) - 5,168,496 gallon (nominal) vertical fixed roof storage tank identified as Tank 512;
  - xiv. One (1) - 1,265,848 gallon (nominal) vertical fixed roof storage tank identified as Tank 513;
  - xv. Two (2) - 2,968,887 gallon (nominal) vertical fixed roof storage tank identified as Tanks 514 and 515;

- xvi. One (1) - 8,518 gallon (nominal) vertical fixed roof storage tank identified as Tank 516;
- xvii. Two (2) - 2,141,194 gallon (nominal) vertical fixed roof storage tanks identified as Tanks 601 and 602;
- xviii. One (1) - 4,605,476 gallon (nominal) internal floating roof storage tank identified as Tank 604;
- xix. Two (2) - 4,856,228 gallon (nominal) internal floating roof storage tanks identified as Tanks 608 and 609;
- xx. Two (2) - 22,557 gallon (nominal) vertical fixed roof storage tanks identified as Tanks 903 and 905;
- xxi. One (1) - 117,487 gallon (nominal) vertical fixed roof storage tank identified as Tank 1103;
- xxii. One (1) - 230,274 gallon (nominal) internal floating roof storage tank identified as Tank 2301.

(Auth.: HAR §11-60.1-3)

2. The permittee shall permanently attach an identification tag or nameplate on each tank. The identification tag or nameplate shall be attached to the tank in a conspicuous location. Information shall also be made available upon request that identifies the capacity, date of construction, serial number or I.D. and manufacturer of each tank.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

### **Section B. Applicable Federal Regulations**

1. Petroleum storage tanks 106, 406, 510, 407, 408 and 605 are subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 60, New Source Performance Standards (NSPS)
    - i. Subpart A, General Provisions; and
    - ii. Subpart K, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978.

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

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

2. Petroleum storage tank 902 is subject to the provisions of the following federal regulations:

- a. 40 CFR Part 60, New Source Performance Standards (NSPS)
  - i. Subpart A, General Provisions; and
  - ii. Subpart Ka, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984.

The permittee shall comply with all applicable requirements of these standards, including all emission limits, notification, reporting, monitoring, testing and recordkeeping requirements.

The major requirements of these standards are detailed in the special conditions of this permit.

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

3. Petroleum storage tanks 107, 108, 109, 110, 111, 610, 611, 3520, 3522 and 3526 are subject to the provisions of the following federal regulations:

- a. 40 CFR Part 60, New Source Performance Standards (NSPS)
  - i. Subpart A, General Provisions; and
  - ii. Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.

The permittee shall comply with all applicable requirements of these standards, including all emission limits, notification, reporting, monitoring, testing and recordkeeping requirements.

The major requirements of these standards are detailed in the special conditions of this permit.

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

4. Each of the storage tanks identified in Section A of this Attachment are subject to the provisions of the following federal regulations:

- a. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT)
  - i. Subpart A, General Provisions; and
  - ii. Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries.

Compliance Date

For Group 1 storage tanks (petroleum storage tanks 101, 102, 103, 104, 105, 106,

107, 108, 109, 110, 111, 201, 202, 203, 204, 405, 406, 407, 408, 501, 502, 509, 510, 605, 610, 611, 902, 3520, 3522 and 3526), the permittee shall comply with all applicable requirements of these standards, including all emission limits, notification, reporting, monitoring, testing and recordkeeping requirements, at the first tank degassing and cleaning activity after August 18, 1998, or before August 18, 2005, whichever comes first; except for tank 109, which shall already be in compliance with these standards.

The major requirements of these standards are detailed in **Section G - 40 CFR Part 63, Subpart CC Requirements** of this Attachment. Group 1 storage tanks shall comply with Sections C through G below. Group 2 storage tanks (petroleum storage tanks 112, 200, 205, 206, 207, 301, 302, 303, 304, 305, 306, 307, 311, 401, 402, 403, 404, 503, 504, 505, 506, 507, 508, 511, 512, 513, 514, 515, 516, 601, 602, 603, 604, 606, 607, 608, 609, 903, 905, 1103 and 2301) shall comply with Sections C through F below.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-174, 40 CFR §63.1, §63.640, §63.646)<sup>1</sup>

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

1. The petroleum storage tanks identified in Special Condition No. A.1.a. of this Attachment shall only store petroleum liquids with a true vapor pressure of 11.1 psia or less.

(Auth.: HAR §11-60.1-3, §11-60.1-39, §11-60.1-90)

2. The petroleum storage tanks identified in Special Condition No. A.1.b. of this Attachment shall only store petroleum liquids with a true vapor pressure of 11.1 psia or less.

(Auth.: HAR §11-60.1-3, §11-60.1-39, §11-60.1-90)

3. The petroleum storage tanks identified in Special Condition No. A.1.c. of this Attachment shall only store petroleum liquids with a true vapor pressure of 11.1 psia or less.

(Auth.: HAR §11-60.1-3, §11-60.1-39, §11-60.1-90)

4. The petroleum storage tanks identified in Special Condition No. A.1.d. of this Attachment (except for petroleum storage tanks 903 and 905) shall only store petroleum liquids with a true vapor pressure of 1.5 psia or less.

(Auth.: HAR §11-60.1-3, §11-60.1-39, §11-60.1-90)

5. Petroleum Storage Tanks 106, 406, 510, 407, 408 and 605

- a. The true vapor pressure of the petroleum liquid stored shall be maintained below 11.1

psia (76.6 kPa) at all times. Determination of the true vapor pressure shall be done according to an applicable method specified in NSPS, Subpart K.

- b. The petroleum storage tanks shall be equipped with a floating roof which will rest on the surface of the liquid contents and be equipped with a closure seal or closure seals to close the space between the roof edge and the tank wall.

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

6. Petroleum storage tank 902

- a. The true vapor pressure of the petroleum liquid stored shall be maintained below 11.1 psia (76.6 kPa) at all times. Determination of the true vapor pressure shall be done according to an applicable method specified in NSPS, Subpart Ka.

- b. The petroleum storage tank shall be equipped with an external floating roof which will rest on the surface of the liquid contents and be equipped with a primary seal and secondary seal to close the space between the roof edge and the tank wall. The roof is to be floating on the liquid at all times (i.e., off the roof leg supports), except during initial fill and when the tank is completely emptied and subsequently refilled. The process of emptying and refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible. The tank shall meet the following specifications:

- i. The primary seal is to be either a metallic shoe seal, a liquid-mounted seal, or a vapor-mounted seal. Each seal is to meet the following requirements:
  - (1) The accumulated area of gaps between the tank wall and the metallic shoe seal or the liquid-mounted seal shall not exceed 212 cm<sup>2</sup> per meter of tank diameter (10.0 in<sup>2</sup> per ft. of tank diameter) and the width of any portion of any gap shall not exceed 3.81 cm (1.5 in).
  - (2) The accumulated area of gaps between the tank wall and the vapor-mounted seal shall not exceed 21.2 cm<sup>2</sup> per meter of tank diameter (1.0 in<sup>2</sup> per ft. of tank diameter) and the width of any portion of any gap shall not exceed 1.27 cm (0.5 in).
  - (3) One end of the metallic shoe is to extend into the stored liquid and the other end is to extend a minimum vertical distance of 61 cm (24 in) above the stored liquid surface.
  - (4) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.
- ii. The secondary seal is to meet the following requirements:

- (1) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall, except as provided in Special Condition No. C.6.b.ii.(2) of this Attachment.
  - (2) The accumulated area of gaps between the tank wall and the secondary seal used in combination with a metallic shoe or liquid-mounted primary seal shall not exceed 21.2 cm<sup>2</sup> per meter of tank diameter (1.0 in<sup>2</sup> per ft of tank diameter) and the width of any portion of any gap shall not exceed 1.27 cm (0.5 in). There shall be no gaps between the tank wall and the secondary seal used in combination with a vapor-mounted primary seal.
  - (3) There are to be no holes, tears or other openings in the seal or seal fabric.
  - (4) The permittee is exempted from the requirements for secondary seals and the secondary seal gap criteria when performing gap measurements or inspections of the primary seal.
- iii. Each opening in the roof except for automatic bleeder vents and rim space vents is to provide a projection below the liquid surface. Each opening in the roof except for automatic bleeder vents, rim space vents and leg sleeves is to be equipped with a cover, seal or lid which is to be maintained in a closed position at all times (i.e., no visible gap), except when the device is in actual use or as described in Special Condition No. C.6.b.iv. of this Attachment. Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended settings.
- iv. Each emergency roof drain is to be provided with a slotted membrane fabric cover than covers at least 90 percent of the area of the opening.

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

7. Petroleum Storage Tanks 107, 108, 109, 110, 111, 610, 611, 3520, 3522 and 3526
  - a. The true vapor pressure of the volatile organic liquid (VOL) stored shall be maintained below 11.1 psia (76.6 kPa) at all times. Determination of the true vapor pressure shall be done according to an applicable method specified in NSPS, Subpart Kb.
  - b. Petroleum storage tanks 109, 111, 610 and 611 shall each have a fixed roof with an internal floating roof and shall meet the specifications pursuant to 40 CFR Part 60, Section 60.112b(a)(1) consisting of the following:
    - i. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The

internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

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

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

- c. Petroleum storage tanks 107, 108, 110, 3520, 3522 and 3526 shall each have an external floating roof and shall meet the specifications pursuant to 40 CFR Part 60, Section 60.112b(a)(2) consisting of the following:
- i. Each external floating roof shall be equipped with a primary seal and secondary seal to close the space between the wall of the storage tank and roof edge. The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. The primary and secondary seals shall completely cover the annular space between the edge of the floating roof and tank wall in a continuous fashion, except as allowed in 40 CFR Part 60, Section 60.113b(b)(4).
  - ii. Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap), except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.
  - iii. The roof is to be floating on the liquid at all times (i.e., off the roof leg supports), except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

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

8. Each petroleum storage tank identified in Section A of this Attachment shall be equipped with a permanent submerged fill pipe. A submerged fill pipe means a fill pipe the discharged opening of which is entirely submerged when the liquid level is six inches above the bottom of the tank; or when applied to a tank which is loaded from the side, shall mean a fill pipe where the bottom of the discharge opening is no more than eighteen inches above the bottom of the tank.

(Auth.: HAR §11-60.1-3, §11-60.1-39, §11-60.1-90)

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

1. All records, including support information, shall be true, accurate, and 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 representatives upon request.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, § 11-60.1-161, §11-60.1-174, 40 CFR §60.113, §60.115a, §60.115b, §63.646, §63.654)<sup>1</sup>

2. Petroleum Storage Tanks 106, 406, 510, 407, 408 and 605

- a. Records shall be maintained on the petroleum liquid stored, the period of storage, and the maximum true vapor pressure (kPa or psia) of that liquid during the respective storage period. Determination of the maximum true vapor pressure shall be in accordance with 40 CFR Part 60, Section 113(b). Records shall be maintained on a monthly basis.
- b. The internal roof seals for petroleum storage tanks 510, 407, 408 and 605 shall be inspected **periodically** and repaired or replaced as **needed**. *In no case shall the period between inspections exceed two (2) years.* This requirement is only applicable until the tanks have their seals upgraded to MACT standards. Thereafter, the requirements of Section G shall be followed.

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

3. Petroleum Storage Tank 902

- a. Records shall be maintained on the petroleum liquid stored, the period of storage, and the maximum true vapor pressure (kPa or psia) of that liquid during the respective storage period. Determination of the maximum true vapor pressure shall be in accordance with 40 CFR Part 60, Section 115a. Records shall be maintained on a monthly basis.
- b. The permittee shall determine compliance with the specifications in Special Condition No. C.6.b. of this Attachment by determining the gap areas and maximum gap widths between the primary seal and the tank wall and between the secondary seal and the tank wall according to the following frequencies specified below:
  - i. For primary seals, gap measurements shall be performed within **sixty (60) days** of the initial fill with petroleum liquid and at least once every **five (5) years** thereafter. All primary seal inspections or gap measurements which require the removal or dislodging of the secondary seal shall be accomplished as rapidly as possible and the secondary seal shall be replaced as soon as possible.
  - ii. For secondary seals, gap measurements shall be performed within **sixty (60)**

**days** of the initial fill with petroleum liquid and at least once every year thereafter.

iii. If any storage tank is out of service for a period of one year or more, subsequent refilling with petroleum liquid shall be considered initial fill for the purposes of Special Conditions (i) and (ii) above.

c. The permittee shall determine gap widths and gap areas in the primary and secondary seals individually by the procedures in 40 CFR Part 60, Section 60.113a(a)(1)(ii) and (iii), respectively.

d. Records of each gap measurement shall be maintained. Each record shall identify the tank on which the measurement was performed and shall contain the date of the seal gap measurement, and the raw data obtained in the measurement process and the calculation required in Special Condition No. D.3.c. of this Attachment.

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

4. Petroleum Storage Tanks 107, 108, 109, 110, 111, 610, 611, 3520, 3522 and 3526

a. Records showing the dimensions (meters or feet) of the petroleum storage tank and the analysis showing the capacity (cubic meters or cubic feet) of the storage tank shall be maintained for the life of the tank.

b. Records shall be maintained on the type of VOL stored, the period of storage, and the maximum true vapor pressure (kPa or psia) of that VOL during the respective storage period. Determination of the maximum true vapor pressure shall be in accordance with 40 CFR Part 60, Section 116b(e). Records shall be maintained on a monthly basis.

c. Petroleum Storage Tanks 109, 111, 610 and 611

i. Inspections and repairs of the petroleum storage tanks shall be conducted in accordance with 40 CFR Part 60, Section 60.113b(a) as follows:

(1) For storage tanks equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every **twelve (12) months** after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage tank, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the permittee shall repair the items or empty and remove the storage tank from service within **forty-five (45) days**. If a failure that is detected during inspections required in this paragraph cannot be repaired within **forty-five (45) days**, a 30-day extension may be requested from the Department of Health in the inspection report required in 40 CFR

§60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the permittee will take that will assure that the control equipment will be repaired or the tank will be emptied as soon as possible.

- (2) For storage tanks equipped with a double-seal system, visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage tank is emptied and degassed and at least once every **five (5) years**. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage tank with VOL; **or** visually inspect the storage tank as specified in Special Condition No. D.4.c.i.(1) at least once every **twelve (12) months** and as specified in Special Condition No. D.4.c.i.(2) of this Attachment at least once every **ten (10) years**.
  - ii. The permittee shall keep records of each inspection performed as required by 40 CFR Part 60, Section 60.113b(a)(1), (a)(2), (a)(3) and (a)(4). Records shall include the storage tank identification, the date the tank was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).
- d. Petroleum Storage Tanks 107, 108, 110, 3520, 3522 and 3526
- i. The permittee shall determine the gap areas and maximum gap widths between the primary seal and the tank wall and between the secondary seal and the tank wall according to the following frequencies:
    - (1) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the tank or within **sixty (60) days** of the initial fill with VOL and at least **once every five (5) years** thereafter.
    - (2) Measurements of gaps between the tank wall and the secondary seal shall be performed within **sixty (60) days** of the initial fill with VOL and at least **once per year** thereafter.
    - (3) If any of the storage tanks ceases to store VOL for a period of one year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of Special Conditions (1) and (2) above.
  - ii. The permittee shall determine gap widths and areas in the primary and secondary

individually by the procedures in 40 CFR Part 60, Section 60.113b(b)(2)(i) through (iii) and 60.113b(3).

- iii. The permittee shall make necessary repairs or empty the storage tank within **forty-five (45) days** of identification in any inspection for seals not meeting the requirements listed below:
  - (1) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm<sup>2</sup> per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.
    - (a) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.
    - (b) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.
  - (2) The secondary seal is to meet the following requirements:
    - (a) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall, except as provided in 40 CFR Part 60, Section 60.113b(b)(2)(iii).
    - (b) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm<sup>2</sup> per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.
    - (c) There are to be no holes, tears, or other openings in the seal or seal fabric.
- iv. The permittee shall keep a record of each gap measurement performed as required by 40 CFR Part 60, Section 60.113b(b). Each record shall identify the storage tank in which the measurement was performed and shall contain the following:
  - (1) The date of measurement.
  - (2) The raw data obtained in the measurement.
  - (3) The calculations described in 40 CFR Part 60, Section 60.113b(b)2) and (b)(3).
- v. The permittee shall visually inspect the external floating roof, the primary seal,

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secondary seal, and fittings each time the storage tank is emptied and degassed. If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the permittee shall repair the items as

necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage tank with VOL.

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

5. Petroleum Storage Tanks 101, 102, 103, 104, 105, 112, 200, 201, 202, 203, 204, 205, 206, 207, 301, 302, 303, 304, 305, 306, 307, 311, 401, 402, 403, 404, 405, 501, 502, 503, 504, 505, 506, 507, 508, 509, 511, 512, 513, 514, 515, 601, 602, 603, 604, 606, 607, 608, 609, 1103 and 2301.

The permittee shall maintain a record of the petroleum liquid stored, the period of storage, and the maximum true vapor pressure (kPa or psia) of that liquid during the respective storage period. Determination of the maximum true vapor pressure shall be in accordance with an applicable method in 40 CFR Part 60 Subpart K, Ka or Kb. Records shall be maintained on a monthly basis.

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

6. The permittee shall keep readily accessible records showing the dimensions of each storage tank identified in Section A of this Attachment and an analysis showing the capacity of the storage tank. This record shall be kept as long as the storage tank retains Group 1 or Group 2 status and is in operation. If a storage tank is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent for existing sources, a record of any data, assumptions, and procedures used to make this determination shall be retained. The permittee shall use the Group 1 and Group 2 storage vessel definitions in 40 CFR §63.641.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, 40 CFR §63.646, §63.654)<sup>1</sup>

### **Section E. Notification and Reporting Requirements**

#### 1. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. The enclosed **Annual Emissions Report Forms: External/Internal Floating Roof Petroleum Storage Tank, and Fixed Roof Petroleum Storage Tank** or equivalent forms, shall be used in reporting emissions.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

2. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Conditions Nos. 16, 17, and 24, respectively. These notifications shall include, but not be limited to:
  - a. Intent to shutdown air pollution control equipment for necessary scheduled maintenance;
  - b. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedences due to emergencies); and
  - c. Permanent discontinuance of construction, modification, relocation or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

3. The permittee shall report in writing **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 preventative measures taken. Corrective actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

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

4. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted within **ninety (90) days** *after the end of each calendar year*, and shall be signed and dated by a responsible official. 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.

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)

5. Petroleum Storage Tanks 107, 108, 109, 110, 111, 610, 611, 3520, 3522 and 3526

a. Petroleum Storage Tanks 109, 111, 610 and 611

- i. The permittee shall notify the Department of Health in writing at least **thirty (30) days** prior to each time the petroleum storage tank is to be filled or refilled for which an inspection is required pursuant to 40 CFR Part 60, Section 60.113b(a)(1) and (a)(4). If the inspection required by 40 CFR Part 60, Section 60.113b(a)(4) is unplanned and the required **thirty (30) day** advance notice cannot be given, the permittee shall notify the Department of Health at least **seven (7) days** prior to refilling the tank. Notification shall be made by telephone followed immediately by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail, so that the Department of Health receives the notice at least **seven (7) days** prior to the refilling.
- ii. The permittee shall furnish the Department of Health a report within **thirty (30) days** of the following inspections:
  - (1) During the annual visual inspection required by Special Condition No. D.4.c.i.(1) of this Attachment, if any of the conditions described in Special Condition No. D.4.c.i.(1) are detected. Each report shall identify the storage tank, the nature of the defects, and the date the storage tank was emptied or the nature and date the repair was made.
  - (2) After each inspection required by Special Condition No. D.4.c.i.(2) of this Attachment that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in Special Condition No. D.4.c.i.(1) of this Attachment. The report shall identify the storage tank and the reasons it did not meet the specifications of Special Conditions Nos. C.7.b. or D.4.c.i.(2) of this Attachment and list each repair made.

- b. Petroleum Storage Tanks 107, 108, 110, 3520, 3522 and 3526
- i. The permittee shall notify the Department of Health in writing at least **thirty (30) days** prior to the filling or refilling of each storage tank to afford the Department of Health the opportunity to inspect the storage tank prior to refilling. If the inspection required by this paragraph is not planned and the permittee could not have known about the inspection **thirty (30) days** in advance of refilling the tank, the permittee shall notify the Department of Health at least **seven (7) days** prior to the refilling of the storage tank. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned.
- Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Department of Health at least **seven (7) days** prior to the refilling.
- ii. The permittee shall furnish the Department of Health a report within **sixty (60) days** of performing the seal gap measurements required by 40 CFR Part 60, Section 60.113b(b)(1). The report shall contain:
- (1) The date of measurement.
  - (2) The raw data obtained in the measurement.
  - (3) (3) The calculations described in 40 CFR Part 60, Section 60.113b(b)(2) and (b)(3).
- iii. The permittee shall furnish the Department of Health a report within **thirty (30) days** of the inspection, if the seal gap measurement exceeded the limitations specified by 40 CFR Part 60, Section 60.113b(b)(4). The report shall identify the storage tank and contain the information specified in Special Condition No. E.6.b.ii. of this Attachment and the date the tank was emptied or the repairs made and the date of repair. The report shall also contain a **thirty (30) day** extension request if the storage tank cannot be repaired within **forty-five (45) days** and if the storage tank cannot be emptied within **forty-five (45) days**. Such an extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the storage tank will be emptied as soon as possible.
- iv. The permittee shall notify the Department of Health **thirty (30) days** in advance of any gap measurements required by 40 CFR Part 60, Section 60.113b(b)(1) to afford the Department of Health the opportunity to have an observer present.

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

6. 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:
- Type of VOL stored in each storage tank, dates of storage, and maximum true vapor pressure (kPa) of the VOL stored during the respective storage period by month; and
  - Any deviations from permit requirements shall be clearly identified.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

#### **Section F. Agency Notification**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

#### **Section G. 40 CFR Part 63, Subpart CC Requirements**

##### **1. Operational and Emission Limitations**

- Group 1 storage tanks with internal floating roofs (petroleum storage tanks 109, 111, 407, 408, 510, 605, 610 and 611) shall meet the requirements described in Special Condition Nos. C.7.b.i. and C.7.b.ii. of this Attachment.
- Group 1 storage tanks with external floating roofs (petroleum storage tanks 101, 102, 103, 104, 105, 106, 107, 108, 110, 201, 202, 203, 204, 405, 406, 501, 502, 509, 902, 3520, 3522 and 3526) shall meet the requirements described in Special Condition Nos. C.7.c.i. and C.7.c.iii. of this Attachment.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-174; 40 CFR §63.646)<sup>1</sup>

##### **2. Monitoring and Recordkeeping Requirements**

- For the Group 1 storage tanks with internal floating roofs (petroleum storage tanks 109, 111, 407, 408, 510, 605, 610 and 611), the permittee shall demonstrate compliance by complying with the requirements of 40 CFR §63.120(a)(1) through (a)(7) including the following:
  - The permittee shall visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), according to the schedule specified below:

- (1) For storage tanks equipped with a single-seal system, the permittee shall perform the inspections specified below:
  - (a) Visually inspect the internal floating roof and the seal through manholes and roof hatches on the fixed roof at least once every **twelve (12) months** after initial fill, or at least once every **twelve (12) months** after the compliance date specified in Special Condition No. B.4. of this Attachment; and
  - (b) Visually inspect the internal floating roof, the seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage tank is emptied and degassed, and at least once every **ten (10) years** after the compliance date specified in Special Condition No. B.4. of this Attachment.
- (2) For storage tanks equipped with a double-seal system, the permittee shall perform either one of the inspections indicated below:
  - (a) Visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage tank is emptied and degassed and at least once every **five (5) years** after the compliance date specified in Special Condition No. B.4. of this Attachment; **or**
  - (b) Visually inspect the internal floating roof and the secondary seal through manholes and roof hatches on the fixed roof at least once every **twelve (12) months** after initial fill, or at least once every **twelve (12) months** after the compliance date specified in Special Condition No. B.4. of this Attachment, **and**
  - (c) Visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes, and sleeve seals (if any) each time the vessel is emptied and degassed and at least once every **ten (10) years** after the compliance date specified in Special Condition No. B.4. of this Attachment.
- ii. If during the inspections required by Special Condition Nos. G.2.a.i.(1)(a) or G.2.a.i.(2)(b) of this Attachment, the internal floating roof is not resting on the surface of the liquid inside the storage tank and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage tank, the permittee shall repair the items or empty and remove the storage tank from service within **forty-five (45) calendar days**. If a failure that is detected during inspections required by Special Condition Nos. G.2.a.i.(1)(a) or

G.2.a.i.(2)(b) of this Attachment cannot be repaired within **forty-five (45) calendar days** and if the tank cannot be emptied within **forty-five (45) calendar days**, the permittee may utilize up to 2 extensions of up to **thirty (30)** additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the tank will be emptied as soon as practical.

- iii. Except as provided in Special Condition No. G.2.a.iv. of this Attachment, for all the inspections required by Special Condition Nos. G.2.a.i.(1)(b), G.2.a.i.(2)(a), and G.2.a.i.(2)(c) of this Attachment, the permittee shall notify the Department of Health in writing at least **thirty (30) calendar days** prior to the refilling of each storage tank to afford the Department of Health the opportunity to have an observer present.
  - iv. If the inspections required by Special Condition Nos. G.2.a.i.(1)(b), G.2.a.i.(2)(a), and G.2.a.i.(2)(c) of this Attachment is not planned and the permittee could not have known about the inspection **thirty (30) calendar days** in advance of refilling the tank, the permittee shall notify the Department of Health at least **seven (7) calendar days** prior to the refilling of the storage tank. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, the notification including the written documentation may be made in writing and sent so that it is received by the Department of Health at least **seven (7) calendar days** prior to refilling.
  - v. If during the inspections required by Special Condition Nos. G.2.a.i.(1)(b), G.2.a.i.(2)(a), and G.2.a.i.(2)(c) of this Attachment, the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area, the permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage tank with organic HAP.
- b. For Group 1 storage tanks with external floating roofs (petroleum storage tanks 101, 102, 103, 104, 105, 106, 107, 108, 110, 201, 202, 203, 204, 405, 406, 501, 502, 509, 902, 3520, 3522 and 3526), the permittee shall demonstrate compliance by complying with the requirements of 40 CFR §63.120(b)(1) through (b)(10) including the following:
- i. Except as provided in Special Condition No. G.2.b.vii. of this Attachment, the permittee shall determine the gap areas and maximum gap widths between the primary seal and the wall of the storage tank, and the secondary seal and the wall of the storage tank as follows:
    - (1) Within **ninety (90) calendar days** of installation of the secondary seal,

inspection of both the primary and secondary seals; and

- (2) At least **once every five (5) years** for the primary seal and at least **once per year** for the secondary seal thereafter.
- ii. Except as provided in Special Condition No. G.2.b.vii. of this Attachment, the permittee shall determine gap widths and gap areas in the primary and secondary seals (seal gaps) individually by the procedures described below:
    - (1) Seal gaps, if any, shall be measured at one or more floating roof levels when the roof is not resting on the roof leg supports.
    - (2) Seal gaps, if any shall be measured around the entire circumference of the tank in each place where an 0.32 centimeter (1/8 inch) diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the storage tank. The circumferential distance of each such location shall also be measured.
    - (3) The total surface area of each gap described in Special Condition No. G.2.b.ii.(2) of this Attachment shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.
  - iii. The permittee shall add the gap surface area of each gap location for the primary seal and divide the sum by the nominal diameter of the tank. The accumulated area of gaps between the tank wall and the primary seal shall not exceed 212 square centimeters per meter of tank diameter and the width of any portion of any gap shall not exceed 3.81 centimeters (1-1/2 inches).
  - iv. The permittee shall add the gap surface area of each gap location for the secondary seal and divide the sum by the nominal diameter of the tank. The accumulated area of the gaps between the tank wall and the secondary seal shall not exceed 21.2 square centimeters per meter of tank diameter and the width of any portion of any gap shall not exceed 1.27 centimeters (1/2 inch). These seal gap requirements may be exceeded during the measurement of primary seal gaps as required by Special Condition No. G.2.b.i. of this Attachment.
  - v. The primary seal shall meet the following requirements:
    - (1) Where a metallic shoe seal is in use, one end of the metallic shoe shall extend into the stored liquid and the other end shall extend a minimum vertical distance of 61 centimeters (24 inches) above the stored liquid surface.
    - (2) There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

- vi. The secondary seal shall meet the following requirements:
- (1) The secondary seal shall be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall, except as provided in Special Condition No. G.2.b.iv. of this Attachment.
  - (2) There shall be no holes, tears, or other openings in the seal or seal fabric.
- vii. If the permittee determines that it is unsafe to perform the seal gap measurements required in Special Condition No. G.2.b.i. of this Attachment or to inspect the tank to determine compliance with Special Condition No. G.2.b.v. and G.2.b.vi. of this Attachment because the floating roof appears to be structurally unsound and poses an imminent or potential danger to inspecting personnel, the permittee shall comply with one of the following:
- (1) The permittee shall measure the seal gaps or inspect the storage tank no later than **thirty (30) calendar days** after the determination that the roof is unsafe, or
  - (2) The permittee shall empty and remove the storage tank from service no later than **forty-five (45) calendar days** after determining that the roof is unsafe. If the tank cannot be emptied within **forty-five (45) calendar days**, the permittee may utilize up to two extensions of up to **thirty (30) additional calendar days** each. Documentation of a decision to utilize an extension shall include an explanation of why it was unsafe to perform the inspection or seal gap measurement, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the tank will be emptied as soon as practical.
- viii. The permittee shall repair conditions that do not meet the requirements listed in Special Condition Nos. G.2.b.iii., G.2.b.iv., G.2.b.v. and G.2.b.vi. of this Attachment (i.e., failures), no later than **forty-five (45) calendar days** after identification, or shall empty and remove the storage tank from service no later than **forty-five (45) calendar days** after identification. If during seal gap measurements required in Special Condition No. G.2.b.i. of this Attachment or during inspections necessary to determine compliance with Special Condition Nos. G.2.b.v. and G.2.b.vi. of this Attachment a failure is detected that cannot be repaired within **forty-five (45) calendar days** and if the tank cannot be emptied within **forty-five (45) calendar days**, the permittee may utilize up to two extensions of up to **thirty (30) additional calendar days** each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternative storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the tank will be emptied as soon as practical.
- ix. The permittee shall notify the Department of Health in writing **thirty (30) calendar**

**days** in advance of any gap measurements to afford the Department of Health the opportunity to have an observer present.

- x. The permittee shall visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the tank is emptied and degassed.
  - (1) If the external floating roof has defects; the primary seal has holes, tears or other openings in the seal or seal fabric; or the secondary seal has holes, tears or other openings in the seal or seal fabric; the permittee shall repair the items as necessary so that none of the conditions specified above exist before filling or refilling the storage tank with organic HAP.
  - (2) Except as provided below, for all the inspections required above, the permittee shall notify the Department of Health in writing as least **thirty (30) calendar days** prior to filling or refilling each storage tank with organic HAP to afford the Department of Health the opportunity to inspect the storage tank prior to refilling.
  - (3) If the inspections required above is not planned and the permittee could not have known about the inspection **thirty (30) calendar days** in advance of refilling the tank with organic HAP, the permittee shall notify the Department of Health at least **seven (7) calendar days** prior to refilling of the storage tank. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent so that it is received by the Department of Health at least **seven (7) calendar days** prior to the refilling.
- c. For Group 1 storage tanks with internal floating roofs (petroleum storage tanks 109, 111, 407, 408, 510, 605, 610 and 611)
  - i. The permittee shall keep a record that each inspection required by Special Condition No. G.2.a. of this Attachment was performed.
- d. For Group 1 storage tanks with external floating roofs (petroleum storage tanks 101, 102, 103, 104, 105, 106, 107, 108, 110, 201, 202, 203, 204, 405, 406, 501, 502, 509, 902, 3520, 3522 and 3526)
  - i. The permittee shall keep records describing the results of the seal gap measurements made in accordance with Special Condition No. G.2.b. of this Attachment. The records shall include the date of the measurement, the raw data obtained in the measurement, and the calculations described in Special Condition Nos. G.2.b.iii. and G.2.b.iv. of this Attachment.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-174; 40 CFR §63.646)<sup>1</sup>

3. Notification and Reporting Requirements

- a. The permittee shall submit **semi-annually** written reports to the Department of Health. The reports shall be submitted **within sixty (60) days** *after the end of each semi-annual calendar period (January 1 to June 30 and July 1 to December 31)* and shall include the following:
- i. For Group 1 storage tanks with internal floating roofs (petroleum storage tanks 109, 111, 407, 408, 510, 605, 610 and 611)
- (1) Results of each inspection conducted in accordance with Special Condition No. G.2.a. of this Attachment in which a failure is detected in the control equipment. For storage tanks for which annual inspections are required under Special Condition Nos. G.2.a.i.(1)(a) and G.2.a.i.(2)(b) of this Attachment, the following specifications and requirements apply:
- (a) A failure is defined as any time in which the internal floating roof is not resting on the surface of the liquid inside the storage tank and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached from the internal floating roof; or there are holes, tears, or other openings in the seal or seal fabric; or there are visible gaps between the seal and the wall of the storage tank.
- (b) Reports shall include the date of the inspection, identification of each storage tank in which a failure was detected, and a description of the failure. The report shall also describe the nature of and date the repair was made or the date the storage tank was emptied.
- (c) If an extension is utilized in accordance with Special Condition No. G.2.a.ii. of this Attachment, the permittee shall, in the next semi-annual report, identify the tank; include the documentation specified in Special Condition No. G.2.a.ii. of this Attachment; and describe the date the storage tank was emptied and the nature of and date the repair was made.
- (2) For storage tanks for which inspections are required under Special Condition Nos. G.2.a.i.(1)(b), G.2.a.i.(2)(a) or G.2.a.i.(2)(c) of this Attachment (i.e., internal inspections), the following specifications and requirements apply:
- (a) A failure is defined as any time in which the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or seal fabric; or the secondary seal (if one has been installed) has holes, tears or other openings in the seal or the seal fabric; or, for a storage tank that is part of a new source, the gaskets no longer close off the liquid

surface from the atmosphere; or, for a storage tank that is part of a new source, the slotted membrane has more than a 10 percent open area.

- (b) The report shall include the date of the inspection, identification of each storage tank in which a failure was detected, and a description of the failure. The report shall also describe the nature of and date the repair was made.
- ii. Group 1 storage tanks with external floating roofs (petroleum storage tanks 101, 102, 103, 104, 105, 106, 107, 108, 110, 201, 202, 203, 204, 405, 406, 501, 502, 509, 902, 3520, 3522 and 3526)
- (1) Documentation of the results of each seal gap measurement made in accordance with Special Condition No. G.2.b. of this Attachment in which the seal and seal gap requirements of Special Condition Nos. G.2.b.iii., G.2.b.iv., G.2.b.v. or G.2.b.vi. of this Attachment are not met. The documentation shall include the following information:
    - (a) The date of the seal gap measurement;
    - (b) The raw data obtained in the seal gap measurement and the calculations described in Special Condition Nos. G.2.b.iii. and G.2.b.iv. of this Attachment;
    - (c) A description of any seal condition specified in Special Condition Nos. G.2.b.v. or G.2.b.vi. of this Attachment that is not met; and
    - (d) A description of the nature of and date the repair was made, or the date the storage tank was emptied.
  - (2) If an extension is utilized in accordance with Special Condition Nos. G.2.b.vii. or G.2.b.viii. of this Attachment, the permittee shall, in the next semi-annual report, identify the tank; include the documentation specified in Special Condition Nos. G.2.b.vii. or G.2.b.viii. of this Attachment, as applicable; and describe the date the tank was emptied and the nature of and date the repair was made.
  - (3) Documentation of any failures that are identified during the visual inspections required by Special Condition No. G.2.b.x. of this Attachment.
    - (a) A failure is defined as any time in which the external floating roof has defects; or the primary seal has holes or other openings in the seal or the seal fabric; or the secondary seal has holes, tears or other openings in the seal or the seal fabric.
    - (b) Documentation shall include the date of the inspection, identification of each storage tank in which a failure was detected, and a description of the failure. The nature of and the date the repair was made shall also be documented.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, §11-60.1-174; 40 CFR §63.654)<sup>1</sup>

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

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

**ATTACHMENT II(N): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
PROPANE LOAD RACK AND CYLINDER FILLING STATION**

**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 portion of the Covered Source Permit encompasses the following equipment and associated appurtenances:
  - a. One (1) Propane Load Rack with Six (6) Truck Loading Stations consisting of liquid fill lines, vapor equalization lines, emergency shut-off valves, isolation valves, and thermal relief valves.
  - b. One (1) Cylinder Filling Station with Two (2) Cylinder Filling Positions consisting of:
    - i. One (1) 2,000-gallon Odorized Propane Storage Tank;
    - ii. One (1) Transfer Pump; and
    - iii. Associated Piping and shut-off valves.

(Auth.: HAR §11-60.1-3)

2. The permittee shall install an identification tag or name plate on the propane load rack and cylinder filling station which identifies, if applicable, the model no., serial no., capacity, and manufacturer. The identification tag or name plate shall be permanently attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

**Section B. Operational Limitations**

1. The maximum throughput of the propane loadrack shall not exceed 438,000 barrels per rolling twelve (12) month period.

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

2. The maximum throughput of the cylinder filling station shall not exceed 10,000 barrels per rolling twelve (12) month period.

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

3. During filling operations of the trucks or cylinders, the permittee shall act to assure that when the bleed stream goes from vapor to liquid (visible as a white liquid vapor cloud), filling is stopped and the bleed valve is shut.

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

4. The permittee shall maintain the propane load rack and cylinder filling station in good operating condition.

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

**Section C. Monitoring and Recordkeeping Requirements**

1. The permittee shall maintain and operate flow meters to monitor the total throughput (gallons) of the propane load rack and the cylinder filling station.

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

2. Pumps, valves, flanges and other connectors at the propane load rack and cylinder filling station shall be monitored for equipment leaks of VOC as follows:

- a. Pumps, valves, flanges and other connectors shall be monitored for leaks within 5 calendar days by the method specified in 40 CFR §60.485(b) *if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method*;
- b. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected;
- c. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after the leak is detected, except as provided in 40 CFR §60.482-9;
- d. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

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

3. The permittee shall keep records of the following:

- a. Throughput records of the propane load rack and cylinder filling station on a monthly and rolling 12-month basis;
- b. When each leak is detected:
  - i. The instrument and operator identification numbers and the equipment identification number;
  - ii. The date the leak was detected and the dates of each attempt to repair the leak;
  - iii. Repair methods applied in each attempt to repair the leak;
  - iv. "Above 10,000" if the maximum instrument reading measured by the methods specified in 40 CFR §60.485(a) after each repair attempt is equal to or greater than 10,000 ppm;
  - v. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak;
  - vi. The signature of the permittee whose decision it was that repair could not be effected without a process shutdown;

- vii. The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days;
- viii. Dates of process unit shutdown that occur while the equipment is unrepaired; and
- ix. The date of successful repair of the leak.

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

- 4. All records, including support information, shall be true, accurate, and 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 in a permanent form suitable for inspection and made available to the Department of Health or their representatives upon request.

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

#### **Section D. Notification and Reporting Requirements**

##### 1. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. Completion and submittal of the **Monitoring Report Form - Propane Load Rack and Cylinder Filling Station** or an equivalent form may be used to satisfy this requirement for annual emissions reporting.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

- 2. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Conditions Nos. 17 and 24, respectively.
  - a. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedences due to emergencies); and
  - b. Permanent discontinuance of construction, modification, relocation, or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-16, §11-60.1-90)

3. The permittee shall report in writing **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 more frequent monitoring, or could trigger implementation of a corrective action plan.

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

4. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted within **ninety (90) days after the end of each calendar year**, and shall be signed and dated by a responsible official. 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.

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)

5. 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- June 30 and July 1 - December 31)** and shall include the following:

- a. The throughput (barrels) summary of the propane load rack and cylinder filling station

on a monthly and rolling 12-month basis. The enclosed **Monitoring Report Form - Propane Load Rack and Cylinder Filling Station** or an equivalent form shall be used for reporting.

- b. For any leaks found at the propane load rack and cylinder filling station during the reporting period, provide the following information:
  - i. Number of valves and pumps for which leaks were detected;
  - ii. Number of valves and pumps for which leaks were not repaired;
  - iii. The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible; and
  - iv. Dates of process unit shutdowns which occurred within the semi-annual reporting period.
- c. Deviations from permit requirements shall be clearly identified and addressed in these reports.

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

#### **Section E. Agency Notifications**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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

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



**ATTACHMENT II(O): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-C  
MISCELLANEOUS EMISSION SOURCES AND REQUIREMENTS**

**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 portion of the Covered Source Permit encompasses the requirements for miscellaneous emission sources from petroleum refining process units not detailed in the Special Conditions of Attachments II(A) through II(N). Miscellaneous facility-wide requirements are also listed here.

(Auth.: HAR §11-60.1-3)

**Section B. Applicable Federal Regulations**

1. All valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and flanges or other connectors *in VOC service* as defined in §60.481 of 40 CFR Part 60, Subpart VV, at the Crude Distillation Unit (CDU), Vacuum Distillation Unit (VDU), Distillate Hydrocracker Unit (DHC), Asphalt Manufacturing Unit (AMU), Visbreaker Unit (VBK), Mercaptan Treatment Units, Amine Treatment Unit (ATU), Light Ends Recovery Unit (LERU) except for T2501 (Deethanizer) and T2502 (C3/C4 Splitter), Fuel Gas System in the Utilities Area, the Flare Gas Vapor Recovery System, Compressors C103, C602C, C901, C1180 and C2503, Naphtha Hydrotreater (NHT), Catalytic Reformer Unit (CRU), and Hydrogen Generating Unit (HGU) are subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 60, New Source Performance Standards (NSPS)
    - i. Subpart A, General Provisions; and
    - ii. Subpart GGG, Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries.

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

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, 40 CFR §60.1, §60.590)<sup>1</sup>

2. All individual drain systems, as defined in §60.691 of 40 CFR Part 60, Subpart QQQ, and for which construction, modification, or reconstruction is commenced after May 4, 1987, at the Crude Distillation Unit (CDU), Asphalt Manufacturing Unit (AMU), Visbreaker Unit (VBK), Catalytic Reformer Unit (CRU), Light Ends Recovery Unit (LERU), Hydrogen Compressor and Compressor C604 are subject to the provisions of the following federal

regulations:

- a. 40 CFR Part 60, New Source Performance Standards (NSPS)
  - i. Subpart A, General Provisions; and
  - ii. Subpart QQQ, Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems.

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

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, 40 CFR §60.1, §60.690)<sup>1</sup>

3. All pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, flanges and other connectors, product accumulator vessels, control devices or systems intended to operate *in benzene service* as defined in §61.111 of 40 CFR Part 61, Subpart J, are subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 61, National Emission Standard for Hazardous Air Pollutants (NESHAPS)
    - i. Subpart A, General Provisions; and
    - ii. Subpart J, National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene

The permittee shall comply with all applicable requirements of these standards, including all emission limits, notification, reporting, monitoring, testing and recordkeeping requirements. The major requirements of these standards are detailed in the special conditions of this permit. If a source is also subject to the provisions of 40 CFR Part 60, Subpart GGG, the source shall only be required to comply with the above standards.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11.60.1-180, 40 CFR §61.01, §61.110)<sup>1</sup>

4. All pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, or instrumentation systems *in organic hazardous air pollutant service*, as defined in §63.641 of 40 CFR Part 63, Subpart CC, are subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT)
    - i. Subpart A, General Provisions; and
    - ii. Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries.

The permittee shall comply with all applicable requirements of these standards, including all emission limits, notification, reporting, monitoring, testing and recordkeeping requirements.

The major requirements of these standards are detailed in the special conditions of this permit.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11.60.1-174, 40 CFR §63.1, §63.640)<sup>1</sup>

5. The storage and use of flammable substances in this facility is subject to the provisions of 40 CFR Part 68, Chemical Accident Prevention Provisions. The permittee shall comply with all applicable requirements, including the submittal of:
  - a. A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR 68.10(a); or
  - b. As part of the compliance certification submitted pursuant to Attachment I, Standard Condition No. 28, a certification statement that the facility is in compliance with all requirements of 40 CFR 68, including the registration and submission of the Risk Management Plan.

(Auth.: HAR §11-60.1-3, §11-60.1-90, 40 CFR §68)<sup>1</sup>

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

1. All pumps and compressors handling volatile organic compounds having a Reid Vapor Pressure (RVP) of 1.5 pounds per square inch (psi) or greater which can be fitted with mechanical seals shall have mechanical seals or other equipment of equal efficiency for purposes of air pollution control as may be approved by the Department of Health. Pumps and compressors not capable of being fitted with mechanical seals, such as reciprocating pumps, shall be fitted with the best sealing system available for air pollution control given the particular design of pump or compressor as may be approved by the Department of Health.

(Auth.: HAR §11-60.1-3, §11-60.1-41, §11-60.1-90)

2. The permittee shall not cause or allow the emissions of gas streams containing volatile organic compounds from a vapor blowdown system unless these gases are burned by smokeless flares, or abated by an equally effective control device as approved by the Department of Health.

(Auth.: HAR §11-60.1-3, §11-60.1-42, §11-60.1-90)

3. Equipment subject to 40 CFR Part 60, Subpart GGG and/or 40 CFR Part 63, Subpart CC

a. Compressors

- i. Compressors shall be equipped and operated with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in 40 CFR §60.482-1(c), 40 CFR §60.482-3(h) and 40 CFR §60.482-3(i).
- ii. Each compressor seal system as required in Special Condition No. C.3.a.i. of this Attachment shall be as follows:
  - (1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or
  - (2) Equipped with a barrier fluid system that is connected by a closed vent system to a control device that complies with the requirements of 40 CFR §60.482-10.
  - (3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.
- iii. The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.
- iv. A compressor is exempt from the requirements of Special Condition Nos. C.3.a.i. and C.3.a.ii. of this Attachment if it is equipped with a closed vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of 40 CFR §60.482-10, except as provided in Special Condition No. C.3.a.v. of this Attachment.
- v. Any compressor that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by methods specified in 40 CFR §60.485(c) and is tested for compliance initially upon designation, annually, and at other times requested by the Department of Health is exempt from the requirements of Special Condition Nos. C.3.a.i. through C.3.a.iv. and D.2.b.i. and D.2.b.ii. of this Attachment.

b. Pressure Relief Devices in Gas/Vapor Service

- i. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in 40 CFR §60.485(c).
- ii. *After each pressure release*, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of

less than 500 ppm above background, **as soon as practicable**, but no later than 5 calendar days *after the pressure release*, except as provided in Special Condition No. C.3.e. of this Attachment.

- iii. Any pressure relief device is exempt from the requirements of Special Condition Nos. C.3.b.i. and C.3.b.ii. of this Attachment if it is equipped with a closed vent system capable of capturing and transporting leakage from the pressure relief device to a control device that complies with the requirements of 40 CFR §60.482-10.

c. Open-Ended Valves/Lines

- i. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR §60.482-1(c). The cap, blind flange, plug, or second valve shall seal the open end at all times, except during operations requiring process fluid flow through the open-ended valve or line.
- ii. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.
- iii. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with Special Condition No. C.3.c.i. of this Attachment at all other times.

d. Sampling Connection Systems

- i. Each sampling connection system shall be equipped with a closed-purged, closed-loop, or closed-vent system, except as provided in 40 CFR §60.482-1(c).
- ii. Each closed-purged, closed-loop, or closed-vent system shall comply with the following requirements:
  - (1) Return the purged process fluid directly to the process line; or
  - (2) Collect and recycle the purged process fluid to a process; or
  - (3) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of 40 CFR §60.482-10.
  - (4) In situ sampling systems and sampling systems without purges are exempt from the requirements of Special Condition Nos. C.3.d.i. and C.3.d.ii. of this Attachment.

e. Delay of Repair

- i. Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.
- ii. Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.
- iii. Delay of repair for valves will be allowed if:
  - (1) The permittee demonstrates that emissions of purged material resulting from the immediate repair are greater than the fugitive emissions likely to result from the delay of repair, and
  - (2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with the requirements of 40 CFR §60.482-10.
- iv. Delay of repair for pumps will be allowed if:
  - (1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and
  - (2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.
- v. Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, §11-60.1-174, 40 CFR §60.592, §63.648)<sup>1</sup>

4. Equipment subject to 40 CFR Part 61, Subpart J

a. Compressors

- i. Compressors shall be equipped and operated with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in 40 CFR §61.242-1(c), 40 CFR §61.242-3(h) and 40 CFR §61.242-3(i).
- ii. Each compressor seal system as required in Special Condition No. C.4.a.i. of this

Attachment shall be as follows:

- (1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or
  - (2) Equipped with a barrier fluid system that is connected by a closed vent system to a control device that complies with the requirements of 40 CFR §61.242-11; or
  - (3) Equipped with a system that purges the barrier fluid into a process stream with zero VHAP emissions to the atmosphere.
- iii. The barrier fluid system shall not be in VHAP service and, if the compressor is covered by standards under 40 CFR Part 60, shall not be in VOC service.
- iv. A compressor is exempt from the requirements of Special Condition Nos. C.4.a.i. and C.4.a.ii. of this Attachment if it is equipped with a closed vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of 40 CFR §61.242-11, except as provided in Special Condition No. C.4.a.v. of this Attachment.
- v. Any compressor that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by methods specified in 40 CFR §61.245(c) and is tested for compliance initially upon designation, annually, and at other times requested by the Department of Health is exempt from the requirements of Special Condition Nos. C.4.a.i. through C.4.a.iv. and D.3.b.i. and D.3.b.ii. of this Attachment.
- b. Pressure Relief Devices in Gas/Vapor Service
- i. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in 40 CFR §61.245(c).
  - ii. *After each pressure release*, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, **as soon as practicable**, but no later than 5 calendar days *after the pressure release*, except as provided in Special Condition No. C.4.f. of this Attachment.
  - iii. Any pressure relief device is exempt from the requirements of Special Condition Nos. C.4.b.i. and C.4.b.ii. of this Attachment if it is equipped with a closed vent system capable of capturing and transporting leakage from the pressure relief device to a control device that complies with the requirements of 40 CFR §61.242-11.

c. Open-Ended Valves/Lines

- i. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR §61.242-1(c). The cap, blind flange, plug, or second valve shall seal the open end at all times, except during operations requiring process fluid flow through the open-ended valve or line.
- ii. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.
- iii. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with Special Condition No. C.4.c.i. of this Attachment at all other times.

d. Sampling Connection Systems

- i. Each sampling connection system shall be equipped with a closed-purged system or closed-vent system, except as provided in 40 CFR §61.242-1(c).
- ii. Each closed-purged system or closed-vent system shall comply with the following requirements:
  - (1) Return the purged process fluid directly to the process line with zero VHAP emissions to atmosphere; or
  - (2) Collect and recycle the purged process fluid with zero VHAP emissions to atmosphere; or
  - (3) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of 40 CFR §61.242-11.
  - (4) In- situ sampling systems are exempt from the requirements of Special Condition Nos. C.4.d.i. and C.4.d.ii. of this Attachment.

e. Product Accumulator Vessels

- i. Each product accumulator vessel shall be equipped with a closed-vent system capable of capturing and transporting any leakage from the vessel to a control device as described in 40 CFR §61.242-11.

f. Delay of Repair

- i. Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.

- ii. Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the process and which does not remain in VHAP service.
- iii. Delay of repair for valves will be allowed if:
  - (1) The permittee demonstrates that emissions of purged material resulting from the immediate repair are greater than the fugitive emissions likely to result from the delay of repair, and
  - (2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with the requirements of 40 CFR §61.242-11.
- iv. Delay of repair for pumps will be allowed if:
  - (1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and
  - (2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.
- v. Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-180, 40 CFR §61.112)<sup>1</sup>

5. Equipment subject to 40 CFR Part 60, Subpart QQQ

a. Individual Drain Systems

- i. Sewer drains shall be equipped with water seal controls.
- ii. Junction boxes shall be equipped with a cover and may have an open vent pipe at least 3 feet (90 cm) in length and shall not exceed 4 inches (10.2 cm) in diameter.
- iii. Junction box covers shall have a tight seal around the edge and shall be kept in place at all times, except during inspection and maintenance.
- iv. Sewer lines shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces.

- v. Refinery wastewater routed through new process drains and a new first common downstream junction box either as part of a new individual drain system or an existing individual drain system, shall not be routed through a downstream catch basin.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, 40 CFR §60.692-2)<sup>1</sup>

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

1. All records, including support information, shall be true, accurate, and 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 in a permanent form suitable for inspection and made available to the Department of Health or their representatives upon request.

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

2. Equipment subject to 40 CFR Part 60, Subpart GGG and/or 40 CFR Part 63, Subpart CC
  - a. Pumps in Light Liquid Service
    - i. Each pump in light liquid service shall be monitored **monthly** to detect leaks in accordance with the requirements set forth in 40 CFR §60.485(b), except as provided in 40 CFR §60.482-1(c) and 40 CFR §60.482-2(d), (e) and (f).
    - ii. Each pump in light liquid service shall be checked by visual inspection **each calendar week** for indications of liquids dripping from the pump seal.
    - iii. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
    - iv. If there are indications of liquids dripping from the pump seal, a leak is detected.
    - v. When a leak is detected, it shall be repaired **as soon as practicable, but not later than fifteen (15) calendar days** after it is detected, except as provided in Special Condition No. C.3.e. of this Attachment. A first attempt at repair shall be made **no later than five (5) calendar days** after each leak is detected.
    - vi. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of Special Condition Nos. D.2.a.i. and D.2.a.ii. of this Attachment provided the requirements of 40 CFR §60.482-2(d)(1) through (6) are met.

vii. Any pump that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Special Condition Nos. D.2.a.i., D.2.a.ii., D.2.a.v., and D.2.a.vi. of this Attachment if the pump:

- (1) Has no externally actuated shaft penetrating the pump housing;
- (2) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in 40 CFR §60.485(c); and
- (3) Is tested for compliance with Special Condition No. D.2.a.vii.(2) of this Attachment initially upon designation, annually, and at other times requested by the Department of Health.

viii. If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of 40 CFR §60.482-10, it is exempt from the requirements of Special Condition Nos. D.2.a.i. through D.2.a.vii. of this Attachment.

b. Compressors

- i. Each compressor barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. Each sensor shall be checked **daily** or shall be equipped with an audible alarm. If the sensor indicates failure of the seal system, the barrier system, or both, a leak is detected.
- ii. When a leak is detected, it shall be repaired **as soon as practicable**, but not later than **fifteen (15) calendar days after it is detected**, except as provided in Special Condition No. C.3.e. of this Attachment. A first attempt at repair shall be made **no later than five (5) calendar days after each leak is detected**.

c. Pressure Relief Devices in Gas/Vapor Service

- i. **No later than five (5) calendar days after a pressure release**, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in 40 CFR §60.485(c).

d. Valves in Light Liquid Service and in Gas/Vapor Service

- i. Each valve in light liquid service shall be monitored **monthly** to detect leaks in accordance with the requirements set forth in 40 CFR §60.485(b), except as provided in 40 CFR §60.483-2.

- ii. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
- iii. Any valve for which a leak is *not detected for 2 successive months* may be monitored the **first month of every quarter**, beginning with the next quarter, *until a leak is detected. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.*
- iv. *When a leak is detected*, it shall be repaired **as soon as practicable, but not later than fifteen (15) calendar days after it is detected**, except as provided in Special Condition No. C.3.e. of this Attachment. A first attempt at repair shall be made **no later than five (5) calendar days after each leak is detected**.
- v. First attempts at repair include, but are not limited to, the following best practices where practicable:
  - (1) Tightening of bonnet bolts;
  - (2) Replacement of bonnet bolts;
  - (3) Tightening of packing gland nuts; and
  - (4) Injection of lubricant into lubricated packing.
- vi. Any valve that is designated, as described in 40 CFR §60.486(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Special Condition No. D.2.d.i. of this Attachment if the valve:
  - (1) Has no external actuating mechanism in contact with the process fluid;
  - (2) Is operated with emissions less than 500 ppm above background as determined by the method specified in 40 CFR §60.485(c); and
  - (3) Is tested for compliance with the Special Condition No. D.2.d.vi.(2) of this Attachment initially upon designation, annually, and at other times requested by the Department of Health.
- vii. Any valve that is designated, as described in 40 CFR §60.486(f)(1), as unsafe-to-monitor valve and satisfies the criteria outlined in 40 CFR §60.482-7(g) is exempt from the requirements of Special Condition No. D.2.d.i. of this Attachment.
- viii. Any valve that is designated, as described in 40 CFR §60.486(f)(2), as difficult-to-monitor valve and satisfies the criteria outlined in 40 CFR §60.482-7(h) is exempt from the requirements of Special Condition No. D.2.d.i. of this Attachment.
- e. Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and other Connectors
  - i. Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors shall be monitored **within five (5) days** by the method specified in 40 CFR §60.485(b) *if evidence of a*

*potential leak is found by visual, audible, olfactory, or any other detection method.*

- ii. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
- iii. *When a leak is detected*, it shall be repaired **as soon as practicable, but not later than fifteen (15) calendar days after it is detected**, except as provided in Special Condition No. C.3.e. of this Attachment. The first attempt at repair shall be made **no later than five (5) calendar days after each leak is detected**.
- iv. First attempts at repair include, but are not limited to, the best practices described in Special Condition No. D.2.d.v. of this Attachment.
- f. *When each leak is detected*, including as specified in 40 CFR §60.483-2, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.
- g. The identification on a valve may be removed after it has been monitored for two (2) successive months as specified in Special Condition No. D.2.d.iii. of this Attachment and no leak has been detected during those two (2) months. The identification on equipment except a valve, may be removed after it has been repaired.
- h. *When each leak is detected*, including as specified in 40 CFR §60.483-2, the following information shall be recorded in a log and shall be kept for 5 years in a readily accessible location:
  - i. The instrument and operator identification numbers and the equipment identification number;
  - ii. The date the leak was detected and the dates of each attempt to repair the leak;
  - iii. Repair methods applied in each attempt to repair the leak;
  - iv. "Above 10,000" if the maximum instrument reading measured by the methods specified in 40 CFR §60.485(a) after each repair attempt is equal to or greater than 10,000 ppm;
  - v. "Repair delayed" and the reason for the delay if a leak is not repaired within fifteen (15) calendar days after discovery of the leak;
  - vi. The signature of the permittee whose decision it was that repair could not be effected without a process shutdown;
  - vii. The expected date of successful repair of the leak if a leak is not repaired within fifteen (15) days;
  - viii. Dates of process unit shutdown that occur while the equipment is unrepaired; and
  - ix. The date of successful repair of the leak.
- i. The following information shall be recorded in a log that is kept in a readily accessible location:
  - i. A list of identification numbers for all equipment;

- ii. A list of identification numbers for equipment that are designated for no detectable emissions which is signed by the permittee;
  - iii. A list of equipment identification numbers for pressure relief devices required to comply with the requirements of Special Condition No. C.3.b. of this Attachment;
  - iv. The dates of each compliance test used to determine no detectable emissions:
    - (1) The background level measured during each compliance test
    - (2) The maximum instrument reading measured at the equipment during each compliance test; and
  - v. A list of identification numbers for equipment in vacuum service.
- j. The following information pertaining to all valves shall be recorded in a log that is kept in a readily accessible location:
- i. A list of identification numbers for valves that are designated as unsafe-to-monitor, an explanation for each valve stating why the valve is unsafe-to-monitor, and the plan for monitoring each valve; and
  - ii. A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.
- k. The following information shall be recorded for valves complying with 40 CFR §60.483-2:
- i. A schedule of monitoring; and
  - ii. The percent of valves found leaking during each monitoring period
- l. The following information shall be recorded in a log that is kept in a readily accessible location:
- i. Design criterion based on design considerations and operating experience indicating the failure of the seal system, barrier fluid system, or both of each affected pump or compressor; and
  - ii. Any changes to this criterion and the reasons for the changes.
- (Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, §11-60.1-174, 40 CFR §60.592, §63.648)<sup>1</sup>
3. Equipment subject to 40 CFR Part 61, Subpart J
- a. Pumps
    - i. Each pump shall be monitored **monthly** to detect leaks in accordance with the

requirements set forth in 40 CFR §61.245(b), except as provided in 40 CFR §61.242-1(c) and 40 CFR §61.242-2(d), (e) and (f).

- ii. Each pump shall be checked by visual inspection **each calendar week** for indications of liquids dripping from the pump seal.
  - iii. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
  - iv. If there are indications of liquids dripping from the pump seal, a leak is detected.
  - v. When a leak is detected, it shall be repaired **as soon as practicable, but not later than fifteen (15) calendar days after it is detected**, except as provided in Special Condition No. C.4.f. of this Attachment. A first attempt at repair shall be made **no later than five (5) calendar days after each leak is detected**.
  - vi. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of Special Condition No. D.3.a.i. through D.3.a.iv. of this Attachment provided the requirements of 40 CFR §61.242-2(d)(1) through (6) are met.
  - vii. Any pump that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Special Condition Nos. D.3.a.i., D.3.a.ii., D.3.a.v., and D.3.a.vi. of this Attachment if the pump:
    - (1) Has no externally actuated shaft penetrating the pump housing;
    - (2) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in 40 CFR §61.245(c); and
    - (3) Is tested for compliance with Special Condition No. D.3.a.vii.(2) of this Attachment initially upon designation, annually, and at other times requested by the Department of Health.
  - viii. If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of 40 CFR §61.242-11, it is exempt from the requirements of Special Condition Nos. D.3.a.i. through D.3.a.vii. of this Attachment.
- b. Compressors
- i. Each compressor barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. Each sensor shall be checked **daily** or shall be equipped with an audible alarm. If the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is

detected.

- ii. When a leak is detected, it shall be repaired **as soon as practicable**, but not later than **fifteen (15) calendar days** after it is detected, except as provided in Special Condition No. C.4.f. of this Attachment. A first attempt at repair shall be made **no later than five (5) calendar days** after each leak is detected.

c. Pressure Relief Devices in Gas/Vapor Service

- i. **No later than five (5) calendar days** after a pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in 40 CFR §61.245(c).

d. Valves

- i. Each valve shall be monitored **monthly** to detect leaks in accordance with the requirements set forth in 40 CFR §61.245(b), except as provided in 40 CFR §61.243-2.
- ii. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
- iii. Any valve for which a leak is *not detected for 2 successive months* may be monitored the **first month of every quarter**, beginning with the next quarter, *until a leak is detected*. If a leak is detected, the valve shall be monitored **monthly** until a leak is *not detected for 2 successive months*.
- iv. *When a leak is detected*, it shall be repaired **as soon as practicable, but not later than fifteen (15) calendar days** after it is detected, except as provided in Special Condition No. C.4.f. of this Attachment. A first attempt at repair shall be made **no later than five (5) calendar days** after each leak is detected.
- v. First attempts at repair include, but are not limited to, the following best practices where practicable:
  - (1) Tightening of bonnet bolts;
  - (2) Replacement of bonnet bolts;
  - (3) Tightening of packing gland nuts; and
  - (4) Injection of lubricant into lubricated packing.
- vi. Any valve that is designated, as described in 40 CFR §61.246(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Special Condition No. D.3.d.i. of this Attachment if the valve:

- (1) Has no external actuating mechanism in contact with the process fluid;
  - (2) Is operated with emissions less than 500 ppm above background as determined by the method specified in 40 CFR §61.245(c); and
  - (3) Is tested for compliance with the Special Condition No. D.3.d.vi.(2) of this Attachment initially upon designation, annually, and at other times requested by the Department of Health.
- vii. Any valve that is designated, as described in 40 CFR §61.246(f)(1), as unsafe-to-monitor valve and satisfies the criteria outlined in 40 CFR §61.242-7(g) is exempt from the requirements of Special Condition No. D.3.d.i. of this Attachment.
- viii. Any valve that is designated, as described in 40 CFR §61.246(f)(2), as difficult-to-monitor valve and satisfies the criteria outlined in 40 CFR §61.242-7(h) is exempt from the requirements of Special Condition No. D.3.d.i. of this Attachment.
- e. Pressure Relief Devices in Liquid Service and Flanges and other Connectors
- i. Pressure relief devices in liquid service and flanges and other connectors shall be monitored **within five (5) days** by the method specified in 40 CFR §61.245(b) *if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.*
  - ii. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
  - iii. *When a leak is detected*, it shall be repaired **as soon as practicable, but not later than fifteen (15) calendar days after it is detected**, except as provided in Special Condition No. C.4.f. of this Attachment. The first attempt at repair shall be made **no later than five (5) calendar days after each leak is detected**.
  - iv. First attempts at repair include, but are not limited to, the best practices described in Special Condition No. D.3.d.v. of this Attachment.
- f. *When each leak is detected*, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.
- g. The identification on a valve may be removed after it has been monitored for two (2) successive months as specified in Special Condition No. D.3.d.iii. of this Attachment and no leak has been detected during those two (2) months. The identification on equipment except a valve, may be removed after it has been repaired.
- h. *When each leak is detected*, the following information shall be recorded in a log and shall be kept for 5 years in a readily accessible location:
- i. The instrument and operator identification numbers and the equipment

- identification number;
  - ii. The date the leak was detected and the dates of each attempt to repair the leak;
  - iii. Repair methods applied in each attempt to repair the leak;
  - iv. "Above 10,000" if the maximum instrument reading measured by the methods specified in 40 CFR §61.245(a) after each repair attempt is equal to or greater than 10,000 ppm;
  - v. "Repair delayed" and the reason for the delay if a leak is not repaired within fifteen (15) calendar days after discovery of the leak;
  - vi. The signature of the permittee whose decision it was that repair could not be effected without a process shutdown;
  - vii. The expected date of successful repair of the leak if a leak is not repaired within fifteen (15) days;
  - viii. Dates of process unit shutdown that occur while the equipment is unrepaired; and
  - ix. The date of successful repair of the leak.
- i. The following information shall be recorded in a log that is kept in a readily accessible location:
- i. A list of identification numbers for all equipment (except welded fittings);
  - ii. A list of identification numbers for equipment that are designated for no detectable emissions which is signed by the permittee;
  - iii. A list of equipment identification numbers for pressure relief devices required to comply with the requirements of Special Condition No. C.4.b. of this Attachment;
  - iv. The dates of each compliance test used to determine no detectable emissions:
    - (1) The background level measured during each compliance test
    - (2) The maximum instrument reading measured at the equipment during each compliance test; and
  - v. A list of identification numbers for equipment in vacuum service.
- j. The following information pertaining to all valves shall be recorded in a log that is kept in a readily accessible location:
- i. A list of identification numbers for valves that are designated as unsafe-to-monitor, an explanation for each valve stating why the valve is unsafe-to-monitor, and the plan for monitoring each valve; and
  - ii. A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the planned schedule for monitoring each valve.
- k. The following information shall be recorded for valves complying with 40 CFR §61.243-2:
- i. A schedule of monitoring; and
  - ii. The percent of valves found leaking during each monitoring period.

- I. The following information shall be recorded in a log that is kept in a readily accessible location:
  - i. Design criterion based on design considerations and operating experience indicating the failure of the seal system, barrier fluid system, or both of each affected pump or compressor.
  - ii. Any changes to this criterion and the reasons for the changes.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, 40 CFR §60.592, §63.648)<sup>1</sup>

4. Equipment subject to 40 CFR Part 60, Subpart QQQ
  - a. Each drain in active service shall be checked by visual inspection or physical inspection **initially and monthly** thereafter for indications of low water levels or other conditions that would reduce the effectiveness of the water seal controls.
  - b. Except for out of service drains where a tightly sealed cap or plug is installed, each drain out of active service shall be checked by visual or physical inspection **initially and weekly** thereafter for indications of low water levels or other problems that could result in VOC emissions. Drains having tightly sealed caps or plugs shall be inspected **initially and semi-annually** to ensure caps or plugs are in place and properly installed.
  - c. *Whenever low water levels or missing or improperly installed caps or plugs are identified*, water shall be added or first efforts at repair shall be made **as soon as practicable**, but not later than twenty-four (24) hours after detection unless it is determined to be technically impossible without a complete or partial refinery or process unit shutdown. In such instances, repair shall occur before the end of the next refinery or process unit shutdown.
  - d. Junction boxes shall be visually inspected **initially and semi-annually** thereafter to ensure that the cover is in place and to ensure that the cover has a tight seal around the edge.
  - e. *If a broken seal or gap is identified*, first effort at repair shall be made **as soon as practicable, but not later than fifteen (15) calendar days** after the broken seal or gap is identified unless it is determined to be technically impossible without a complete or partial refinery or process unit shutdown. In such instances, repair shall occur before the end of the next refinery or process unit shutdown.
  - f. The portion of each unburied sewer line shall be visually inspected **initially and semi-annually** for indication of cracks, gaps, or other problems that could result in VOC emissions.

- g. *Wherever cracks, gaps, or other problems are detected*, repairs shall be made **as soon as practicable, but not later than fifteen (15) calendar days** after identification unless it is determined to be technically impossible without a complete or partial refinery or process unit shutdown. In such instances, repair shall occur before the end of the next refinery or process unit shutdown.
- h. Before using any individual drain system installed in compliance with 40 CFR §60.692-2, the permittee shall inspect such equipment for indications of potential emissions, defects, or other problems that may cause the requirements of 40 CFR Part 60, Subpart QQQ not to be met. Points of inspection include, but are not limited to, seals, flanges, joints, gaskets, hatches, caps, and plugs.
- i. For each individual drain system subject to the requirements of 40 CFR §60.692-2, the location, date, and corrective action shall be recorded for each drain when the water seal is dry or otherwise breached, when a drain cap or plug is missing or improperly installed, or other problem is identified that could result in VOC emissions during the initial and periodic visual or physical inspection.
- j. For junction boxes subject to the requirements of 40 CFR §60.692-2, the location, date, and corrective action shall be recorded for each inspection when a broken seal, gap, or other problem is identified that could result in VOC emissions.
- k. For each sewer line subject to the requirements of 40 CFR §60.692-2, the location, date, and corrective action shall be recorded for inspections when a problem is identified that could result in VOC emissions.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-180, 40 CFR §61.112)<sup>1</sup>

### **Section E. Notification and Reporting Requirements**

#### 1. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit **on an annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days following the end of each calendar year**. The enclosed **Annual Emissions Report Form: Refinery Equipment - Process Rate** or an equivalent form, shall be used in reporting fugitive emissions.

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

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-114)

2. Additional notification and reporting requirements shall be conducted in accordance with the standard conditions found in Attachment I, Standard Conditions 16, 17 and 24, respectively. These notifications shall include, but not be limited to:
  - a. Intent to shutdown air pollution control equipment for necessary scheduled maintenance;
  - b. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and
  - c. Permanent discontinuance of construction, modification, relocation or operation of the facility covered by this permit.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

3. 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 preventative measures taken. Corrective actions

may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

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

4. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted within **ninety (90) days after the end of each calendar year**, and shall be signed and dated by a responsible official. 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.

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)

5. Equipment subject to 40 CFR Part 60, Subpart GGG and/or 40 CFR Part 63, Subpart CC
  - a. The permittee shall submit for valves, pumps and compressors, **semi-annual** reports to the Department of Health beginning six months after the initial start-up date. 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)*. The **initial** semi-annual report shall include the following information:
    - i. Process unit identification;
    - ii. Number of valves subject to the requirements of Special Condition No. D.2.d. of this Attachment, excluding those valves designated for no detectable emission under the provisions of Special Condition No. D.2.d.vi. of this Attachment;
    - iii. Number of pumps subject to the requirements of Special Condition No. D.2.a. of this Attachment, excluding those pumps designated for no detectable emissions under the provisions of Special Condition No. D.2.a.vii. of this Attachment and those pumps complying with Special Condition No. D.2.a.viii. of this Attachment; and
    - iv. Number of compressors subject to the requirements of Special Condition No. C.3.a. of this Attachment, excluding those compressors designated for no detectable emissions under the provisions of Special Condition No. C.3.a.v. of this Attachment and those compressors complying with Special Condition No. C.3.a.iv. of this Attachment.
  - b. All semi-annual reports, required in Special Condition No. E.5.a. of this Attachment, shall include the following information:
    - i. Process unit identification;
    - ii. For each month during the semi-annual reporting period,
      - (1) Number of valves for which leaks were detected, including as described in 40 CFR §60.483-2,
      - (2) Number of valves for which leaks were not repaired,
      - (3) Number of pumps for which leaks were detected,
      - (4) Number of pumps for which leaks were not repaired,
      - (5) Number of compressors for which leaks were detected,

- (6) Number of compressors for which leaks were not repaired, and
      - (7) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible;
    - iii. Dates of process unit shutdowns which occurred within the semi-annual reporting period; and
    - iv. Revisions to items reported in the initial semiannual report if changes have occurred since the initial report or subsequent revisions to the initial report.
  - c. If the permittee elects to comply with the provisions of 40 CFR §60.483-2, the Department of Health shall be notified of the alternate standard selected **ninety (90) days** before implementing the provision.  
  
(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, §11-60.1-174, 40 CFR §60.592, §63.648)<sup>1</sup>
6. The permittee shall comply with the reporting provisions of 40 CFR §63.654, including §63.654(d), (e), (f) and (h) for equipment subject to the equipment leak standards in 40 CFR Part 63, Subpart CC.  
  
(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-174, 40 CFR §63.654)<sup>1</sup>
7. Equipment subject to 40 CFR Part 61, Subpart J
- a. The permittee shall submit an **initial report** notifying the Department of Health that the requirements of 40 CFR §61.242, §61.245, §61.246, and §61.247 are being implemented. The initial report shall include the following information:
    - i. Equipment identification number and process unit identification;
    - ii. Type of equipment;
    - iii. Percent by weight VHAP in the fluid at the equipment;
    - iv. Process fluid state at the equipment (gas/vapor or liquid); and
    - v. Method of compliance with the standard.
  - b. The permittee shall submit for valves, pumps and compressors, **semi-annual** reports to the Department of Health beginning six months after the initial report required in Special Condition No. E.7.a. 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)*. All semi-annual reports shall include the following information:
    - i. Process unit identification;
    - ii. For each month during the semi-annual reporting period,
      - (1) Number of valves for which leaks were detected, including as described in 40

CFR §61.243-2,

- (2) Number of valves for which leaks were not repaired,
- (3) Number of pumps for which leaks were detected,
- (4) Number of pumps for which leaks were not repaired,
- (5) Number of compressors for which leaks were detected,
- (6) Number of compressors for which leaks were not repaired, and
- (7) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible;

- iii. Dates of process unit shutdowns which occurred within the semi-annual reporting period;
- iv. Revisions to items reported in the initial semiannual report if changes have occurred since the initial report or subsequent revisions to the initial report; and
- v. The results of all performance tests and monitoring to determine compliance with no detectable limits and with 40 CFR §61.243-1 and 40 CFR §61.243-2 conducted within the semi-annual reporting period.

- c. If the permittee elects to comply with the provisions of 40 CFR §61.243-2, the Department of Health shall be notified of the alternate standard selected **ninety (90) days** before implementing the provision.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-180, 40 CFR §61.112)<sup>1</sup>

8. Equipment subject to 40 CFR Part 60, Subpart QQQ

- a. The permittee shall submit to the Department of Health within **sixty (60) days** after initial start-up a certification that the equipment necessary to comply with 40 CFR Part 60, Subpart QQQ has been installed and that the required initial inspections or tests of process drains, sewer lines and junction boxes have been carried out in accordance with 40 CFR Part 60, Subpart QQQ. Thereafter, the permittee shall submit **semi-annually** a certification that all of the required inspections have been carried out in accordance with 40 CFR Part 60, Subpart QQQ.
- b. A report that summarizes all inspections when a water seal was dry or otherwise breached, when a drain cap or plug was missing or improperly installed, or when cracks, gaps, or other problems were identified that could result in VOC emissions, including information about the repairs or corrective action taken, shall be submitted **initially and semi-annually** thereafter to the Department of Health.
- c. If compliance with the provisions of 40 CFR Part 60, Subpart QQQ is delayed pursuant to 40 CFR §60.692-7, the notification required under 40 CFR §60.7(a)(4) shall include the estimated date of the next scheduled refinery or process unit shutdown after the date of notification and the reason why compliance with the standard is technically impossible without a refinery or process unit shutdown.

CSP No. 0212-01-C  
Attachment II(O)  
Page 25 of 24  
Issuance Date:  
Expiration Date:

**PROPOSED**

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, 40 CFR §60.698)<sup>1</sup>

**Section F. Agency Notifications**

Any document (including reports) required to be submitted by this Covered Source Permit shall be in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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

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



**ATTACHMENT II(INSIG): SPECIAL CONDITIONS  
COVERED SOURCE PERMIT NO. 0212-01-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 true, accurate, and maintained for at least **five (5) years** from the date of any required monitoring, recordkeeping, testing, or reporting. These records shall be in a permanent form suitable for inspection and made available to the Department of Health or their authorized representative upon request.

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

**Section D. Notification and Reporting.**

Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA Region 9, the attached **Compliance Certification Form**, pursuant to HAR §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 be submitted **within ninety (90) days after the end of each calendar year**, and shall be signed and dated by a responsible official. 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;
5. 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
6. Any additional information as required by the Department of Health including information to determine compliance.

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.

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.

(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. 0212-01-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 on 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 emissions data shall be mailed to:

**Clean Air Branch  
Environmental Management Division  
Hawaii Department of Health  
919 Ala Moana Boulevard, Room 203  
Honolulu, HI 96814**

**ATTACHMENT IV: ANNUAL EMISSIONS REPORTING REQUIREMENTS  
COVERED SOURCE PERMIT NO. 0212-01-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 emission.

1. Complete the attached **Annual Emissions Report Form for Refinery Equipment - Fuel Consumption, Refinery Equipment - Process Rate, External/Internal Floating Roof Petroleum Storage Tank, and Fixed Roof Petroleum Storage Tank.**
2. The reporting period shall be from January 1 to December 31 of each year. All reports shall be submitted to the Department of Health within **sixty (60) days** after the end of each calendar year and shall be mailed to the following address:

**Clean Air Branch  
Environmental Management Division  
Hawaii Department of Health  
919 Ala Moana Boulevard, Room 203  
Honolulu, HI 96814**

3. The permittee shall retain the information submitted, including all emission calculations. These records shall be in a permanent form suitable for inspection, retained for a minimum of five (5) years, and made available to the Department of Health upon request.
4. Any information submitted to the Department of Health without a request for confidentiality shall be considered public record.
5. In accordance with HAR, Section 11-60.1-14, the permittee may request confidential treatment of specific information by submitting a written request to the Director of Health and clearly identifying the specific information that is to be accorded confidential treatment.

**PROPOSED**

**COMPLIANCE CERTIFICATION FORM  
COVERED SOURCE PERMIT NO. 0212-01-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. 0212-01-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>	<u>Equipment(s)</u>	<u>Compliance</u>
All standard conditions	All Equipment(s) listed in the permit	Continuous Intermittent

**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. 0212-01-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
		monitoring recordkeeping reporting testing none of the above	Continuous Intermittent

**(Make Additional Copies if Needed)**

**COMPLIANCE CERTIFICATION FORM  
COVERED SOURCE PERMIT NO. 0212-01-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) &amp; date (mo/day/yr)</u>	<u>Date of Written Deviation Report to DOH (mo/day/yr)</u>
		Beginning:  Ending:	

**(Make Additional Copies if Needed)**

**MONITORING REPORT FORM  
FUEL CONSUMPTION  
COVERED SOURCE PERMIT NO. 0212-01-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 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.: \_\_\_\_\_

Type of Fuel: \_\_\_\_\_ Maximum Sulfur Content (% 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 the Department of Health as public record.**

Responsible Official (PRINT):

TITLE:

Responsible Official (Signature):

<b>MONTH</b>	<b>FUEL CONSUMPTION - MONTHLY AVERAGE (gal/hr or scf/hr)</b>	<b>FUEL CONSUMPTION - ROLLING 12-MO. AVERAGE (gal/hr or scf/hr)</b>	<b>NOTES</b>
January			
February			
March			
April			
May			
June			
July			
August			
September			

**PROPOSED**

October			
November			
December			

**PROPOSED**

**MONITORING REPORT FORM  
FUEL CONSUMPTION – PACKAGE BOILER  
COVERED SOURCE PERMIT NO. 0212-01-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 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 (MMSCF)	RFG HHV
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

**PROPOSED**



## PROPOSED

**VISIBLE EMISSIONS FORM REQUIREMENTS  
STATE OF HAWAII  
COVERED SOURCE PERMIT NO. 0212-01-C**

**Issuance Date:**

**Expiration Date:**

The **Visible Emissions (V.E.) 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*), V.E. observation shall be conducted for each equipment subject to opacity limits by a certified reader in accordance with Method 9. The V.E. Form shall be completed as follows:

1. Visible emissions observations shall take place during the day only and shall be compared to the Ringelmann Chart provided. The opacity shall be noted in 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 V.E. Form using the symbols as shown.
3. For V.E. observations of stacks, stand at least three (3) stack heights but not more than a quarter mile from the stack.
4. For V.E. 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 V.E. Forms for recordkeeping. These records shall be in a permanent form suitable for inspection, retained for a minimum of five 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 V.E. monitoring requirements for the month the performance test is performed.

# PROPOSED

**VISIBLE EMISSIONS FORM**  
**COVERED SOURCE PERMIT NO. 0212-01-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)

Stack **X**  
 Sun   
 Wind 

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 (%):					

**PROPOSED**

**MONITORING REPORT FORM  
PROPANE LOAD RACK AND CYLINDER FILLING STATION  
COVERED SOURCE PERMIT NO. 0212-01-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: \_\_\_\_\_

**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): \_\_\_\_\_

**THROUGHPUT USAGE**

THROUGHPUT (BARRELS)				
MONTH	PROPANE LOAD RACK	TOTAL 12-MONTH ROLLING BASIS	CYLINDER FILLING STATION	TOTAL 12-MONTH ROLLING BASIS
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				

No. of stations: \_\_\_\_\_

No. of arms per station: \_\_\_\_\_

**PROPOSED**

**MONITORING REPORT FORM  
FLARE GAS VAPOR RECOVERY SYSTEM  
COVERED SOURCE PERMIT NO. 0212-01-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: \_\_\_\_\_

**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): \_\_\_\_\_

<b>MONTH</b>	<b>QUANTITY OF OFFGAS RECOVERED - MONTHLY BASIS (MMSCF)</b>	<b>QUANTITY OF OFFGAS RECOVERED - ROLLING 12 MONTH BASIS (MMSCF)</b>
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

**PROPOSED**

**ANNUAL EMISSIONS REPORT FORM  
EXTERNAL/INTERNAL FLOATING ROOF PETROLEUM STORAGE TANK  
COVERED SOURCE PERMIT NO. 0212-01-C  
(Page 1 of 2)**

**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.

(Make Copies for Future Use)

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

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

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

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

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

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

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

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

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

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

**PROPOSED**

**ANNUAL EMISSIONS REPORT FORM  
EXTERNAL/INTERNAL FLOATING ROOF PETROLEUM STORAGE TANK  
COVERED SOURCE PERMIT NO. 0212-01-C  
(Page 2 of 2)**

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

**ANNUAL EMISSIONS REPORT FORM  
FIXED ROOF PETROLEUM STORAGE TANK  
COVERED SOURCE PERMIT NO. 0212-01-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.

(Make Copies for Future Use)

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

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

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

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

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

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

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

TANK	IDENTIFICATION NO.					
	CAPACITY (bbl)					
	DIAMETER (ft)					
	HEIGHT (ft)					
	PAINT CONDITION <sup>a</sup>					
	COLOR <sup>b</sup>					
	POSITION <sup>c</sup>					
	TYPE OF ROOF <sup>d</sup>					
PRODUCT	PRODUCT NAME					
	REID VAPOR PRESSURE (psi)					
	TRUE VAPOR PRESSURE (psia)					
	STORAGE TEMP. (°F)					
ANNUAL THROUGHPUT (bbl/yr)						
AIR POLLUTION CONTROL DEVICE/METHOD <sup>e</sup>						

- a. Indicate paint condition as "G" (good) or "P" (poor).
- b. If the tank is totally underground, indicate a "und" in lieu of specifying a color.
- c. Indicate whether the tank's position is "V" (vertical) or "H" (Horizontal).

## **PROPOSED**

- d. Indicate whether the roof construction is "F" (flat), "C" (cone) or "D" (dome).
- e. Indicate applicable control device/method (i.e., vapor recovery system, vapor balance, etc.).

# PROPOSED

**ANNUAL EMISSIONS REPORT FORM  
REFINERY EQUIPMENT- FUEL CONSUMPTION  
COVERED SOURCE PERMIT NO. 0212-01-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.

(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, Btu/hr, 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): \_\_\_\_\_

Type of Fuel Fired	Fuel Usage Barrels/yr or Ft <sup>3</sup> /yr	Maximum Sulfur Content (% by weight)	Identify % Nitrogen, % Ash, & % Lead, if applicable

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

<u>Type of Air Pollution Control</u>	<u>In Use?</u>	<u>Pollutant(s) Controlled</u>	<u>Control Eff.(%)</u>
_____	<u>Yes or No</u>	_____	_____
_____	<u>Yes or No</u>	_____	_____
_____	<u>Yes or No</u>	_____	_____

**PROPOSED**

**ANNUAL EMISSIONS REPORT FORM  
REFINERY EQUIPMENT - PROCESS RATE  
COVERED SOURCE PERMIT NO. 0212-01-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.

(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, Btu/hr, 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): \_\_\_\_\_

<b>EMISSION SOURCE <sup>1</sup></b>	<b>ANNUAL PROCESS RATE <sup>2</sup></b>	<b>NOTES</b>

<sup>1</sup> Specify emission source. For example, list wastewater treatment unit, flare, valves, flanges, compressor seals, etc.

<sup>2</sup> Specify annual process rate. For example, list gallons wastewater/yr, etc.

**EXCESS EMISSIONS AND MONITORING SYSTEM  
PERFORMANCE SUMMARY REPORT  
COVERED SOURCE PERMIT NO. 0212-01-C  
(Page 1 of 2)**

**Issuance Date:**

**Expiration Date:**

(Make Copies for Future Use)

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

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

Process Unit(s) Description: \_\_\_\_\_

Pollutant Monitored: \_\_\_\_\_

Reporting Period Dates:

From: Date \_\_\_\_\_ - Time \_\_\_\_\_

To: Date \_\_\_\_\_ - Time \_\_\_\_\_

Emission Limitation:

\_\_\_\_\_

Monitor Manufacturer and Model No.: \_\_\_\_\_

Date of Latest CMS Certification or Audit: \_\_\_\_\_

Total Source Operating Time in Reporting Period: \_\_\_\_\_

**EMISSION DATA SUMMARY**

1. Duration of excess emissions in reporting period due to:
  - a. Startup/shutdown \_\_\_\_\_
  - b. Control equipment problems \_\_\_\_\_
  - c. Process problems \_\_\_\_\_
  - d. Other known causes \_\_\_\_\_
  - e. Unknown causes \_\_\_\_\_
2. Total duration of excess emission \_\_\_\_\_
3. Total duration of excess emissions [% of total source operating time] \_\_\_\_\_%

**CMS PERFORMANCE SUMMARY**

1. CMS downtime 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 \_\_\_\_\_
2. Total CMS downtime \_\_\_\_\_
3. Total CMS downtime [% of total source operating time] \_\_\_\_\_%

**EXCESS EMISSIONS AND MONITORING SYSTEM  
PERFORMANCE SUMMARY REPORT  
COVERED SOURCE PERMIT NO. 0212-01-C  
(Page 2 of 2)**

**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): \_\_\_\_\_

Date: \_\_\_\_\_