**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| **aa. Emission Units No. 10:** Wastewater Treatment Plant (WWTP) – Oily Sewer System | | |
| 1. Volatile Organic Compounds (VOC):<br>i. Emission Standard:<br>A. VOC emissions shall not exceed 0.26 tons in any twelve consecutive months. *[Reference: APC-93/0350 (A1) and 40 CFR 60.692-5 dated 11/23/1988]*<br>B. Benzene emissions shall not exceed 0.03 tons in any twelve consecutive months. *[Reference: APC-93/0350 (A1)]*<br><br>ii. Operational Limitations: *[Reference: APC-93/0350 (A1)]*<br>A. Except as provided in Operational Limitation (E) the Owner/Operator shall meet the following standards for each individual drain system in which waste is placed in accordance with §61.342(c)(1)(ii):<br>1. The Owner/Operator shall operate and maintain on each drain system opening a cover and closed-vent system that routes all organic vapors vented from the drain system to a control device.<br>2. The cover shall meet the following requirements:<br>i. The cover and all openings (e.g., access hatches, sampling ports) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv | iii. Compliance Method:<br>A. Compliance with Emission Standards (A) and (B) and Operational Limitation (F) (2) shall be based on Monitoring/Testing.<br>B. Alternately, the Owner/Operator may analyze the daily monitoring data to establish a carbon canister change out schedule so that the carbon in each carbon adsorption location is replaced with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and either the organic concentration or the benzene concentration in the gas stream vented to the carbon adsorption system. The Owner/Operator shall obtain the Department's written approval prior to implementing any such replacement schedule.<br>C. Compliance with Operational Limitation (A) shall be based on Monitoring/Testing.<br>D. Compliance with operational limitation (B), (C), (D), (E), (F)(1) and (F)(3) shall be based on recordkeeping.<br>iv. Monitoring/Testing<br>The Owner/Operator shall comply with the following monitoring/testing requirements: *[Reference: APC-93/0350 (A1)]*<br>A. The carbon adsorbers shall be monitored daily in accordance with the monitoring protocol in Attachment "D" of this permit. | vi. Reporting:<br>In addition to the requirements of Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit, the Company shall: *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>A. Submit to the Department copies of the Quarterly and Annual reports sent to the US EPA in accordance with the requirements of 40 CFR Part 61, Subpart FF.<br>B. [**RESERVED**]<br>C. [**RESERVED**]<br>D. [**RESERVED**]<br>E. [**RESERVED**]<br><br>vii. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| above background, initially and thereafter at least once per year by the methods specified in §61.355(h).<br>ii. Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the drain system except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.<br>iii. If the cover and closed-vent system operate such that the individual drain system is maintained at a pressure less than atmospheric pressure, then paragraph (A)(2)(ii) does not apply to any opening that meets all of the following conditions:<br>A. The purpose of the opening is to provide dilution air to reduce the explosion hazard;<br>B. The opening is designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined | and by replacing the carbon immediately upon breakthrough. For the purpose of this paragraph, "breakthrough" is defined as any reading of 50 ppm volatile organic compounds measured after the first canister at each location, and "immediately" shall mean 8 hours for canisters 55 gallons or less, 24 hours for canisters between 55 gallons and 20,000 pounds and 48 hours for canisters greater than 20,000 pounds. Attachment "D" to this permit specifies the location and size of each canister set.<br>B. The Owner/Operator shall conduct periodic visual inspections in accordance with Section 61.346(a)(2). *[Reference: 40 CFR 61.346 dated 1/7/93]*<br>C. The Owner/Operator shall annually monitor the system for no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background using the methods specified in Section 61.355(h). *[Reference: 40 CFR 61.346 dated 1/7/93]*<br><br>v. Recordkeeping:<br>The following records shall be maintained in accordance with Condition 3(b): *[Reference: APC-93/0350(A1)]*<br>A. Engineering design documentation for the carbon canister control devices installed on the OWS system. The documentation shall be retained for the life of the control equipment.<br>B. A statement signed and dated by the | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| initially and thereafter at least once per year by the methods specified in § 61.355(h); and<br>C. The pressure is monitored continuously to ensure that the pressure in the individual drain system remains below atmospheric pressure.<br>B. The closed-vent system and control device shall be designed and operated in accordance with §61.349.<br>C. Each cover seal, access hatch, and all other openings shall be checked by visual inspection initially and quarterly thereafter to ensure that no cracks or gaps occur and that access hatches and other openings are closed and gasketed properly.<br>D. Except as provided in §61.350, when a broken seal or gasket or other problem is identified, or when detectable emissions are measured, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after identification.<br>E. As an alternative to complying with Operational Limitations (A) through (D), the Owner/Operator may elect to comply with the following | owner or operator certifying that the closed-vent systems and control device are designed to operate at the documented performance level when the waste management unit vented to the control devices are or would be operating at the highest load or capacity expected to occur. The documentation shall be retained for the life of the control equipment.<br>C. If engineering calculations are used to determine control device performance in accordance with § 61.349(c), then a design analysis for the control device that includes for example, specifications, drawings, schematics, and piping and instrumentation diagrams prepared by the owner or operator, or the control device manufacturer or vendor that describe the control device design based on acceptable engineering texts. The design analysis shall address the following vent stream characteristics and control device operating parameters for the carbon adsorption system: the design analysis shall consider the vent stream composition, constituent concentration, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level or the design exhaust vent stream benzene concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| requirements:<br>1. Each drain shall be equipped with water seal controls or a tightly sealed cap or plug.<br>2. Each junction box shall be equipped With a cover and may have a vent pipe. The vent pipe shall be at least 90 cm (3 ft) in length and shall not exceed 10.2 cm (4 in) in diameter.<br>i. 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.<br>ii. One of the following methods shall be used to control emissions from the junction box vent pipe to the atmosphere:<br>A. Equip the junction box with a system to prevent the flow of organic vapors from the junction box vent pipe to the atmosphere during normal operation. An example of such a system includes use of water seal controls on the junction box. A flow indicator shall be installed, operated, and maintained on each junction box vent pipe to ensure that organic vapors are not vented from | design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule. The documentation shall be retained for the life of the control equipment.<br>E. A record for each visual inspection required by Operational Limitations (C) or (E) (4) that identifies a problem (such as a broken seal, gap or other problem) which could result in benzene emissions. The record shall include the date of the inspection, waste management unit and control equipment location where the problem is identified, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed.<br>F. A record for each test of no detectable emissions required by operational limitations (A)(2)(i) and (F)(1) The record shall include the date the test was performed, background level measured during test, and maximum concentration indicated by the instrument reading measured for each potential leak interface. If detectable emissions are measured at a leak interface, then the record shall also include the waste management unit, control equipment, and leak interface location where detectable emissions were measured, a description of the problem, a description of the corrective action taken, | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| the junction box to the atmosphere during normal operation.<br>B. Connect the junction box vent pipe to a closed-vent system and control device in accordance with § 61.349.<br>3. Each sewer line 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.<br>4. Equipment installed in accordance with paragraphs (E)(1), (E)(2), or (E)(3) or §61.346 shall be inspected as follows:<br>i. Each drain using water seal controls shall be checked by visual or physical inspection initially and thereafter quarterly for indications of low water levels or other conditions that would reduce the effectiveness of water seal controls.<br>ii. Each drain using a tightly sealed cap or plug shall be visually inspected initially and thereafter quarterly to ensure caps or plugs are in place and properly installed. | and the date the corrective action was completed.<br>G. Dates of startup and shutdown of the closed-vent systems and control devices and periods when the closed-vent system and control device are not operated as designed.<br>H. Records of dates and times when the control devices are monitored, when breakthrough is measured, and shall record the date and time that the existing carbon in the control devices are replaced with fresh carbon. | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| iii. Each junction box shall be visually inspected initially and thereafter quarterly to ensure that the cover is in place and to ensure that the cover has a tight seal around the edge.<br>iv. The unburied portion of each sewer line shall be visually inspected initially and thereafter quarterly for indication of cracks, gaps, or other problems that could result in benzene emissions.<br>5. Except as provided in § 61.350, when a broken seal, gap, crack or other problem is identified, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after identification.<br>F. The closed vent system and carbon adsorption control devices shall be operated and maintained to meet the following requirements:<br>1. Be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in §61.355(h). | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 2. To recover or control the organic emissions vented to it with an efficiency of 95 weight percent or greater, or shall recover or control the benzene emissions vented to it with an efficiency of 98 weight percent or greater.<br>3. Be operated at all times when waste is placed in the waste management unit vented to the carbon adsorption control devices, except when maintenance or repair of the waste management unit cannot be completed without a shutdown of the Carbon Adsorption Control System. | | |
| **ab. Emission Units No. 10:** Wastewater Treatment Plant (WWTP) Unit No. 10: API/CPI Separators, Equalization Tank, Spill Diversion Tanks, Floatation Clarifier, Flocculation Tanks and Flash Mix Tank | | |
| 1. Volatile Organic Compounds (VOC):<br>i. Emission Standard for API/CPI Separators: *[Reference: APC-81/1008, 40 CFR 60.692-5 dated 11/23/88 and 40 CFR 61.349(a)(2)(ii) dated 1/7/93]*<br>A. VOC emissions shall not exceed 3.4 tons in any twelve consecutive months.<br>B. Benzene emissions shall not exceed 0.09 tons in any twelve consecutive months.<br>ii. Equipment Standard/Operational Limitation for API/CPI Separators: | iv. Compliance Method:<br>A. Compliance with emission standards A and B shall be demonstrated by following the monitoring protocol that is Attachment "E" of this permit. *[Reference: APC-81/1008]*<br>B. Compliance with the Equipment Standards/Operational Limitations for API/CPI Separators, Equalization Tanks, Spill Diversion Tank, Flocculation Tanks and Flash Mix Tank shall be based on the monitoring/testing and recordkeeping requirements. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3. dated 12/11/00]* | vii: Reporting:<br>In addition to the requirements of Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit, the Company shall: *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00 and 40 CFR 61.357 dated 1/7/93]*<br>A. Submit to the Department copies of the Quarterly and Annual reports sent to the US EPA in accordance with the requirements of 40 CFR Part 61, Subpart FF<br>B. [**RESERVED**]<br>C. [**RESERVED**] |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| *[Reference: 40 CFR 61.351 and 40 CFR 61.352 dated 1/7/93, APC-81/1008 and APC-81/1009]*<br>A. All Fixed-Roofs shall be operated and maintained according to the following requirements:<br>1. The cover and all openings (access hatches, sampling ports, gauge wells, etc.) shall operate with no detectable emissions, as indicated by an instrument reading of less than 500 *ppmv* above background, as determined initially, and thereafter at least one (1)-year intervals by the methods specified in 40 CFR 61.355(h) (1993).<br>2. Each opening shall be maintained in a closed, sealed position (covered by a lid that is gasketed and latched) at all times that waste is in the oil-water separator, except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance or repair.<br>B. Each floating roof shall be equipped with a closure device between the wall of the Separator and the roof edge. The closure device shall consist of a primary seal and a secondary seal.<br>C. The primary seal on each floating roof shall be a liquid-mounting seal meeting the following requirements:<br>1. A liquid-mounted seal means a | v. Monitoring/Testing: *[Reference: APC-81/1008, 40 CFR 60.692-5 dated November 23, 1988 and 40 CFR 61.349(a)(2)(ii) dated January 7, 1993]*<br>A. Measurement of primary seal gaps shall be performed within sixty (60) calendar days after initial installation of the floating roofs and introduction of refinery wastewater or sixty (60) calendar days after the equipment is placed back into service, and once every five (5) years thereafter. Measurement of secondary seal gaps shall be performed within sixty (60) calendar days after the equipment is placed in service, and once every year thereafter.<br>B. The Owner/Operator shall perform the following inspections on the flocculation, spill diversion and equalization tanks:<br>1. Semiannual inspections to ensure compliance with the equipment standards/operational limitations for the flocculation, spill diversion and equalization tanks (including visual inspection of the secondary seal gap); and measure the secondary seal gap annually according to the procedure described in paragraph C below.<br>C. Gap area shall be calculated by physically measuring the length and width of all gaps around the entire circumference of the secondary seal in each place where a 0.32 cm (0.125 in) uniform diameter probe passes freely (without forcing or binding | D. [**RESERVED**]<br><br>viii. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| foam-filled or liquid-filled seal mounted in contact with the liquid between the wall of the Separator and the floating roof.<br>2. The gap width between the primary seal and the Separator wall shall not exceed 3.8 *cm* (1.5 *in.*) at any time.<br>3. The total gap area between the primary seal and the Separator wall shall not exceed 67 $cm^2/m$ (3.2 $in.^2/ft.$) of Separator wall perimeter.<br>D. The secondary seal on each floating roof shall be above the primary seal and cover the annular space between the floating roof and the wall of the Separator.<br>1. The gap width between the secondary seal and the Separator wall shall not exceed 1.3 *cm* (0.5 *in.*) at any point.<br>2. The total gap area between the secondary seal and the Separator wall shall not exceed 6.7 $cm^2/m$ (0.32 $in.^2/ft.$) of Separator wall perimeter.<br>E. The maximum gap width and total gap area shall be determined by the methods and procedures specified in 40 CFR 60.696(d).<br>F. Necessary repairs shall be made within thirty (30) calendar days of identification of seals not meeting the | against the seal) between the seal and the tank wall. Summing these gap areas will determine the accumulated gap area.<br>D. During periods when any API bay is uncovered, conduct a daily check of the presence of a water seal to ensure that vapors from other bays are not escaping to the atmosphere through the out of service bay.<br><br>vi. Recordkeeping:<br>In addition to the requirements of Conditions 3(b)(1)(ii) and 3(b)(2) of this permit, the Company shall: *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 and 6.2.1 dated 12/11/00]*<br><br>A. A statement signed and dated by the Owner/Operator certifying that the closed vent system and control device is designed to operate at the documented performance level when the waste management unit vented to the control device is, or would be, operating at the highest load or capacity expected to occur. *[Reference: 40 CFR 61.356(f)(1) dated 1/7/93]*<br>B. For a carbon adsorption system that does not regenerate the carbon bed directly on-site in the control device, such as a carbon canister, records of the design analysis which takes into account the vent stream composition, constituent concentration, flow rate, relative humidity and temperature. Records shall also be maintained for the following parameters | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| requirements listed in paragraphs (C) and (D) of this Condition.<br>G. Except as provided in Operational Limitation I, each opening in the roof shall be equipped with a gasketed cover, seal or lid, which shall be maintained in a closed position at all times, except during inspection and maintenance.<br>H. The roof shall be floated on the liquid (i.e., off the roof supports) at all times except during a condition of low flow rate.<br>I. The floating roof may be equipped with one (1) or more emergency roof drains for removal of storm water. Each emergency roof drain shall be fitted with a slotted membrane fabric cover that covers at least ninety percent (*90%*) of the drain opening area, or a flexible fabric sleeve seal.<br>J. Access doors and other openings shall be visually inspected initially and semiannually thereafter to ensure that there is a tight fit around the edges and to identify other problems that could result in VOC emissions.<br>K. When a broken seal or gasket on an access door or other opening is identified, it shall be repaired as soon as possible, but not later than thirty (30) calendar days after it is | established by the design analysis: the design exhaust vent stream organic compound concentration level or the design exhaust vent stream benzene concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule. *[Reference: 40 CFR 61, Subpart FF, Section 61.356(f)(2)(G) dated 1/7/93]*<br>C. A record for each test of no detectable emissions in accordance with 40 CFR 61.355(h). *[Reference: 40 CFR 61, Subpart FF, Section 61.355(h) dated 1/7/93]*<br>D. The Owner/Operator shall maintain records of all inspections and seal gap measurements of the equalization tanks and spill diversion tank in accordance with the procedures in Section 60.115b. *[Reference: 40 CFR 60.115b dated April 8, 1987, 40 CFR 61.351 and APC-81/1009]*<br>E. The Owner/Operator shall maintain records of all inspections and seal gap measurements of oil water separator floating roofs in accordance with NSPS Alternative Standards for oil waste separators. *[Reference: 40 CFR 60.693-2 dated August 18, 1995, 40 CFR 61.352]*<br>F. Log of operating hours when any API bay is taken out of service and the operator's verification of the presence of a water seal. *[Reference: APC-81/1008]* | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| identified, except if the repair is technically impossible without a complete or partial Refinery or process unit shutdown. Repair of such equipment shall occur before the end of the next Refinery or process unit shutdown.<br>L. The Closed-Vent System shall be operated and maintained according to the following requirements:<br>1. Operate with no detectable emissions, as indicated by an instrument reading of less than 500 *ppmv* above background, as determined initially, and thereafter at least at one (1)-year intervals by the methods specified in 40 CFR 61.355(h).<br>2. All gauging and sampling devices shall be gas-tight, except when gauging or sampling is taking place.<br>3. One (1) or more devices which vent directly to the atmosphere may be used on the Closed-Vent System, provided that each device remains in a closed, sealed position during normal operations, except when the device needs to open to prevent physical damage or permanent deformation of the Closed-Vent System resulting from malfunction of the Unit in accordance with good engineering | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| and safety practices for handling flammable, explosive or other hazardous materials.<br>M. The Closed-Vent and Carbon Adsorption Control Systems shall be operated at all times when waste is placed in the waste management unit vented to the Carbon Adsorption Control System, except when maintenance or repair of the waste management unit cannot be completed without a shutdown of the Carbon Adsorption Control System.<br>N. When an API Separator bay is uncovered and out of service for maintenance or repair, its water seal shall be established immediately and maintained continuously for the entire duration of the out of service period.<br>O. The carbon adsorption system shall be operated and maintained to recover or control the VOC emissions vented to it with an efficiency of 95 weight percent or greater or to recover or control the benzene emissions vented to it with an efficiency of 98 weight percent or greater.<br>iii. Equipment Standard/Operational Limitations for Equalization, Flocculation and Spill Diversion Tanks: *[Reference: 40 CFR 60.112b(a)(2) dated April 8, 1987, 40 CFR 61.351 and APC-81/1009, and APC-94/0710]* | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| A. The two equalization and one spill diversion tank shall be fitted with:<br>1. A continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal); or<br>2. A closure or other device approved by the Department as part of the State Implementation Plan ("SIP") that controls VOC emissions with an effectiveness that is equal to or greater than the tank's continuous secondary seal.<br>B. Seals and seal fabric shall have no holes, tears or other openings.<br>C. Seals must be intact and uniformly in place around the circumference of the floating roof, between the floating roof and the tank wall.<br>D. The width of any portion of any gap shall not exceed 1.27 centimeters (cm) (0.5 inch) and the accumulated area of gaps exceeding 0.32 centimeters (cm) (0.125 inch) in width between the secondary seal and the tank wall shall not exceed 21.2 square centimeters per meter ($cm^2/m$) (1.0 square inch per foot) ($in^2/ft$) of tank diameter.<br>E. All openings in the external floating roof, except for automatic bleeder vents and leg sleeves, shall be equipped with: | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 1. Covers, seals or lids in the closed position, except for when the openings are in actual use; and,<br>2. Projections into the tank that remain below the liquid surface at all times.<br>F. Automatic bleeder vents must be closed at all times, except when the roof is being floated-off the leg supports.<br>*[Reference: 40 CFR 60.693-2 dated August 18, 1995, 40 CFR 61.352, and Permit: APC-81/1008]* | | |
| **ac. Emission Unit No. 10: Wastewater Treatment Plant (WWTP) – Dissolved Nitrogen Floatation, Oil Recovery System and Vapor Combustion Unit (VCU); Emission Point 10-1** | | |
| 1. Particulate Matter:<br>i. Emission Standard:<br>The Owner/Operator shall not cause or allow the emission of particulate matter in excess of 0.3 lb/mm BTU heat input, maximum 2-hour average from the VCU. *[Reference: 7 **DE Admin. Code** 1104 No. 4 Section 2.1 dated 2/1/81]* | ii. Compliance Method:<br>A. Compliance with the Emission Standard shall be based on the fuel type and quality. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br>None in addition to those listed in Condition 3 - Table 1.ac.3.iv. *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br><br>iv. Recordkeeping:<br>The following records shall be maintained in accordance with Condition 3(b):<br>A. The fuel usage by the VCU.<br>B. The rolling 12 month total emissions shall be calculated and recorded each month. | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 2. Sulfur dioxide ($SO_2$):<br>i. Operational Limitation: | ii. Compliance Method:<br>A. Compliance with the Operational Limitation A | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| A. In addition to an inerting stream identified as Waste Stream "A" in Drawing No. B-VC-A05733-150, pipeline grade natural gas shall be the only fuel fired in the VCU. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>B. $SO_2$ emissions shall not exceed 0.06 tons per year. *[Reference APC-94/0710(A1)]* | shall be based on monitoring and recordkeeping. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>B. Compliance with the Operational Limitation B shall be based on the type and quality of the fuel. *[Reference APC-94/0710(A1)]*<br><br>iii. Monitoring/Testing:<br>None in addition to those listed in Condition 3 - Table 1.ac.3.iv. *[Reference 7 DE Admin. Code 1130 Section 6.1.3.1.2 dated 12/11/00]*<br><br>iv. Recordkeeping:<br>Comply with Condition 3 - Table 1.ac.1.iv. *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* | 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 3. Nitrogen oxides ($NO_X$):<br>i. Operational Limitation: *[Reference Permit: APC-94/0710(A1)]*<br>A. [**RESERVED**]<br>B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. | iii. Compliance Method:<br>A. Compliance with the operational limitations A and B shall be based on recordkeeping. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>Compliance with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j shall be based on published NOx emission factors for such source or category of sources or any other method proposed by the Owner/Operator and approved by the Department. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.1 dated 12/11/00]*<br><br>iv. Monitoring/Testing:<br>A. The Owner/Operator shall continuously | vi. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vii. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | monitor the fuel usage by the VCU. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.1 dated 12/11/00]*<br><br>v. Recordkeeping: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>The following records shall be maintained in accordance with Condition 3(b):<br>A. The rolling twelve month fuel usage by the VCU.<br>B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.2 dated 12/11/00]*<br>C. Comply with Condition 3 - Table 1.ac.1.iv. | |
| 4. Volatile Organic Compounds (VOC)<br>i. Emission Standard:<br>VOC emissions shall not exceed 20 ppmv (dry) corrected to 3 percent $O_2$ and 0.5 tons in any rolling twelve month period from the VCU. *[Reference:APC-94/0710(A1) and 40 CFR 61.349(a)(2)(i)(B) dated January 7, 1993]*<br><br>ii. Operational Limitation:<br>A. The VCU shall not operate below a temperature of 1,300°F except during a 4 hour start up period. Start up is defined as the time when the waste gases are introduced into the VCU. | iv. Compliance Method: *[Reference: APC-94/0710(A1) and 40 CFR 61.354(c)(1) dated January 7, 1993]*<br>A. Compliance with the Emission Standard shall be based on the type and quality of fuel fired.<br>B. Compliance with the Operational Limitation (A) shall be based on compliance with the minimum operating temperature of 1300°F (defined as no more than 50°F below 1300°F in any rolling three hour period of operation).<br>C. Compliance with the Operational Limitation (B) shall be based on Monitoring/Testing.<br>D. Compliance with the Operational Limitation (C) shall be based on Recordkeeping.<br>E. Compliance with the Equipment Standard | vii. Reporting: *[Reference: 40 CFR 61.357 dated 1/7/93]*<br>In addition to the requirements of Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit, the Company shall: *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. Submit to the Department copies of the Quarterly and Annual reports sent to the US EPA in accordance with the requirements of 40 CFR Part 61, Subpart FF.<br>B. [RESERVED]<br><br>viii. Certification:<br>That required by Condition 3(c)(3) of this |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| *[Reference:APC-94/0710(A1)]*<br>B. The dissolved nitrogen floatation and flocculation system, oil recovery system and VCU shall operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background using the methods specified in 40 CFR Part 61.355(h). *[Reference: 40CFR 61.351 and 40 CFR 61.352 dated 1/7/93 and APC-94/0710(A1)].*<br>C. The VCU shall be operating properly whenever any of the following equipment is in operation except during periods of maintenance on the VCU, or during emergency situations that require the shutdown of the VCU:<br>• Crude Recovery Tank (372-TC-M)<br>• Sludge Holding Tank (349-TM-M)<br>• DNF Tank 326<br>• DNF Tank 305<br>• DNF Tank 306<br>• Slop Oil Tank 10-D-109<br>• Slop Oil Tank 10-D-202<br>• Day Tank 356-TC-3<br>• Day Tank 357-TC-3<br>• Day Tank 358-TC-3<br><br>iii. Equipment Standard:<br>The VCU shall be equipped with a | shall be based on recordkeeping.<br><br>v. Monitoring/Testing:<br>A. The Owner/Operator shall monitor the temperature of the firebox continuously. *[Reference: APC-94/0710(A1)]*<br>B. The Owner/Operator shall annually monitor the system for no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background using the methods specified in Section 61.355(h). *[Reference: 40 CFR 61.355 dated 1/7/93]*<br><br>vi. Recordkeeping: *Reference: APC-94/0710 and 40 CFR 61.356 dated January 7, 1993]*<br>The Owner/Operator shall maintain the following records in accordance with Condition 3(b) unless a longer period is otherwise specified:<br>A. Dates of start-up and shutdown of the closed vent system and VCU.<br>B. A description of the operating parameter(s) to be monitored to ensure that the VCU will be operated in conformance with all permit conditions and regulatory requirements, and the VCU's design specifications and an explanation of the criteria used for selection of that parameter(s). This documentation shall be retained for the life of the VCU.<br>C. A record for each test of no detectable emissions in accordance with 40 CFR 61.355 (h).<br>D. Maintain continuous records of the temperature of the gas stream in the combustion zone of the VCU and record of all | permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| temperature monitoring device equipped with a continuous recorder. The temperature monitoring device shall have an accuracy of ± 1 percent of the temperature being monitored in °C or ±0.5 °C, whichever is greater. *[Reference: APC-94/0710(A1), and 40 CFR 61.354(c)(1) dated January 7, 1993]* | three (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 combustion zone temperature.<br>E. A statement signed and dated by the Owner/Operator certifying that the closed vent system and control device is designed to operate at the documented performance level when the waste management unit vented to the control device is, or would be, operating at the highest load or capacity expected to occur. *[Reference: 40 CFR 61.356(f)(1) dated 1/7/93.]*<br>F. Comply with Condition 3 - Table 1.ac.1.iv. | |
| 5. Visible emissions:<br>i. Emission standard:<br>The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than 20 percent opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period. *[Reference: 7 **DE Admin. Code** 1114, Section 2.1, dated 7/17/84].* | ii. Compliance Method:<br>Compliance shall be demonstrated by monitoring and testing requirements, and recordkeeping. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br>A. The Owner/Operator shall conduct daily qualitative stack observations to determine the presence of any visible emissions when the unit is in operation.<br>1. If visible emissions are observed, the Owner/Operator shall take corrective actions and/or conduct a visible observation in accordance with Paragraph B below.<br>2. If no visible emissions are observed, no further action is required.<br>B. If required under paragraph A above, the | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | Owner/Operator shall, in accordance with 7 **DE Admin. Code** 1120 section 1.5, conduct visual observations at fifteen-second intervals for a period of not less than one hour except that the observations may be discontinued whenever a violation of the standard is recorded. The additional procedures, qualification and testing to be used for visually determining the opacity shall be those specified in Section 2 & 3 (except for Section 2.5 and the second sentence of Section 2.4) of Reference Method 9 set forth in Appendix A, 40 CFR, Part 60, revised July 1, 1982. *[Reference 7 **DE Admin. Code** 1120, Section 1.5(c) dated 12/7/88].* | |
| 6. Carbon Monoxide<br>i. Emission Limitation:<br>Carbon Monoxide emissions shall not exceed 8.2 tons per year on a 12 month rolling basis. *[Reference APC-94/0710(A1)]* | ii. Compliance Methodology<br>Compliance with the Operational Limitation B shall be based on the type and quality of the fuel. *[Reference APC-94/0710(A1)]*<br><br>iii. Monitoring/Testing<br>The Owner/Operator shall continuously monitor the fuel usage by the VCU. *[Reference APC-94/0710(A1)]*<br><br>iv. Recordkeeping:<br>Comply with Condition 3 - Table 1.ac.1.iv. *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| **ad. Emission Unit No. 10: Gasoline Dispensing Facility** | | |
| 1. Volatile Organic Compounds (VOC):<br>i. Emission Standard<br>A. During loading of the aboveground | iii. Compliance Method:<br>A. Compliance with Emission standard (A). shall be based on compliance with the | vi. Reporting:<br>A. In addition to the requirements of Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| storage tank, the Stage I vapor recovery system for the 4000 gallon aboveground storage tank shall be returned by way of the vapor balance system which returns no less than 90 percent by weight of the vapors to a vapor tight delivery vessel. *[Reference: APC-95/0862-OI]*<br><br>ii. Operational Limitation: *[Reference: APC-95/0862-OI dated April 28, 1995 and APC-95/0862-OII]*<br>A. All gaskets and seals in the vapor balance system of the Dual Point Stage I Vapor Recovery System shall be in place and in good condition so as to prevent gasoline vapors from being released when the vapor balance system is not in use.<br>B. For the Healy Stage II Vapor Recovery System:<br>1. The maximum length of the hose must not exceed 13 feet;<br>2. Then maximum dispensing rate is limited to 10 gallons or less per minute; and<br>3. Model 200 nozzles or upgraded nozzles shall be used with the Model 100 Jet Pump. | Operational Limitation. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>B. Compliance with the Operational Limitations shall be based on recordkeeping. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br><br>iv. Monitoring/Testing: *[Reference: APC-95/0863-0II and 7 **DE Admin. Code** 1124, Section 36, dated 1/11/02]*<br>A. A pressure/decay leak test shall be conducted as described in 7 **DE Admin. Code** 1124, Section 36 paragraph (d)(1)(i)(A) once every five years.<br>B. An annual Healy Aboveground Applications System Test shall be conducted.<br>C. At least one representative from the Owner/Operator must have been trained to operate and maintain the Stage II Healy System in accordance with Regulation 1124, Section 36 paragraph (c)(2).<br>D. Personnel trained pursuant to Monitoring/Testing requirement (C) shall perform daily routine maintenance inspections is accordance with manufacturer's specifications.<br><br>v. Recordkeeping: *[Reference: APC-95/0863-0II and 7 **DE Admin. Code** 1124, Section 36, dated 1/11/02]*<br>A. The following records shall be maintained in accordance with Condition 3(b):<br>1. Record of daily visual inspections and any maintenance conducted on the Stage II system. | and 3(c)(2) of this permit, the Company shall: *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>1. Report excess emissions to the Department's Underground Storage Tank Branch.<br>2. Provide written notification to the Department 10 working days prior to any test operation, unless permission is granted to the contrary; and<br>3. Report test failures to the Department within 24 hours of the failure.<br>4. Within 30 days of a test date, submit to the Department the actual test date, the testing Owner/Operator's name, address and phone number, and, if any corrective action was performed by the testing Owner/Operator, all information specified in 7 **DE Admin. Code** 24, Section 36, paragraph (f)(4). *[Reference: APC-95/0862-OI and APC-95/0863-OII. and Reg. No. 24, Section 36, dated 1/11/02.]*<br><br>vii. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | 2. Pressure/decay and the Healy Aboveground Applications System Test results<br>3. Daily records showing the quantity of gasoline delivered to the site.<br>4. Proof of attendance and completion of a training program as specified in 7 **DE Admin. Code** 1124, Section 36 paragraph (c)(2)(ii).<br>5. Compliance records, including warnings, notices of violation and other compliance records issued by the Department to the facility.<br>B. A conspicuous sign shall be posted with instructions on how to correctly dispense gasoline.<br>C. A conspicuous "Out of Order" sign must be posted on any nozzle associated with any part of the Stage II system that is found to be defective.<br>D. The Department emergency reporting number shall be posted conspicuously. | |
| **b. <u>Emission Unit No. 15</u>: Marine Vapor Recovery (MVR) System; Emission points 15-1 and 15-2** | | |
| 1. Conditions Applicable to Multiple Pollutants<br>i. Operational Limitation:<br>A. Commercial grade, desulfurized natural gas shall be the only fuel fired in this unit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.1.2 dated 12/11/00]*<br>B. **[RESERVED]** | ii. Compliance Method:<br>A. Compliance with the operational limitation A shall be based on the fuel type and quality. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>B. **[RESERVED]**<br><br>iii. Monitoring/Testing: | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification: |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | The Owner/Operator shall monitor the fuel usage of the MVR VCU continuously. *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br><br>iv. Recordkeeping:<br>The following records shall be maintained in accordance with Condition 3(b):<br>The type of fuel combusted in the MVR VCU and hourly fuel usage. *[Reference: 7 DE Admin. Code 1130 Section 6.1.3.1.2 dated 12/11/00]* | That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 2. Particulate Matter:<br>i. Emission Standard:<br>The Owner/Operator shall not cause or allow the emission of particulate matter in excess of 0.3lb/mmBTU heat input, maximum 2-hour average. *[Reference: 7 **DE Admin. Code** 1104 Section 2.1 dated 2/1/81]* | ii. Compliance Method:<br>A. Compliance with the Emission Standard shall be based on the fuel type and quality. *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.b.1.iii.<br><br>iv. Recordkeeping<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.b.1 iv. | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 3. Nitrogen oxides ($NO_x$)<br>i. Emission Standard:<br>Comply with "Facility Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. | ii. Compliance Method:<br>A. Compliance with the Emission Standard shall be based on Monitoring/Testing and Recordkeeping requirements. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>B. Compliance with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j shall be based on determination and use of a NOx emission factor based upon results of | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | the most recent performance testing conducted in accordance with a protocol approved by DNREC, or performed in accordance with applicable performance testing methods established and published by EPA and appropriate for measuring NOx emissions from the relevant source or any other method proposed by the Owner/Operator and approved by the Department. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.1 dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br>A. The Owner/Operator shall conduct a Department-approved stack test once every 5 years. *[Reference: APC-95/0471(A2)]*<br>B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1 dated 12/11/00]*<br><br>iv. Recordkeeping:<br>Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.2 dated 12/11/00][* | |
| 4. Carbon monoxide (CO):<br>i. Emission Standards:<br>CO emissions shall not exceed 153.2 lb/hour and 55.7 tons in any twelve consecutive months. *[Reference: APC-95/0471 (A2)]* | ii. Compliance Method:<br>A. Compliance with the emission standard shall be based on Monitoring/Testing and Recordkeeping requirements. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br>A. The Owner/Operator shall conduct a Department approved stack test once every 5 years. *[Reference: APC-95/0471 (A2)]* | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.b.1.iv. | |
| 5. Volatile Organic Compounds (VOCs)<br>i. Emission Standard:<br>A. VOC emissions shall not exceed 151 tons in any twelve consecutive months. *[Reference: APC-95/0471 (A2)]*<br>B. Vapors displaced during barge loading operations shall be collected and routed through the marine vapor control system and shall be reduced by 98 weight percent or to 1000 ppmv of VOC.<br><br>ii. Operational Limitations: *[Reference: APC-95/0471 (A2), 40 CFR §60.18 dated 10/17/2000, 40 CFR §63.11 dated 10/17/2000 and 40 CFR 63.56(b)(1), (b)(3) and (b)(3) dated September 19, 1995]*<br>A. Barge loading of gasoline products shall not exceed the following rates:<br>1. 35,000 barrels hour when loading simultaneously at two piers; and<br>2. 25,000 barrels per hour at one pier.<br>B. The rolling twelve month throughput of gasoline products shall not exceed 25,463,000 barrels.<br>C. The vapors collected at one loading berth shall not pass through another | iii. Compliance Method:<br>A. Compliance with Emission Standard (A) and Operational Limitation (H) shall be based on all of the following: *[Reference: APC-95/0471 (A2), 40 CFR §60.18 dated 10/17/2000 and 40 CFR §63.11 dated 10/17/ 2000]*<br>1. Operating the VCUs in accordance with 40 CFR 60.18 and with the continuous presence of a flame at the pilot during the entire loading cycle.<br>2. Compliance with all of the Operational Limitations.<br>3. Operating a calibrated and maintained sensing device to indicate the continuous presence of a flame at the pilot light during the entire loading cycle.<br>B. Compliance with Emission Standard (B) shall be based upon monitoring/testing and recordkeeping requirements to demonstrate the 98% destruction efficiency or by CEMS to demonstrate compliance with the 1000 ppmv limit.<br>C. Compliance with the Operational Limitations shall be based on the monitoring/testing and recordkeeping requirements of this condition. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]*<br><br>iv. Monitoring/Testing: *[Reference: 7 **DE Admin. Code*** | vi. Reporting Requirements:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vii. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| loading berth to the atmosphere.<br>D. Marine tank vessel loading operations shall be limited to those vessels that are equipped with vapor collection equipment that is compatible with the terminal's vapor collection system.<br>E. Marine tank vessel loading operations shall be limited to those vessels that are vapor tight and that are connected to the vapor collection system.<br>F. Marine vessel loading operations may be carried out only when the marine vessels have been connected to the loading rack's vapor collection system and which have current vapor tightness certification in accordance with the requirements of 40 CFR 63.563(a)(4) and have been demonstrated to be vapor tight within the preceding 12 months.<br>G. No barge loading operations of gasoline products shall be conducted unless the MVR VCUs is/are operating properly. Proper operation is defined as operating the VCUs in accordance with 40 CFR 60.18, and with the continuous presence of a flame at the pilot during the entire loading cycle.<br>H. Marine vessel loading operations shall not be conducted unless the | *1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. The Owner/Operator shall continuously monitor the hourly loading rate of all gasoline products at each pier during loading operations.<br>B. A sensing device shall be calibrated, maintained and operated to indicate the continuous presence of a flame at the pilot light during the entire loading cycle. *[Reference: APC-95/0471 (A2), 40 CFR §60.18 dated 10/17/2000, and40 CFR §63.11 dated 10/172000]\|*<br>C. The Owner/Operator shall conduct a Department approved stack test once every 5 years. *[Reference: APC-95/0471 (A2)]*<br>D. If the Owner/Operator decides to install a CEMS, the CEMS shall comply with Quality Assurance procedures in 40 CFR Part 60 Appendix "F".<br><br>v. Recordkeeping:<br>In addition to the records required by §63.567, the following records shall be maintained in accordance with Condition 3(b):<br>A. **[RESERVED]**<br>B. **[RESERVED]**<br>C. Continuous records of pilot flame monitoring.<br>D. Records of all periods of operation during which the pilot flame is absent during the loading cycle.<br>E. The hourly throughput, type of product, number of piers used and duration of each loading cycle.<br>F. Any flare system that is designed to cease operation upon loss of pilot and that | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| vapor control system is working properly.<br>I. The Owner/Operator shall comply with the operation and maintenance requirements for air pollution control equipment in accordance with the provisions of 40 CFR 63.562(e). | automatically shuts down vessel loading and isolates the vessel vent stream from the flare by closing automatic block valves shall be exempt from the requirements of (C) and (D) above.<br>G. For each marine vessel the Owner/Operator shall maintain up-to-date documentation of the vapor tightness test results to include as a minimum the following:<br>1. Marine tank vessel owner(s) name(s) and address(s).<br>2. Marine tank vessel identification number.<br>3. Date and location of test.<br>4. Test results.<br>5. Name and signature of tester.<br>6. Witnessing inspector: name, signature and affiliation.<br>H. The written operation and maintenance plan required by 63.562(e). | |
| 6. Visible Emissions:<br>i. Emission Standard:<br>The MVR VCUs 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 hour period. *[Reference: 7 **DE Admin. Code** 1114, Section 2.1, dated 7/17/84, 40 CFR 60, Subpart A, §60.18(c)(1), dated 7/1/00 and 40 CFR 63.11(a)(4) dated 7/1/00]* | ii. Compliance Method:<br>A. Compliance with the Emission Standard shall be based on Monitoring/Testing requirements. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br>A. Visible emissions from the MVR VCUs shall be monitored as follows: Each day the MVR VCUs are operated, the Owner/Operator shall conduct a qualitative observation of the flare using Method 22 to evaluate the presence or absence of smoke and/or visible air contaminants while the flare is in | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | operation. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>B. If visible emissions are detected during the daily qualitative survey of visible emissions or is observed at any other time, the Owner/Operator shall take corrective actions and/or conduct a visible observation in accordance with Paragraph (C) below. If no visible emissions are observed, no further action is required.<br>C. If required under paragraph B above, the Owner/Operator shall, in accordance with 7 **DE Admin. Code** 1120 Section 1.5.3, conduct visual observations at fifteen-second intervals for a period of not less than one hour except that the observations may be discontinued whenever a violation of the standard is recorded or if operations at the MVR VCU are ceased. The additional procedures, qualification and testing to be used for visually determining the opacity shall be those specified in Section 2 & 3 (except for Section 2.5 and the second sentence of Section 2.4) of Reference Method 9 set forth in Appendix A, 40 CFR, Part 60, revised July 1, 1982. *[Reference: 7 **DE Admin. Code** 1120, Section 1.5(c) dated 12/7/88].*<br><br>iv. Recordkeeping:<br>The following records shall be maintained in accordance with Condition 3(b): Records of qualitative emission observations and Method 9 evaluations when emissions are observed. | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| **c. Emission Unit No. 21: Crude Unit; Crude Unit Atmospheric Tower Heater 21-H-701, and Crude Unit Vacuum tower Heater 21-H-2. Emission Point 21-1** | | |
| 1. **Conditions Applicable to Multiple Pollutants:**<br>i. Operational Limitation:<br>A. The throughput to the crude unit shall not exceed 191,100 BPD on a twelve month rolling average basis. *[Reference: APC-81/0828(A2)]*<br>B. [**RESERVED**]<br>C. [**RESERVED**]<br>D. The emission standards in conditions (c)(2) through (c)(6) below shall not apply for a period of twenty-four (24) hours from the time that fuel gas flow is started to the heater and for a period of twenty-four (24) hours from the time that black oil charge to the crude unit is stopped. *[Reference: APC-95/0570 (A3) and APC-95/0784 (A2)]*<br>E. There shall be no emissions of uncondensed VOCs from the condensers, hot wells or accumulators of any vacuum producing system.<br>F. The Company shall provide for the following during process unit turnarounds:<br>1. Depressurization venting of the process unit or vessel to a vapor recovery system, flare or firebox.<br>2. No emission of VOC from a process unit or vessel until its | ii. Compliance Method:<br>Compliance with the Operational Limitations shall be based on monitoring/testing and recordkeeping requirements and the following.: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. Compliance with Operational Limitations E and F shall be based on either piping the uncondensed vapors to a firebox or incinerator. Alternately, the vapors may be compressed and added to the refinery fuel gas. [Reference: APC-81/0828(A2)]<br>B. Compliance with Operational Limitations F shall be based upon the Company conducting depressurization venting of the process unit or vessel to a vapor recovery system, flare or firebox. *[Reference: APC-81/0828(A2)]*.<br><br>iii. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br><br>A. The Owner/Operator shall continuously monitor the following:<br>1. Daily fresh feed throughput to the Crude unit and determine the rolling 12 month average in barrels per calendar day.<br>2. Monitor the fuel usage by 21-H-701 and 21-H-2.<br>B. [**RESERVED**]<br>C. The Company shall monitor the pressure in | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| internal pressure is 136 kPa (19.7 psia) or less. | each process or vessel until its internal pressure is 136 kPa or less. *[Reference: APC-81/0828(A2)]*<br><br>iv. Recordkeeping: *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>The following records shall be maintained in accordance with Condition 3(b):<br>A. Rolling 12 month average throughout of fresh feed to the crude unit in MBPD.<br>B. [**RESERVED**]<br>C. Type of fuel combusted in 21-H-701 and 21-H-2 and fuel usage.<br>D. The rolling 12-month total emissions for each pollutant.<br>E. Date of process unit or vessel turnaround and the internal pressure immediately prior to venting to the atmosphere. *[Reference: APC-81/0828(A2)]* | |
| 2. Particulate Matter:<br>i. Emission Standard:<br>For 21-H-701 and 21-H-2 combined: $PM_{10}$ emissions shall not exceed 0.02 lb/mmBtu and 60.9 tons in any rolling twelve month period (inclusive of H2SO4 emissions). *[Reference: 7 **DE Admin. Code** 1104 Section 2.1 dated 2/1/81 and APC-95/0570 (A3) and APC-95/0784 (A2)]*<br><br>ii. Operational Limitation:<br>A. With the exception of Operational Limitation (B) process heaters 21-H-701 and 21-H-2 shall only combust natural gas or desulfurized RFG. | iii. Compliance Method:<br>A. Compliance with the Emission Standard shall be based on the stack test based emission factor and the rolling 12 month fuel usage. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br><br>iv. Monitoring/Testing: *[Reference: APC-95/0570 (A2)] and 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. [**RESERVED**]<br>B. [**RESERVED**]<br>C. [**RESERVED**]<br>D. The Owner/Operator shall conduct a stack test every five years to determine the | vi. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vii. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2 dated 12/11/00]*<br><br>B. 21-H-701 may combust process vent gas from the Merox system oxidizer column 21-C-104. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2 dated 12/11/00]* | emission factor in terms of lb/mmBtu in accordance with Methods 5B/202, or any other testing methodology approved by the Department.<br><br>v. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.c.1.iv. | |
| 3. Sulfur dioxide ($SO_2$):<br>i. Emission Standards:<br>A. Except as allowed by Operational Limitation 2.ii.A. above, the Owner/Operator shall not burn in any fuel gas combustion device any fuel gas that contains $H_2S$ in excess of 0.1 grain/DSCF on a three hour rolling average. *[Reference 7 **DE Admin. Code** 1120, Section 11 dated 11/27/85 and 40 CFR 60.104(a)(1) dated 10/17/2000]*<br>B. $SO_2$ emissions from 21-H-701 and 21-H-2 combined shall not exceed 0.063 lb/mmBtu and 80.4 tons in any rolling twelve month period. *[Reference: APC-95/0570 (A3) and APC-95/0784 (A2)]* | ii. Compliance Method: *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. Compliance with Emission Standard A shall be based on the $H_2S$ CEMS for the RFG.<br>B. Compliance with Emission Standard B shall be based on the rolling twelve month fuel usage and the rolling twelve month average sulfur content of the refinery fuel gas as measured by a TRS analyzer.<br><br>iii. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. The $H_2S$ content in RFG shall be continuously monitored using CMS.<br>B. The $H_2S$ CMS shall comply with Performance Specification 7 of 40 CFR 60, Appendix "B".<br>C. Quality Assurance requirements for the $H_2S$ CMS shall be in accordance with the procedures described in 40 CFR 60, Appendix "F".<br>D. The TRS monitor shall conform to the QA/QC requirements recommended by the manufacturer's specifications and listed in the QA/QC Plan for the TRS monitor. The | v. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | TRS monitor shall conform to Performance Specification 5 of 40 CFR Part 60, Appendix "B". Relative accuracy evaluations shall be conducted using Method 15 of 40 CFR part 60, Appendix "A".<br><br>iv. Recordkeeping: *[Reference:7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]*<br><br>The following records shall be maintained in accordance with Condition 3(b):<br>A. Fuel usage, rolling average 12 month sulfur content as measured by $H_2S$ CEMS and all $H_2S$ CEMS calibration, maintenance, quarterly cylinder gas audits and annual relative accuracy test audits.<br>B. The rolling 12-month TRS concentration in fuel gas. | |
| 4. Nitrogen oxides ($NO_X$):<br>i. Emission Standard:<br>A. For 21-H-701 and 21-H-2 combined: $NO_X$ emissions shall not exceed 0.04 lb/mmBtu on a 3 hour rolling average and 20 lb/hour. *[Reference: APC-95/0570(A3) and APC-95/0784 (A2) and 7 **DE Admin Code 1142**, Section 2.3.2 dated 04/11/11]*<br>B. For 21-H-701 and 21-H-2: Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3, Table 1.j.<br>C. [**RESERVED**] | ii. Compliance Method:<br>A. Compliance with the Emission Standards shall be determined by CEMS. The Owner/Operator shall operate and maintain the CEMS to assure maximum data capture and at no time shall the data capture fall below eighty-five percent (85%) of the Process Heaters daily operating hours and eighty-five percent (85%) of the operating days per month. *[Reference: APC-95/0570 (A3) and APC-95/0784 (A2)]*<br>B. comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1 dated 12/11/00]* | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | iii. Monitoring/Testing:<br>The CEMS for $NO_X$ and diluent must be certified by satisfying the applicable Performance Specifications in 40 CFR, Part 60, Appendix "B". The QA/QC procedures for the $NO_X$ and diluent CEMS shall be established in accordance with 40 CFR, Part 60, Appendix "F". *[Reference: APC-95/0570 (A3) and APC-95/0784 (A2)]*<br><br>iv. Recordkeeping:<br>The following records shall be maintained in accordance with Condition 3(b):<br>Owner/Operator shall maintain the following records: *[Reference: APC-95/0570(A3) andAPC-95/0784(A2)]*<br>A. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.2 dated 12/11/00]*<br>B. [**RESERVED**]<br>C. [**RESERVED**]<br>D. The hourly and rolling 12-month total emissions for $NO_X$ shall be calculated and recorded for each month.<br>E. CEMS data calibration and audit results.<br>F. F-factor adjustments and the actual daily data capture. | |
| 5. Carbon Monoxide (CO):<br>i. Emission Standard:<br>A. CO emissions from 21-H-701 and 21-H-2 combined shall not exceed 0.03 lb/mmBtu and 91.4 tons in any rolling 12 month period. *[Reference: APC-* | ii. Compliance Method:<br>Compliance with the emission standard shall be based on the stack test based emission factor and the rolling twelve month fuel usage. *[Reference: Permit:APC-95/0570(A2)]* | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| *95/0570(A3) and APC-95/0784(A2)]* | iii. Monitoring/Testing: *[Reference: APC-95/0570 (A2) and 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. RESERVED<br>B. The Owner/Operator shall conduct stack Tests at 5 year intervals to determine the emission factor in terms of lb/mmBtu in accordance with Reference Method 10 in Appendix "A" of 40 CFR Part 60.<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.c.1.iv. | vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |
| 6. Volatile Organic Compounds (VOCs):<br>i. Emission Standard:<br>A. VOC emissions from 21-H-701 and 21-H-2 combined shall not exceed 0.003 lb/mmBtu and 9.2 tons in any rolling twelve month period. *[Reference: APC-95/0570(A3) and APC-95/0784(A2)]*<br>B. The leak detection and repair requirements to control fugitive VOC emissions from the Crude Unit shall be in accordance with the requirements in 40 CFR 60, Subpart GGG for existing components in light liquid and gaseous service and in accordance with 40 CFR part 63, subpart CC for new components in light liquid and gaseous service. The leak detection and repair requirements to control fugitive emissions from the Crude Unit shall be in accordance with the Consent Decree | ii. Compliance Method:<br>A. Compliance with the Emission Standard (A) shall be based on the stack test based emission factor and the rolling twelve month fuel usage. *[Reference: APC-95/0570 (A2)]*<br>B. Compliance with the emission standard B shall be based on the standards in 40 CFR subpart GGG and 40 CFR Part 63 subpart CC, as applicable. Compliance with the standards in 40 CFR subpart GGG shall be based on the test methods and procedures in 40 CFR 60.592 and compliance with the requirements of 40 CFR Part 63 subpart CC shall be based on the standards in 40 CFR 63.648. *[Reference: APC-2004/0828 (A2)]*<br>C. [**RESERVED**]<br><br>iii. Monitoring/Testing: *[Reference: APC-95/0570 (A2) and 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*.<br>None in addition to those required by Condition 3(c)(3) of this permit. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| for both new and existing components in light liquid and gaseous service. *[Reference: APC-2004/0828 (A2)]*<br><br>ii. Operational Limitation:<br>[**RESERVED**] | A. [**RESERVED**]<br>B. The Owner/Operator shall conduct a stack test every 5 years to determine the emission factor in terms of lb/mmBtu in accordance with Reference Method 25A in Appendix "A" of 40 CFR Part 60 and shall determine and report results as total hydrocarbons or shall conduct such other testing methodology and/or report results as approved by the Department.<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.c.1.iv. and maintain the following records: *[Reference: APC-95/0570 (A2) and 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]*<br>A. [**RESERVED**]<br>B. [**RESERVED**]<br>C. VOC leak repair records required by 40 CFR 60.592 for existing components in light liquid and gaseous service and 40 CFR 63.654 for new components in light liquid and gaseous service.<br>D. [**RESERVED**] | |
| 7. Visible Emissions:<br>The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than 20% opacity for an aggregate of more than 3 minutes in any 1 | ii. Compliance Method: Compliance shall be demonstrated by proper operation and maintenance of the emission units, monitoring and testing requirements, and record keeping. *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>iii. Monitoring/Testing:<br>A. The Owner/Operator shall conduct daily | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement: |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| hour or more than 15 minutes in any 24 hour period. *[Reference 7 **DE Admin. Code** 1114, Section 2.1, dated 7/17/84].* | qualitative stack observations to determine the presence of any visible emissions when the unit is in operation.<br>1. If visible emissions are observed, the Owner/Operator shall take corrective actions and/or conduct a visible observation in accordance with Paragraph B below.<br>2. If no visible emissions are observed, no further action is required.<br>B. If required under paragraph A above, the Owner/Operator shall, in accordance with 7 **DE Admin. Code** 1120 section 1.5, conduct visual observations at fifteen-second intervals for a period of not less than one hour except that the observations may be discontinued whenever a violation of the standard is recorded. The additional procedures, qualification and testing to be used for visually determining the opacity shall be those specified in Section 2 & 3 (except for Section 2.5 and the second sentence of Section 2.4) of Reference Method 9 set forth in Appendix A, 40 CFR, Part 60, revised July 1, 1982. *[Reference 7 **DE Admin. Code** 1120 Section 1.5.3 dated 12/7/88].*<br>iv. Recordkeeping *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]*<br>A. A record of daily qualitative emission observations and Method 9 evaluations when emissions were observed. | That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00].* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 8. Sulfuric Acid ($H_2SO_4$)<br>i. Emission Standard:<br>$H_2SO_4$ emissions from 21-H-701 and 21-H-2 combined shall not exceed 0.002 lb/mmBtu and 2.4 TPY. *[Reference: APC-95/0570(A3) and APC-95/0784(A2)]* | ii. Compliance Method:<br>Compliance with the Emission Standard shall be based on the rolling twelve month fuel usage and the rolling twelve month average sulfur content in the refinery fuel gas as measured by a TRS analyzer. *[Reference: APC-95/0570(A3) and APC-95/0784(A2)]*<br><br>iii. Monitoring/Testing:<br>The TRS monitor shall conform to the QA/QC requirements recommended by the manufacturer's specifications and listed in the QA/QC Plan for the TRS monitor. The TRS monitor shall conform to Performance Specification 5 of 40 CFR Part 60, Appendix "B". Relative accuracy evaluations shall be conducted using Method 15 of 40 CFR Part 60, Appendix "A". *[Reference: APC-95/0570(A3) and APC-95/0784(A2)]* | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |
| 9. Ammonia ($NH_3$)<br>i. Emission Standard:<br>$NH_3$ emissions from 21-H-701 and 21-H-2 combined shall not exceed 10 ppmvd @ 3% $O_2$ and 16.5 TPY. *[Reference: APC-95/0570 (A3) and APC-95/0784 (A2)]* | ii. Compliance Method:<br>Compliance with the Emission Standard shall be based on the Monitoring/Testing requirements. *[Reference: APC-95/0570 (A3) and APC-95/0784 (A2)]*<br><br>iii. Monitoring/Testing: *[Reference: APC-95/0570(A3) and APC-95/0784(A2)]*<br>The Owner/Operator shall obtain weekly grab samples from a location downstream of the SCR using a Department approved method. The Owner/Operator may request the Department for approval of less frequent monitoring if 24 consecutive sampling events indicate the ammonia slip to be less than 5 ppmvd @ 3% $O_2$. If at any time the grab samples indicate an $NH_3$ | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | slip greater than 10 ppmvd @ 3% $O_2$, the Department reserves the right to require the Owner/Operator to conduct more frequent sampling and may include the requirement to install a CEMS. | |
| **da. Emission Unit No. 22: Fluid Coking Unit (FCU): FCU, Wet Gas Scrubber (WGS), and Selective Non-Catalytic Reduction System (SNCR) (Emission point/s 22-2 or 22-3), FCU Start Up Heater 22-H-1 (Emission point/s 22-2 or 22-3), FCU Selas Steam Superheater 22-H-2 (Emission point 22-4), FCU Carbon Monoxide Boiler 22-H-3 (Emission point 22-2) and FCU Back Up Incinerator 22-H-4 (Emission point 22-3)** | | |
| 1. Conditions Applicable to Multiple Pollutants:<br>i. Operational Limitations *[Reference APC-81/0829 (A8)]*<br>A. The FCU throughput shall not exceed a maximum rate of 57,199 barrels per day of total feed, exclusive of the FCU recycle stream, as a 12 month rolling average, except as provided in this Condition. In the event that the Owner/Operator determines that the FCU throughput may exceed 57,199 barrels per day of fresh feed, as a 12 month rolling average, without any "modification" to the FCU, as such term is defined in State of Delaware's 7 **DE Admin. Code** 1101, then the Owner/Operator shall submit a notification to the Department in advance of achieving a throughput in excess of the level | ii. Compliance Method:<br>A. Compliance with Operational Limitations A, C, D, and H(1) shall be based on monitoring/testing and recordkeeping requirements. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>B. [**RESERVED**]<br>C. Compliance with Operational Limitation C shall be based on continuous monitoring systems. *[Reference APC-81/0829(A8)]*<br>D. Compliance with Operational Limitations I and J shall be based on either piping the uncondensed vapors to a firebox or incinerator. Alternately, the vapors may be compressed and added to the refinery fuel gas.<br>E. Compliance with Operational Limitation G shall be based on engineering calculations. *[Reference APC-81/0829(A8)]*<br><br>iii. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* | v. Reporting:<br>In addition to the requirements of Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit, the Company shall: *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00 and 40 CFR 61.357 dated 1/7/93 and APC-81/0829 (A8)]*<br>A. Semiannual reports for the preceding six month period shall be submitted to the Department by January 31 and July 31 of each calendar year. The semiannual reports required by this section shall be increased in frequency to quarterly reports at the Department's discretion and shall become effective upon request of the Department after reasonable notice to the Owner/Operator. An electronic copy of all required reports shall be sent to the Department's compliance engineer assigned to the Refinery. The required reports shall contain the following information: |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| identified in this Condition. The notification shall include a demonstration that the proposed throughput value would be achieved without any modification to the FCU. If the Department approves such demonstration, the Owner/Operator may operate the FCU at the throughput value addressed in the notification made under this Condition.<br>B. With the exception of the FCU burner offgas, the Owner/Operator shall not burn any fuel gas in any fuel gas combustion device that contains hydrogen sulfide ($H_2S$) in excess of 0.10 gr/dscf (162 ppm).<br>C. The Belco pre-scrubber, the amine-based Cansolv regenerative WGS, the caustic polishing scrubber and SNCR system shall be operating properly at all times when the FCU is operating.<br>D. During planned start ups of the FCU, the FCU COB and WGS shall be operating prior to introducing feed into the reaction section of the FCU. In the event of a planned shut down of the FCU, the FCU COB or the WGS, the Owner/Operator shall continue to operate the FCU COB and WGS until there is no feed entering the reaction section of the | A. The Owner/Operator shall continuously monitor and record the concentration (dry basis) of $H_2S$ in RFG before it is combusted in any fuel burning device. The monitoring instrument shall be located downstream of all process steps that increase the concentration of $H_2S$ in RFG prior to its being combusted in any fuel burning device. The $H_2S$ CEMS shall conform to the requirements of Performance Specification 7 of 40 CFR 60, Appendix "B" and comply with the Quality assurance requirements of 40 CFR 60, Appendix "F" The relative accuracy evaluation shall be conducted using Method 11 of 40 CFR 60, Appendix "A." *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>B. The Owner/Operator shall monitor the FCU throughput and coke burn rates. *[Reference APC-81/0829 (A8)]*<br>C. During process unit turnarounds, the Company shall monitor the pressure in each process or vessel until its internal pressure is 136kPa or less. *[Reference APC-81/0829(A8)]*<br><br>iv. Recordkeeping:<br>The following records shall be maintained in accordance with Condition 3(b): *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]*<br>A. [**RESERVED**]<br>B. [**RESERVED**]<br>C. [**RESERVED**]<br>D. [**RESERVED**]<br>E. [**RESERVED**] | 1. [**RESERVED**]<br>2. [**RESERVED**]<br>3. [**RESERVED**]<br>4. A summary of all periods when the FCU WGS has been bypassed<br>5. Hourly $SO_2$ emissions during periods when the FCU WGS was bypassed<br>6. [**RESERVED**]<br>7. Back up incinerator operating data required pursuant to recordkeeping condition I.12.<br>B. Quarterly $NO_x$, $SO_2$ and CO CEMS reports for the preceding quarter shall be submitted to the Department by January 31, April 30, July 31 and October 31 of each calendar year and shall include the following:<br>1. Excess emissions and the nature and cause of the excess emissions, if known. The summary shall consist of emission averages, in the units of the applicable standard, for each averaging period during which the applicable standard was exceeded.<br>2. The date and time identifying each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of system repairs or adjustments.<br>3. When no excess emissions have occurred and the CEMS have not been inoperative, repaired, or adjusted, |

**Condition 3 - Table 2 (Specific Requirements)**

<table>
<tr><th>Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s)</th><th>Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping</th><th>Reporting/Compliance Certification</th></tr>
<tr>
<td>FCU prior to commencing shut down of the FCU COB and/or the WGS.<br>E. During operation of the backup incinerator and other periods of FCU CO Boiler, Belco prescrubber and WGS outages, the Owner/Operator, at a minimum, must initiate a reduction in the feed rate to the FCU and achieve the operational limits shown below by no later than 24 hours following the commencement of the outage of the FCU CO Boiler, Belco prescrubber and/or WGS.
<table>
<tr><th>FCU Feed Rate (KBD)</th><th>FCU Feed Wt. % S</th><th>$SO_2$ Emissions (lb/hour)</th></tr>
<tr><td>31.5</td><td>6.0</td><td>4441.5</td></tr>
<tr><td>31.5</td><td>5.5</td><td>4071.4</td></tr>
<tr><td>31.5</td><td>5.0</td><td>3701.3</td></tr>
<tr><td>31.5</td><td>4.5</td><td>3331.1</td></tr>
<tr><td>31.5</td><td>4.0</td><td>2961.0</td></tr>
</table>
F. **[RESERVED]**<br>G. The Emission Standards in Condition 3 - Table 1.da.2 through da.10 below shall not apply during periods of planned start up and planned shut downs of the FCU provided the planned start up and shut down event does not exceed 116 hours. The Emission Standards shall apply</td>
<td>F. [**RESERVED**]<br>G. [**RESERVED**]<br>H. The rolling 12 month total emissions for each pollutant shall be calculated and recorded each month in an easily accessible format for each pollutant listed in Condition 3 - Table 1.da<br>I. The Company shall maintain all records necessary for determining compliance with this permit in a readily accessible location for 5 years and shall make these records available to the Department upon written or verbal request. These records shall include:<br>1. CEMS data;<br>2. Calibration and audit results;<br>3. Stack test results;<br>4. The daily FCU COB fuel usage;<br>5. The coke burn rate and FCU throughput, both on a rolling 12 month average basis;<br>6. Detailed daily records of observations of visible emissions or the absence of visible emissions, or daily visible emissions observations, or other records identified in an approved alternative plan;<br>7. Date of every process unit or vessel turnaround;<br>8. COB firebox temperature;<br>9. Internal pressure of the process unit or vessel immediately prior to venting to the atmosphere;<br>10. VOC leak repair records required by 40 CFR 60.592 for existing components in</td>
<td>such information shall be included in the report.<br>C. Records of the internal pressures of process units and vessels during process unit turnarounds. [Reference APC-81/0829(A8)]<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. [Reference: 7 DE Admin. Code 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00].<br>.</td>
</tr>
</table>

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| to each planned start up or shut down event after the expiration of the 116 hour period. Planned start ups shall be considered a maximum of 116 hours preceding oil back into the unit. Planned shut downs shall be considered a maximum of 116 hour from feed out of the FCU. In lieu of the Emission Standards, the following Emission Standards shall apply during planned start ups and shut downs of the FCU:<br>1. VOC – 1.6 lb/hr<br>2. $H_2SO_4$ – 58 lbs/hr<br>3. TSP – 47.1 lbs/hr<br>4. $PM_{10}$ – 133.3 lbs/hr<br>5. $SO_2$ – 95 lbs/hr<br>6. CO – 415 lbs/hr<br>7. Ammonia – 2 lbs/hr<br><br>H. This Permit does not authorize emissions exceeding the limits set forth in Condition 3 - Table 1.da.2 through da.10 including emissions during periods of any unplanned shutdown of the FCU, or any unplanned shutdown or bypass of the FCU COB or the Belco prescrubber or WGS. Instead, in the event of any unplanned shutdown of the FCU or any unplanned shutdown or bypass of the FCU COB or Belco prescrubber or the WGS, the Owner/Operator | light liquid and gaseous service and 40 CFR 63.654 for new components in light liquid and gaseous service.<br>11. Bypass stack $SO_2$ emissions as calculated according to Operational Limitation H; and<br>12. Backup incinerator operating hours, furnace temperature, percent $O_2$, and opacity.<br>J. The depressurization venting of process units and vessels during turnaround shall be documented.<br>K. The rolling 12 month total emissions for each pollutant shall be calculated and recorded each month in an easily accessible format for each pollutant listed in Condition 3 - Table 1.da. | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| shall bear the burden of demonstrating to the Department's satisfaction that the Owner/Operator's continued operation of the FCU should not subject the Owner/Operator to an enforcement action for noncompliance with emission limitations or operating standards included in this Permit or otherwise applicable to the facility under the State of Delaware "Regulations Governing the Control of Air Pollution." Such demonstration must at a minimum be supported by sufficient documentation and emissions data including all relevant emissions calculations, formulas, and any assumptions made thereof. The Department's evaluation shall consider, the specific circumstances of the event, including without limitation 1) the cause of, and the Owner/Operator's response to, the unplanned shutdown; 2) whether the Owner/Operator has taken all reasonable and prudent steps to abide by the emissions limit conditions; 3) whether the Owner/Operator has taken all reasonable and prudent steps to minimize the emissions associated with the plant; 4) the degree to | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| which the Owner/Operator has reduced throughput to the FCU, and the basis for such degree of reduction; 5) the estimated emissions associated with a complete shutdown of the FCU; 6) whether the Owner/Operator has reviewed all prior similar causes of unplanned shutdowns and had taken all reasonable and prudent actions necessary to avoid future similar outages; and 7) the actual emissions during the period of the unplanned shutdown.<br>1. Should the Owner/Operator operate the backup incinerator, the Owner/Operator shall abide by the following:<br>a. Carbon Monoxide combustion shall be achieved at a minimum of 1300°F, and at a minimum retention time of 0.3 seconds; and<br>b. Maximum particulate matter emissions of 0.19 grain per dry standard cubic foot ("dscf") shall be achieved either by operating at a temperature of 1700°F, a minimum excess of 1.9% $O_2$ and a residence time of 2.0 seconds, or, at such other alternate operating conditions as have been | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| demonstrated by testing to achieve equivalent emissions.<br>I. During process unit turnarounds the Company shall provide for the following:<br>1. Depressurization venting of the process unit or vessel to a vapor recovery system, flare or firebox.<br>2. No emission of VOC from a process unit or vessel until its internal pressure is 136 kiloPascals (kPa) (19.7 psia) or less.<br>J. There shall be no emissions of uncondensed VOCs from the condensers, hot wells or accumulators of any vacuum producing unit. *[Reference: APC-81/0829(A8)]* | | |
| 2a. Particulate Matter:<br>i. Emission Standard:<br>A. For 22-H-1 and 22-H-2: The Owner/Operator shall not cause or allow the emission of particulate matter in excess of 0.3 lb/mmBTU heat input, maximum 2-hour average. *[Reference: **DE Admin. Code** 1104 Section 2.1 dated 2/1/81]*<br>B. For 22-H-3: The Owner/Operator shall not cause or allow the emission of particulate matter in excess of those specified in Table 4 of Regulation 5. *[Reference: **DE Admin. Code** 1105 Section 5.2 dated 2/1/81]* | iii. Compliance Method: *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. Compliance with Emission Standard (A) shall be based on the fuel type and quality.<br>B. Compliance with the Emission Standard (B) shall be based on monitoring/testing and recordkeeping requirements.<br>C. Compliance with Emission Standard (C) shall be based upon stack testing conducted in accordance with Condition 3 - Table 1.da.2a.iv.A.<br>D. Compliance with the Operational Limitation shall be demonstrated by record keeping.<br>iv. Monitoring/Testing: *[Reference: APC-81/0829 (A8) and 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* | vi. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vii. That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| C. For the FCU WGS:<br>1. TSP emissions shall not exceed 60.9 lb/hour and 266.8 TPY, and<br>2. $PM_{10}$ emissions (including TSP and $H_2SO_4$) shall not exceed 128.4 lb/hour and 562.4 TPY. *[Reference APC-81/0829 (A8)]*<br>ii. Operational Limitation:<br>With the exception of process off gas in units 22-H-3 and 22-H-4 only desulfurized RFG may be combusted in units 22-H-1, 22-H-2, 22-H-3 and 22-H-4. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2 dated 12/11/00]* | A. The Owner/Operator shall conduct annual performance testing of the WGS, unless the Department approves less frequent testing, as follows:<br>1. RESERVED<br>2. For TSP, testing in accordance with Reference Method 5B in Appendix "A" of 40 CFR Part 60, or other testing methodology approved by the Department.<br>3. For $PM_{10}$ (including TSP and $H_2SO_4$), testing shall be in accordance with Methods 5B/202, or other testing methodology approved by the Department.<br>v. Recordkeeping: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]*<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.da.1.iv. | |
| 2b. Compliance Assurance Monitoring Plan for Particulate Matter | | |
| i. Emission Standard<br>A. For 22-H-3: The Owner/Operator shall not cause or allow the emission of particulate matter in excess of those specified in Table 4 of Regulation 5 *[Reference: **DE Admin. Code** 1105 Section 5.2 dated 2/1/81]*<br>B. For the FCU WGS:<br>1. TSP emissions shall not exceed 60.9 lb/hour and 266.8 TPY, and<br>2. $PM_{10}$ emissions (including TSP and $H_2SO_4$) shall not exceed 128.4 lb/hour and 562.4 TPY. *[Reference APC-81/0829 (A8)]* | 3. Compliance Method<br>Compliance shall be demonstrated by records of the required monitoring. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>4. Monitoring *[Reference: 40 CFR Part 64.3 and 64.4 dated 10/22/97]*<br>A. Data Representativeness *[Reference: 40 CFR Part 64.6(c)(1)(iii) dated 10/22/97]*<br>1. For the primary indicator: pressure drop indication shall be based on pressure indicators located prior to the Agglo-filtering modules and prior to the Cylolab Droplet Separators. | 7. Reporting<br>A. Quality Improvement Plan (QIP)<br>1. The Company shall submit a QIP in accordance with 40 CFR Part 64.8(b) if any stack tests reveal higher than permitted emission rates. *[Reference: 40 CFR Part 64.7(e) dated 10/22/97]*<br>2. The Company shall submit a QIP in accordance with 40 CFR Part 64.8(b) if excursions exceed 5% of the unit's operating time for a reporting period. *[Reference: 40 CFR Part 64.8(a) dated 10/22/97]*<br>B. The Company shall notify the |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| ii. Operational Limitations<br>A. Indicators *[Reference: 40 CFR Part 64.6(c)(1)(i) dated 10/22/97]*<br>1. Scrubber pressure drop shall be used as the primary indicator<br>2. Scrubber pump discharge shall be used as the secondary indicator<br>B. Indicator Ranges *[Reference: 40 CFR Part 64.6(c)(1)(i) dated 10/22/97]*<br>1. For the primary indicator: Minimum delta-P of 6 inches of water column for no more than 3 minutes in any 1 hour or more than 15 minutes in any 24-hour period.<br>2. For the secondary indicator: Minimum discharge pressure satisfying the less stringent of:<br>115 psig or<br>95 % of the average discharge pressure recorded during performance testing as specified in for no more than 3 minutes in any 1-hour or more than 15 minutes in any 24-hour period. *[Reference: APC-81/0829 (A8)]*<br>C. Excursions *[Reference: 40 CFR Part 64.6(c)(2) dated 10/22/97]*<br>1. An excursion shall be defined as any deviation from the ranges specified in the Indicator Ranges (B)(1) or (B)(2).<br>2. An excursion shall trigger an inspection, corrective action, and a | 2. For the secondary indicator: pressure drop indication shall be based on a pressure indicator located after the quench/pre-scrubber recirculation pumps.<br>B. Verification of Operational Status for both indicators:<br>Annual stack testing conducted in accordance with Condition 3 - Table 1da.2a.iv.A. *[Reference: 40 CFR Part 64.6(c)(1)(iii) dated 10/22/97]*<br>C. QA/QC Practices for both indicators:<br>Annual stack testing conducted in accordance with Condition 3 - Table 1da.2a.iv.A. *[Reference: 40 CFR Part 64.6(c)(1)(ii) dated 10/22/97]*<br>D. Frequency for both indicators shall be continuous. *[Reference: 40 CFR Part 64.6(c)(1)(iii) dated 10/22/97]*<br>E. Data Collection Procedures for both indicators shall be collected and stored via the Refinery Process Historian *[Reference: 40 CFR Part 64.6(c)(1)(iii) dated 10/22/97]*<br>F. Averaging Period for both indicators:<br>On a 1-minute basis. *[Reference: 40 CFR Part 64.6(c)(1)(iii) dated 10/22/97]*<br><br>5. Testing *[Reference: 40 CFR Part 64.6 dated 10/22/97]*<br>None in addition to those required by Condition 3 - Table 1da.2a.iv.A.<br><br>6. Record Keeping *[Reference: 40 CFR Part 64.9(b) dated 10/22/97]*<br>A. The Company shall maintain records of the following:<br>1. Monitoring data;<br>2. Monitor performance data; | Department at least 30 days prior to any reestablishment of excursion values. *[Reference: 40 CFR Part 64.6(c)(2) dated 10/22/97]*<br>C. The report required by Condition 3(c)(2) of this permit shall also contain the following information: *[Reference: 40 CFR Part 64.9(a)(2) dated 10/22/97]*<br>1. Summary information on the number, duration, and cause of excursions or exceedances;<br>2. The corrective actions taken after an excursion or exceedance;<br>3. Summary information on the number, duration, and cause of monitor downtime incidents; and<br>4. If triggered, a description of the actions taken to implement the QIP.<br><br>8. Certification<br>None in addition to that required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.2 dated 12/11/2000]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| reporting requirement. *[Reference: 40 CFR Part 64.7(d) dated 10/22/97]*<br>D. Monitoring/Measurement Approach *[Reference: 40 CFR Part 64.6(c)(1)(ii) dated 10/22/97]*<br>1. Pressure drop for the primary indicator shall be based on pressure transducer measurements obtained upstream of the Agglo-filtering modules and upstream of the Cylolab Droplet Separators.<br>2. Pressure drop for the secondary indicator shall be based on pressure transducer measurements obtained at the quench/pre-scrubber recirculation pumps discharge.<br>E. At all times, the Company shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment. *[Reference: 40 CFR Part 64.7(b) dated 10/22/97]*<br>F. At all times, the Company shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. | 3. Corrective actions taken;<br>4. Any written quality improvement plan (QIP) required pursuant to 64.8;<br>5. Any activities undertaken to implement a QIP; and<br>6. All supporting information used to demonstrate compliance. | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are cause in part by poor maintenance or careless *operation are not malfunctions.* *[Reference: 40 CFR Part 64.7(c) dated 10/22/97]* | | |
| 3. Sulfur Dioxide ($SO_2$):<br>i. Emission Standards:<br>A. $SO_2$ emissions shall not exceed 25 ppmvd @ 0% $O_2$ on a rolling 365 day average, 50 ppmvd @ 0% $O_2$ on a rolling 7 day average, and 182.3 TPY. *[Reference APC-81/0829 (A8)]* | ii. Compliance Method: *[Reference : 7 **DE Admin. Code** 1130 Sections 6.1.3.1.2 dated 12/11/00]*<br>A. Compliance with Emission Standard (A) shall be based on CEMS. *[Reference APC-81/0829(A8)]*<br><br>iii. Monitoring/Testing: *[Reference APC-81/0829 (A8) and 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. RESERVED<br>B. The CEMS for $SO_2$ and $O_2$ must be certified by satisfying the applicable Performance Specifications in 40 CFR, Part 60, Appendix "B". The QA/QC procedures for the $SO_2$ and $O_2$ CEMS shall be established in accordance with the procedures in 40 CFR 60, Appendix "F".<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.da.1.iv. | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "General Conditions" in Condition 3 - Table 1.da.1.v *[Reference :7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 4. Nitrogen Oxides ($NO_X$):<br>i. Emission Standard:<br>A. For Unit 22-H-2: $NO_X$ emissions shall not exceed those achieved through an annual tune up performed by qualified personnel. *[Reference: 7 **DE Admin. Code** 1112, Section 3.3.2 dated 11/24/93]*<br>B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j.<br>C. $NO_X$ emissions from the FCU WGS shall not exceed 152 ppmvd @ 0 % oxygen on a 30-day rolling average basis. *[Reference APC-81/0829(A8)]* | ii. Compliance Method:<br>A. Compliance with Emission Standard (A). shall be by conducting an annual tune up of each unit by qualified personnel. *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3, Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1 dated 12/11/00]*<br>C. Compliance with the Emission Standard (C) shall be based on CEMS. *[Reference APC-81/0829(A8)]*<br><br>iii. Monitoring/Testing:<br>A. For Unit 22-H-2: None in addition to the annual tune up required in Compliance Method A.<br>B. The CEMS for $NO_X$ and $O_2$ must be certified by satisfying the applicable Performance Specifications in 40 CFR, Part 60, Appendix "B". The QA/QC procedures for the $NO_X$ and $O_2$ CEMS shall be established in accordance with the procedures in Appendix "F" of 40 CFR, Part 60. *[Reference APC-81/0829 (A8)]*.<br>C. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1 dated 12/11/00]*<br><br>iv. Recordkeeping:<br>The following records shall be maintained in accordance with Condition 3(b):<br>A. A log of all tune ups performed and documentation of qualifications of personnel | v. Reporting:<br>A. That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "General Conditions" in Condition 3 - Table 1.da.1.v *[Reference :7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>B. RESERVED<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | responsible for conducting the tune up.<br>B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.2 dated 12/11/00]*<br>C. [**RESERVED**]<br>D. [**RESERVED**] | |
| 5. Carbon Monoxide (CO):<br>i. Emission Standards: *[Reference APC-81/0829 (A8)]*<br>A. CO emissions from the FCU WGS shall not exceed 500 ppm dry @ 0% $O_2$ on an hourly average, 200 ppm dry @ 0% $O_2$ on a rolling 365 day average, and 694.4 TPY.<br>B. The Owner/Operator shall not cause or allow the emission of carbon monoxide from the FCU unless it is burned at no less than 1300º F for at least 0.3 seconds in the FCU COB. | ii. Compliance Method *[Reference APC-81/0829 (A8)]*:<br>A. Compliance with Emission Standard (A) shall be based on CEMS.<br>B. Compliance with Emission Standard (B) is defined as maintaining a firebox temperature of no less than 1300º F as measured on a minute average basis.<br><br>iii. Monitoring/Testing:<br>A. The Owner/Operator shall monitor the firebox temperature of the FCU COB continuously. *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>B. The QA/QC procedures for the CO CEMS and shall be in accordance with the procedures in Appendix "F" of 40 CFR Part 60.<br><br>iv. Recordkeeping:<br>The following records shall be maintained in accordance with Condition 3(b):<br>A. COB firebox temperature.<br>B. The rolling 12 month total emissions for CO shall be calculated and recorded each month in an easily accessible format.<br>C. [RESERVED] | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "General Conditions" in Condition 3 - Table 1.da.1.v *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 6. Volatile Organic Compounds (VOCs):<br>i. Emission Standards: *[Reference APC-81/0829 (A8)]*<br>A. VOC emissions from the FCU WGS shall not exceed 0.14 lb/mmDSCF of stack gas and 8.2 TPY.<br>B. The leak detection and repair requirements to control fugitive VOC emissions from the FCU shall be in accordance with the requirements in 40 CFR 60, Subpart GGG for existing components in light liquid and gaseous service and in accordance with 40 CFR 60, Subpart CC for new components in light liquid and gaseous service. The leak detection and repair requirements to control fugitive emissions from the FCU shall be in accordance with the Consent Decree for both new and existing components in light liquid and gaseous service.<br><br>ii. Operational Limitation:<br>A. [**RESERVED**] | iii. Compliance Method *[Reference APC-81/0829 (A8)]*:<br>A. Compliance with Emission Standard (A) shall be based on stack testing to be conducted in accordance with Condition 3 - Table 1.da.6.iii.A.<br>B. Compliance with Emission Standard B for new components in light liquid and gaseous service shall be based on compliance with the standards in 40 CFR 63.162 through 63.177. Compliance with the standards in 40 CFR subpart GGG for existing components in light liquid gaseous service shall be based on the test methods and procedures in 40 CFR 60.592 and compliance with the requirements of 40 CFR Part 63 subpart CC shall be based on the standards in 40 CFR 63.648.<br>C. [**RESERVED**]<br>D. [**RESERVED**]<br><br>iv. Monitoring/Testing:<br>A. The Owner/Operator shall conduct performance testing every three years, unless the Department approves less frequent testing. Each performance test conducted shall be performed in accordance with Reference Method 25A in Appendix "A" of 40 CFR Part 60, and shall determine and report results as total hydrocarbons. *[Reference APC-81/0829 (A8)]*<br><br>v. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple | vi. Reporting Requirement:<br>A. That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "General Conditions" in Condition 3 - Table 1.da.1.v *[Reference :7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>B. Leak detection and repair reports shall be submitted as required by 40 CFR 60.592 for existing components in light liquid and gaseous service and 40 CFR 63.654 for new components in light liquid and gaseous service. *[Reference APC-81/0829 (A8)]*<br><br>vii. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | Pollutants" in Condition 3 - Table 1.da.1.iv.<br>A. [**RESERVED**]<br>B. VOC leak repair records required by 40 CFR 60.592 for existing components in light liquid and gaseous service and 40 CFR 63.654 for new components in light liquid and gaseous service. *[Reference APC-81/0829 (A8)]* | |
| 7. Sulfuric Acid (H2SO4):<br>i. Emission Standard: *[Reference APC-81/0829 (A8)]*<br>A. $H_2SO_4$ emissions from the FCU shall meet one of the following standards:<br>1. $H_2SO_4$ emissions shall be reduced by at least 40% across the wet gas scrubber system; or<br>2. The outlet concentration of $H_2SO_4/SO_3$ from the stack shall be no greater than 10 ppmvd<br>B. $H_2SO_4$ emissions from the FCU WGS shall not exceed 67.5 lb/hr and 295.7 TPY. | ii. Compliance Method: *[Reference APC-81/0829 (A8)]* Compliance with the Emission Standard (A) shall be based on stack testing conducted in accordance with Condition 3 - Table 1.da.7.iii.<br><br>iii. Monitoring/Testing: The Owner/Operator shall conduct annual performance tests, unless the Department approves less frequent testing, in accordance with Reference Method 8 in Appendix "A" of 40 CFR Part 60, or other testing methodology approved by the Department. *[Reference APC-81/0829 (A8)]*<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.da.1.iv. | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "General Conditions" in Condition 3 - Table 1.da.1.v. *[Reference : **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 8. Ammonia ($NH_3$):<br>i. Emission Standard:<br>Ammonia emissions from the FCU shall not exceed 2.3 lb/hour and 10.2 TPY. *[Reference APC-81/0829 (A8)]* | ii. Compliance Method: *[Reference APC-81/0829 (A8)]*<br>Compliance with the Emission Standard shall be based on an initial performance test.<br><br>iii. Monitoring/Testing: *[Reference APC-81/0829 (A8)]*<br>The initial performance test shall be conducted in accordance with EPA Conditional Test Method 27.<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.da.1.iv. | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "General Conditions" in Condition 3 - Table 1.da.1.v *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |
| 9. Lead (Pb):<br>i. Emission Standard:<br>Pb emissions from the FCU shall not exceed 4.37 E-04 pounds per thousand pounds of coke burned and 0.12 TPY. *[Reference APC-81/0829 (A8)]* | ii. Compliance Method:<br>Compliance with the Emission Standard shall be based on the stack test based emission factor in terms of lb/Mlb coke burn rate. *[Reference APC-81/0829 (A8)]*<br><br>iii. Monitoring/Testing:<br>The Owner/Operator shall conduct performance testing every three years, unless the Department approves less frequent testing. *[Reference APC-81/0829 (A8)]*<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.da.1.iv. | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "General Conditions" in Condition 3 - Table 1.da.1.v *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 10. Hazardous Air Pollutants (HAPs):<br>i. Emission Standards:<br>A. Nickel (Ni) emissions shall not exceed 0.001 pounds per 1,000 pounds of coke burned and 0.27 TPY. *[Reference APC-81/0829 (A8)]*<br><br>B. HAP emissions from the FCU from a Group 1 miscellaneous process vent, as defined by 40 CFR 63.641, shall be controlled in accordance with 40 CFR 63.643(b). | ii. Compliance Method:<br>Compliance with the Emission Standard shall be based on the stack test based emission factor in terms of lb/Mlb coke burn rate. *[Reference APC-81/0829 (A8)]*<br><br>iii. Monitoring/Testing:<br>The Owner/Operator shall conduct performance testing every three years, unless the Department approves less frequent testing. *[Reference APC-81/0829 (A8)]*<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.da.1.iv. | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "General Conditions" in Condition 3 - Table 1.da.1.v *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00* |
| 11. Visible Emissions:<br>i. Emission Standards:<br>The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than 20 percent opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period. *[Reference 7 **DE Admin. Code** 1114, Section 2.1, dated 7/17/84 and APC-81/0829 (A8)].* | ii. Compliance Method:<br>A. For units 22-H-2 and 22-H-4: Comply with "Visible Emissions Standard" in Condition 3 - Table 1.ob.1. *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>B. For units 22-H-1 and 22-H-3 compliance shall be demonstrated by the AMP.<br><br>iii. Monitoring/Testing:<br>A. [**RESERVED**]<br>B. For Units 22-H-2 and, when operating, 22-H-4, the Owner/Operator shall conduct daily qualitative stack observations to determine the presence of any visible emissions when the unit is in operation.<br>1. If visible emissions are observed, the Owner/Operator shall take corrective actions and/or conduct a visible | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "General Conditions" in Condition 3 - Table 1.da.1.v. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | observation in accordance with Paragraph C below.<br>2. If no visible emissions are observed, no further action is required.<br>C. For periods when the CO Boiler (22-H-3) is firing refinery fuel gas only, the Owner/Operator shall conduct daily qualitative stack observations to determine the presence of any visible emissions when the unit is in operation.<br>1. If visible emissions are observed, the Owner/Operator shall take corrective actions and/or conduct a visible observation in accordance with Paragraph E.<br>2. If no visible emissions are observed, no further action is required.<br>D. AMP: The Owner/Operator shall continuously monitor the pressure drop across the Agglo-filtering modules and Cyclolab Droplet Separators and the quench/pre-scrubber recirculation pump discharge pressure. The determination that the opacity from the FCU WGS stack, when it is operating, shall not be greater than 20% for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period shall be based upon the following parametric monitoring:<br>1. The minimum delta-P across the Agglo-Filtering modules and Cycolab Droplet Separators shall be 6 inches WC, evaluated on a one minute average | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | basis; and<br>2. A minimum discharge pressure, evaluated on a one minute average basis, from the quench/pre-scrubber recirculation pumps satisfying the less stringent of:<br>a. 115 psig, or<br>b. The discharge pressure equivalent to 95% of the average discharge pressure recorded during performance testing performed in accordance with the methods identified in Condition 3 – Table 1.da.2.iv.3, provided that such performance testing also includes a demonstration of compliance with the visual emissions standard identified in Condition 3 - Table 1.da.11.i using EPA Method 9.<br>3. Notwithstanding Condition 3 - Table 1.da.11.iii.D.2, if the discharge pressure from the quench/pre-scrubber falls below the minimum discharge pressure established under Condition 3 - Table 1.da.11.iii.D.2 for greater than 3 minutes in any hour or more than 15 minutes in any 24 hour period, the Owner/Operator may perform a visual emission test in accordance with EPA Reference Method 9 to establish that visible emissions do not exceed the opacity standard specified in Condition 3 - Table 1.da.11.i at the reduced discharge pressure. In | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | such case, the new minimum discharge pressure from the quench/pre-scrubber recirculation pumps shall be the average discharge pressure recorded during the Method 9 test, and shall be used in conjunction with Condition 3 - Table 1.da.11.iii.D.1 to evaluate compliance with Condition 3 - Table 1.da.11.i.<br><br>E. If required under paragraph C above, the Owner/Operator shall, in accordance with Subsection 1.5(c) of 7 **DE Admin. Code** 20, conduct visual observations at fifteen-second intervals for a period of not less than one hour except that the observations may be discontinued whenever a violation of the standard is recorded. The additional procedures, qualification and testing to be used for visually determining the opacity shall be those specified in Section 2 & 3 (except for Section 2.5 and the second sentence of Section 2.4) of Reference Method 9 set forth in Appendix A, 40 CFR, Part 60, revised July 1, 1982. *[Reference 7 **DE Admin. Code** 1120, Section 1.5(c) dated 12/7/88].*<br><br>iv. Recordkeeping: *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]*<br>The following records shall be maintained in accordance with Condition 3(b):<br>A. Detailed daily records of observations of visible emissions or the absence of visible emissions, or other records identified in an approved alternate plan. | |

**Condition 3 - Table 2 (Specific Requirements)**

<table>
<tr><th>Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s)</th><th>Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping</th><th>Reporting/Compliance Certification</th></tr>
<tr><td colspan="3">db. Emission Unit No. 22: Petroleum Coke Storage and Handling Complex: Emission Point 22-1</td></tr>
<tr>
<td>1. Particulate Matter (PM)<br>i. Emission Limitations:<br>A. PM emissions shall not exceed 0.2 grain/dscf from any baghouse exhaust. [Reference 7 DE Admin. Code 1105, Section 2.1, dated 2/1/81].<br>B. [RESERVED]<br>C. PM emissions from the following baghouses shall not exceed 0.014 grains/scf[1]:
<table>
<tr><th>Emission Pt</th><th>Control Number</th></tr>
<tr><td>PS-01A</td><td>Conveyor A, BH-1</td></tr>
<tr><td>PS-02A</td><td>Conveyor B, BH-2</td></tr>
<tr><td>PS-03A</td><td>Conveyor C, BH-3</td></tr>
<tr><td>PS-04A</td><td>Conveyor D, BH-4</td></tr>
<tr><td>PS-05</td><td>Railcar Loading, BH-5</td></tr>
</table>
D. PM emissions from the Pugmills and Scrubber (Emission Pt. PS-06) shall not exceed 0.067 grains/scf[1].<br>E. Aggregate emissions from the emission points identified in sections B and C above, truck and railcar loading and from the storage pile in the barn shall not exceed 27.2 tons per year of PM and 20.1 tons per year of PM10. “Tons per year” shall mean</td>
<td>iii. Compliance Method:<br>A. [RESERVED]<br>B. [RESERVED]<br>C. [RESERVED]<br>D. [RESERVED]<br>E. Compliance with Emission Limitations (A) through (C) shall be based on initial stack tests for PM and PM10 shall be conducted at the scrubber and baghouses in accordance with the appropriate testing methods and at 5 year intervals thereafter. A list of baghouses to be tested shall be submitted for the Department’s approval. After the initial tests, the Company may petition the Department to reduce the number of units retested. [Reference: 7 DE Admin. Code 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-82/1209 (A7)].<br>F. Compliance with Emission Limitation (D) shall be based upon stack test data conducted pursuant to Compliance Method (A) using the calculation methodology in its September 17, 2010 permit application. [Reference: 7 DE Admin. Code 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-82/1209 (A7)]<br>G. Compliance with Emission Limitation (D) shall be based upon stack test data conducted pursuant to Compliance Method (A) using the calculation methodology in its September 17, 2010 permit application. [Reference: 7 DE Admin. Code 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-82/1209 (A7)]).</td>
<td>vi. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and quarterly reports of the Daily Ambient TSP monitoring. [Reference 7 DE Admin. Code 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00 and APC-82/1209 (A7)]<br><br>vii. Certification:<br>That required by Condition 3(c)(3) of this permit. [Reference: 7 DE Admin. Code 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00</td>
</tr>
</table>

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| total emissions on a rolling 12-month basis.<br>F. The Company shall not cause or allow visible particulate emissions of any petroleum coke that is being transported by a motor vehicle within the refinery.<br>G. The Company shall not cause or allow the transport of material to or from the barn in such a manner as may cause a condition of air pollution.<br>*[Reference APC-82/1209 (A7)].*<br><br>1. *The outlet grain loading emission rate shall be the arithmetic mean of the results of the three test runs as required by the stack testing requirement.*<br><br>ii. Operational Limitations: *[Reference APC-82/1209 (A7)].*<br>A. [**RESERVED**]<br>B. [**RESERVED**]<br>C. The moisture content of the coke transported by truck shall be greater than 8% at all times and greater than 10% on an annual average basis.<br>D. [**RESERVED**]<br>E. [**RESERVED**]<br>F. [**RESERVED**]<br>G. [**RESERVED**]<br>H. The Company shall pave and maintain as paved all roads and truck movement areas within the facility that | H. Compliance with Operational Limitation (C) shall be based on the sampling and monitoring requirements. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-82/1209 (A7)]*<br>I. Compliance with Operational Limitations (J), (K) and (L) shall be based on information available to the Department concerning the Owner/Operator's actions with respect to such events, and shall include the Department's review of all available facts and circumstances including, but not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.<br>J. Compliance with Operational Limitation (N) shall be based on continuously monitoring the differential pressure across the scrubber and the baghouses.<br>K. Compliance with Operational Limitations (M) and (N) shall be based upon proper operation of the railcar loading dust collector system. Proper operation of the dust collector system shall be based on compliance with the manufacturer's recommended operating procedures and parameters.<br>*[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-82/1209(A7)]*<br><br>iv. Sampling/Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-82/1209(A7)]*<br>A. [**RESERVED**] | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| are used in transporting or moving petroleum coke.<br>I. The Company shall regularly use a street sweeper or other approved method to clean the paved areas where coke accumulates.<br>J. Trucks containing coke must be covered at all times except when being loaded with coke or as soon as practicable thereafter.<br>K. This permit does not authorize importing coke into the refinery and does not authorize the storage of coke in areas outside the coker silo and the coke barn.<br>L. The differential pressure ranges for the scrubber and baghouses shall operate within the manufacturer's established ranges.<br>M. The gravity chute and extendable load out spout for loading railcars shall extend to the railcar being loaded during railcar loading operations. The loading operation shall not generate any visible emissions at his transfer point.<br>N. Railcar loading operations shall not be conducted unless its dust collector system is operating properly. Proper operation of the dust collector system shall be based on compliance with the manufacturer's recommended operating procedures and parameters. | B. [**RESERVED**]<br>C. The moisture content of the coke shall be based on collecting a sample of coke each day that petroleum coke is loaded into trucks and analyzing the sample. After one year of testing demonstrating that the source is meeting the requirements, the Company may petition the Department to reduce the testing frequency to weekly.<br>D. The Company shall conduct daily ambient TSP monitoring in accordance with the "Quality Assurance Project Plan & Standard Operation Procedures for the Ambient Continuous Particulate Air Quality Monitoring Program at the Motiva Delaware City Power Plant and Coke and Flux Handling/Storage Facility", dated April 2002. If no exceedance of the secondary Delaware TSP 24-hour AAQS is monitored for any one year period after the issuance of the operating permit, the Company may petition the Department to approve ceasing monitoring operations.<br><br>v. Recordkeeping: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-82/1209 (A3)].* The following records shall be maintained in accordance with Condition 3(b):<br>A. [**RESERVED**]<br>B. [**RESERVED**]<br>C. [**RESERVED**]<br>D. [**RESERVED**]<br>F. [**RESERVED**]<br>G. [**RESERVED**] | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | H. [**RESERVED**]<br>I. The rolling 12 month total TSP and $PM_{10}$ emissions shall be calculated and recorded each month.<br>J. Continuous scrubber and baghouse differential pressures when required.<br>K. Stack test results and related data, regardless of whether or not the stack test is completed.<br>L. Records of daily ambient TSP monitoring. | |
| 2. Visible Emissions<br>i. Emission Standards:<br>The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from a stationary source, the shade or appearance of which is greater than 20 percent opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 months in any 24 hour period. *[Reference 7 **DE Admin. Code** 1114, Section 2.1 dated 7/17/84 and APC-82/1209(A7)]* | ii. Compliance Method:<br>Compliance shall be demonstrated by monitoring and testing requirements, and record keeping. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-82/1209(A7)]*<br>A. For each baghouse, compliance shall be demonstrated by operating and monitoring a broken bag detection system or by performing daily qualitative stack observations in accordance with Monitoring/Testing Paragraph (A) below.<br>B. For the scrubber, compliance shall be demonstrated by operating the scrubber within the specified differential pressure range established in accordance with Part 3, Condition 3 – Table 1.db.1.ii.H or by performing daily qualitative stack observations in accordance with Monitoring/Testing Paragraph (A) below.<br><br>iii. Monitoring/Testing:<br>A. When required by Section 2.ii above, the | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | Owner/Operator shall conduct daily qualitative stack observations to determine the presence of any visible emissions when the unit is in operation.<br>1. If visible emissions are observed, the Owner/Operator shall take corrective actions and/or conduct a visible observation in accordance with Paragraph (B) below.<br>2. If no visible emissions are observed, no further action is required.<br>B. If required under paragraph A above, the Owner/Operator shall, in accordance with Subsection 1.5(c) of 7 **DE Admin. Code** 1120, conduct visual observations at fifteen-second intervals for a period of not less than one hour except that the observations may be discontinued whenever a violation of the standard is recorded. The additional procedures, qualification and testing to be used for visually determining the opacity shall be those specified in Section 2 & 3 (except for Section 2.5 and the second sentence of Section 2.4) of Reference Method 9 set forth in Appendix A, 40 CFR, Part 60, revised July 1, 1982. *[Reference 7 **DE Admin. Code** 1120, Section 1.5.3 dated 12/7/88 and 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00].*<br><br>iv. Record keeping: *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]*<br>The Owner/Operator shall maintain the following records in accordance with Condition 3(b): | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | A. Observation records shall be maintained and made available to the Department upon request.<br>B. The date, time, location and corrective actions taken when the broken bag detection system indicates a potential failure. | |
| **e. Emission Unit No. 23: Fluid Catalytic Cracking Unit (FCCU); FCCU Reactor, Catalyst Regenerator, Start up Heaters 23-H-1 A and B, Carbon Monoxide Boiler, 23-H-3, and Wet Gas Scrubber System (WGS) (emission point 23-1);** | | |
| 1. General Conditions:<br>i. Operational Limitations: *[Reference APC-82/0981 (A9)]*<br>A. Except as allowed by operational limitation G, the Owner/Operator shall not burn any fuel gas in any fuel gas combustion device that contains hydrogen sulfide ($H_2S$) in excess of 0.10 gr/dscf (162 ppm).<br>B. Except as provided in Operating Limitation J, the COB, Belco pre-scrubber, the amine-based Cansolv regenerative WGS, and the caustic polishing scrubber shall be operating properly at all times when the FCCU is operating.<br>C. During planned start ups of the FCCU, the FCCU COB and WGS shall be operating prior to introducing feed into the riser reactor of the FCCU. In the event of a planned shutdown of the FCCU, the FCCU COB or the WGS, the Owner/Operator shall continue to | ii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. Compliance with Operational Limitations A and B shall be based on monitoring/testing and recordkeeping requirements.<br>B. Compliance with operational limitations C, and E shall be based on information available to the Department concerning the Owner/Operator's actions with respect to such events, and shall include the Department's review of all available facts and circumstances including, but not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.<br>C. Compliance with the operational limitations F and G shall be demonstrated by monitoring/testing and record keeping requirements.<br>D. Compliance with Operational Limitation (D) shall be based on either piping the uncondensed vapors to a firebox or incinerator. Alternately, the vapors may be compressed and added to the refinery fuel gas. *[Reference APC-82/0981(A9)]* | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00and APC-82/0981 (A9)]*<br>A. Semiannual reports for the preceding six month period shall be submitted to the Department by January 31 and July 31 of each calendar year. The semiannual reports required by this section shall be increased in frequency to quarterly reports at the Department's discretion and shall become effective upon request of the Department after reasonable notice to the Owner/Operator. An electronic copy of all required reports shall be sent to the Department's compliance engineer assigned to the Refinery. The required reports shall contain the following information:<br>1. [**RESERVED**]<br>2. [**RESERVED**]<br>3. A summary of all periods when the FCCU WGS has been bypassed. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| operate the FCCU COB and WGS until there is no feed entering the riser reactor of the FCCU prior to commencing shut down of the FCCU COB and the WGS.<br>D. [**RESERVED**]<br>E. [**RESERVED**]<br>F. With the exception of operational Limitation (G), 23-H-1A/B and the FCCU COB (23-H-3) shall only combust desulfurized RFG. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2 dated 12/11/00]*<br>G. 23-H-3 may combust Alky Merox spent air from 24-C-10, Poly Merox spent air from 26-C-5 and process off gas from the regenerator. *[Reference:40 CFR Part 63, Subpart CC]*<br>H. The Emission Standards in Condition 3 - Table 1.e.4 through e.9 below, with the exception of e.7, shall not apply during periods when the FCCU COB is combusting refinery fuel gas only and during periods of planned shut downs and planned start ups of the FCCU for a period of time not to exceed 80 hours for each planned shut down and each planned start up event. The planned shut down period shall begin 8 hours prior to the time when there is no feed entering the FCCU reaction section. The planned start up period shall begin when dry-out of the FCCU is | E. Compliance with Operational Limitations H shall be determined based on engineering calculations.<br>iii. Monitoring/Testing:<br>A. The Owner/Operator shall continuously monitor and record the concentration (dry basis) of $H_2S$ in RFG before it is combusted in any fuel burning device. The monitoring instrument shall be located downstream of all process steps that increase the concentration of $H_2S$ in RFG prior to its being combusted in any fuel burning device. The $H_2S$ CEMS shall conform to the requirements of Performance Specification 7 of 40 CFR 60, Appendix "B" and comply with the Quality assurance requirements of 40 CFR 60, Appendix "F". The monitoring instrument shall conform to the requirements of Performance Specification 7 of 40 CFR 60, Appendix "B." The relative accuracy evaluation shall be conducted using Method 11 of 40 CFR 60, Appendix "A."*[Reference7 DE Admin. Code 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>B. [**RESERVED**]<br>C. During process unit turnarounds, the Company shall monitor the pressure in each process or vessel until its internal pressure is 136kPa or less. *[Reference APC-82/0981(A9)]*<br><br>iv. Recordkeeping: *[Reference APC-82/0981 (A9)]*<br>A. CEMS data, calibration and audit results.<br>B. The type of fuel combusted in the FCCU COB and 23-H-1 A and B and the daily FCCU COB fuel usage. | 4. Actual hourly $SO_2$ emissions during periods when the FCCU WGS was bypassed.<br>5. [**RESERVED**]<br>B. Quarterly CEMS reports for the preceding quarter shall be submitted to the Department for the CEMS required by this permit by January 31, April 30, July 31 and October 31 of each calendar year and shall include the following:<br>1. Excess emissions and the nature and cause of the excess emissions, if known. The summary shall consist of emission averages, in the units of the applicable standard, for each averaging period during with the applicable standard was exceeded.<br>2. The date and time identifying each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of system repairs or adjustments.<br>3. When no excess emissions have occurred and the CEMS have not been inoperative, repaired, or adjusted, such information shall be included in the report.<br><br>C. [**RESERVED**]<br><br>D. Quarterly $SO_2$ and CO CEMS reports for the preceding quarter shall be submitted |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| commenced. The Emission Standards in Condition 3 - Table 1.e.2 through e.9 shall apply to each planned start up event after the expiration of the 80 hour period following commencement of FCCU dry-out. In lieu of the Emission Standards, the following emission limitations shall apply during planned start ups and shut downs of the FCCU:<br><br>1. VOC – 9.5 lb/hr<br>2. PM – 500 lbs/hr<br>3. $SO_2$ – 165 lbs/hr<br>4. CO – 860 lbs/hr<br><br>I. In the event of an unplanned shutdown of the CO Boiler, the Owner/Operator shall as expeditiously as practicable but no later than 24 hours initiate promoted burn in the FCCU regenerator to control CO emissions in accordance with Condition 3, Table 1.e.5.i.<br>J. Except as provided in Operational Limitation D, this permit does not authorize emissions exceeding the limits set forth in Condition 3, Table 1.e.2 through e.9 including emissions during periods of any unplanned shutdown of the FCCU, or any unplanned shutdown or bypass | C. [**RESERVED**]<br>D. [**RESERVED**]<br>E. [**RESERVED**]<br>F. [**RESERVED**]<br>G. FCCU COB firebox temperature<br>H. [**RESERVED**]<br>I. [**RESERVED**]<br>J. The rolling 12 month total emissions for each pollutant shall be calculated and recorded each month in an easily accessible format for each pollutant listed in Condition 3 - Table 1.e.<br>K. Stack test results;<br>L. The daily FCCU COB fuel usage;<br>M. Detailed daily records of observations of visible emissions or the absence of visible emissions, or daily visible emissions observations, or other records identified in an approved alternative plan;<br>N. Date of each FCCU process unit or vessel turnaround;<br>O. Date and duration of seamless bypass operation;<br>P. Internal pressure of the process unit or vessel immediately prior to venting to the atmosphere; and<br>Q. VOC leak repair records required by 40 CFR 60.592 for existing components in light liquid and gaseous service and 40 CFR 63.654 for new components in light liquid and gaseous service.<br>R. The depressurization venting of process units and vessels during turnaround shall be | to the Department by January 30, April 30, July 30 and October 30 of each calendar year and shall include the information required by 40 CFR 60.7(c) and (d).<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| of the FCCU COB, or the Belco prescrubber or WGS system. Instead, in the event of any unplanned shutdown of the FCCU or any unplanned shutdown or bypass of the FCCU COB or Belco prescrubber or the WGS, the Owner/Operator shall bear the burden of demonstrating to the Department's satisfaction that the Owner/Operator's continued operation of the FCCU should not subject the Owner/Operator to an enforcement action for noncompliance with emission limitations or operating standards included in this Permit or otherwise applicable to the facility under 7 DE Admin. Code 1100. Such demonstration must at a minimum be supported by sufficient documentation and emissions data including all relevant emissions calculations, formulas, and any assumptions made thereof. The Department's evaluation shall consider, the specific circumstances of the event, including without limitation 1) the cause of, and the Owner/Operator's response to, the unplanned shutdown; 2) whether the Owner/Operator has taken all reasonable and prudent steps to | documented. *[Reference APC-82/0981(A9)]* | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| abide by the emissions limit conditions; 3) whether the Owner/Operator has taken all reasonable and prudent steps to minimize the emissions associated with the plant; 4) the degree to which the Owner/Operator has reduced throughput to the FCCU, and the basis for such degree of reduction; 5) the estimated emissions associated with a complete shutdown of the FCCU; 6) whether Premcor had reviewed all prior similar causes of unplanned shutdowns and had taken all reasonable and prudent actions necessary to avoid future similar outages; and 7) the actual emissions during the period of the unplanned shutdown.<br>K. During process unit turnarounds the Company shall provide for the following:<br>1. Depressurization venting of the process unit or vessel to a vapor recovery system, flare or firebox.<br>2. No emission of VOC from a process unit or vessel until its internal pressure is 136 kiloPascals (kPa) (19.7 psia) or less.<br>L. The Company shall evaluate the performance of the FCCU over a | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| contiguous 30-month period to verify the improvements anticipated by the project (the equipment authorized to be constructed by APC-82/0981-CONSTRUCTION (A9)(NSPS) issued February 3, 2011). The Company shall, based on this evaluation, submit a proposal to incorporate revised and lower emission limits for PM and $SO_2$ emissions, to the Department for its approval and incorporation into an operating permit. The proposal shall be submitted to the Department within 90 days of the end of the evaluation period.<br>M. In the event that the FCCU COB is bypassed and/or shutdown, operation of the FCCU shall be in accordance with Attachment G of this permit. | | |
| 2a. Particulate Matter:<br>i. Emission Limitations:<br>A. [**RESERVED**]<br>B. TSP emissions from the WGS + system shall not exceed 1lb/1000 lb of coke burned and 203 TPY. *[Reference APC-82/0981 (A9)]* | iii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. [**RESERVED**]<br>B. Compliance with Emission Limitation (B) is based on stack testing conducted in accordance with Condition 3 - Table 1.e.2a.iv.<br><br>iv. Monitoring/Testing: *[Reference: APC-81/0829 (A9) and 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>The Owner/Operator shall conduct performance testing as follows annually, unless the | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv. and "General Conditions" in Condition 3 - Table 1.e.1.v. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | Department approves less frequent testing:<br>A. [**RESERVED**]<br>B. TSP: in accordance with Reference Method 5B in Appendix "A" of 40 CFR Part 60, or other testing methodology approved by the Department.<br>C. PM10: in accordance with Methods 5B/202, or other testing methodology approved by the Department. The Company may petition the Department to decrease the frequency of PM10 performance tests based on the results of any performance testing.<br><br>v. Record Keeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv. | permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 2b. Compliance Assurance Monitoring Plan for Particulate Matter | | |
| i. Emission Standard<br>A. For 23-H-3: The Owner/Operator shall not cause or allow the emission of particulate matter in excess of those specified in Table 4 of Regulation 1105 *[Reference: **DE Admin. Code** 1105 Section 5.2 dated 2/1/81]*<br>B. For the FCCU WGS:<br>1. TSP emissions shall not exceed 1 lb/1000 lb of coke burned and 203 TPY. *[Reference APC-82/0981 (A9)]*<br><br>ii. Operational Limitations:<br>A. Indicators: *[Reference: 40 CFR Part 64.6(c)(1)(i) dated 10/22/97]*<br>1. Scrubber pressure drop shall be used | iii. Compliance Method<br>Compliance shall be demonstrated by records of the required monitoring. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 dated 12/11/00 and 6.2.1 dated 12/11/00]*<br><br>iv. Monitoring *[Reference: 40 CFR Part 64.3 and 64.4 dated 10/22/97]*<br>A. Data Representativeness *[Reference: 40 CFR Part 64.6(c)(1)(iii) dated 10/22/97]*<br>1. For the primary indicator: pressure drop indication shall be based on pressure indicators located prior to the Agglo-filtering modules and prior to the Cylolab Droplet Separators.<br>2. For the secondary indicator: pressure drop | v. Reporting<br>A. Quality Improvement Plan (QIP)<br>1. The Company shall submit a QIP in accordance with 40 CFR Part 64.8(b) if any stack tests reveal higher than permitted emission rates. *[Reference: 40 CFR Part 64.7(e) dated 10/22/97]*<br>2. The Company shall submit a QIP in accordance with 40 CFR Part 64.8(b) if excursions exceed 5% of the unit's operating time for a reporting period. *[Reference: 40 CFR Part 64.8(a) dated 10/22/97]*<br>B. The Company shall notify the Department at least 30 days prior to any reestablishment of excursion values. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| as the primary indicator<br>2. Scrubber pump discharge shall be used as the secondary indicator<br>B. Indicator Ranges *[Reference: 40 CFR Part 64.6(c)(1)(i) dated 10/22/97]*<br>1. For the primary indicator: Minimum delta-P of 6 inches of water column for no more than 3 minutes in any 1 hour or more than 15 minutes in any 24-hour period.<br>2. For the secondary indicator: Minimum discharge pressure satisfying the less stringent of:<br>115 psig or<br>95 % of the average discharge pressure recorded during performance testing as specified in **Permit: APC-81/0829 (A9)** for no more than 3 minutes in any 1-hour or more than 15 minutes in any 24-hour period.<br>C. Excursions *[Reference: 40 CFR Part 64.6(c)(2) dated 10/22/97]*<br>1. An excursion shall be defined as any deviation from the ranges specified in the Indicator Ranges (B)(1) or (B)(2).<br>2. An excursion shall trigger an inspection, corrective action, and a reporting requirement. *[Reference: 40 CFR Part 64.7(d) dated 10/22/97]*<br>D. Monitoring/Measurement Approach *[Reference: 40 CFR Part 64.6(c)(1)(ii) dated 10/22/97]* | indication shall be based on a pressure indicator located after the quench/pre-scrubber recirculation pumps.<br>B. Verification of Operational Status for both indicators:<br>Annual stack testing conducted in accordance with Condition 3 - Table 1.da.2a.iv.A. *[Reference: 40 CFR Part 64.6(c)(1)(iii) dated 10/22/97]*<br>C. QA/QC Practices for both indicators shall be Annual stack testing conducted in accordance with Condition 3 - Table 1da.2a.iv.A. *[Reference: 40 CFR Part 64.6(c)(1)(ii) dated 10/22/97]*<br>D. Frequency for both indicators shall be continuous. *[Reference: 40 CFR Part 64.6(c)(1)(iii) dated 10/22/97]*<br>E. Data Collection Procedures for both indicators shall be collected and stored via the Refinery Process Historian. *[Reference: 40 CFR Part 64.6(c)(1)(iii) dated 10/22/97]*<br>F. Averaging Period for both indicators shall be on a 1-minute basis. *[Reference: 40 CFR Part 64.6(c)(1)(iii) dated 10/22/97]* | *[Reference: 40 CFR Part 64.6(c)(2) dated 10/22/97]*<br>C. The report required by Condition 3(c)(2) of this permit shall also contain the following information: *[Reference: 40 CFR Part 64.9(a)(2) dated 10/22/97]*<br>1. Summary information on the number, duration, and cause of excursions or exceedances;<br>2. The corrective actions taken after an excursion or exceedance;<br>3. Summary information on the number, duration, and cause of monitor downtime incidents; and<br>4. If triggered, a description of the actions taken to implement the QIP.<br><br>vi. Certification<br>None in addition to that required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.2 dated 12/11/2000]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 1. Pressure drop for the primary indicator shall be based on pressure transducer measurements obtained upstream of the Agglo-filtering modules and upstream of the Cylolab Droplet Separators.<br>2. Pressure drop for the secondary indicator shall be based on pressure transducer measurements obtained at the quench/pre-scrubber recirculation pumps discharge.<br>E. At all times, the Company shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment. *[Reference: 40 CFR Part 64.7(b) dated 10/22/97]*<br>F. At all times, the Company shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are cause in part by poor maintenance or careless operation are not malfunctions. *[Reference: 40 CFR Part 64.7(c) dated 10/22/97]* | | |
| 3. Sulfur dioxide ($SO_2$):<br>i. Emission Standards:<br>A. $SO_2$ emissions from the FCCU WGS+ shall not exceed 25 ppmvd @ 0% $O_2$ on a rolling 365 day average, 50 ppmvd @ 0% $O_2$ on a rolling 7 day average, and 352 TPY. *[Reference APC-82/0981 (A9)]* | ii. Compliance Method: *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. Compliance with Emission Standard (A) shall be based on a continuous monitoring system and recordkeeping.<br><br>iii. Monitoring/Testing: *[Reference APC-82/0981 (A9)]*<br>A. The $SO_2$ emissions shall be continuous monitored by CEMS.<br>B. RESERVED<br>C. The CEMS for $SO_2$ and $O_2$ must be certified by satisfying the applicable Performance Specifications in 40 CFR, Part 60, Appendix "B". The QA/QC procedures for the $SO_2$ and $O_2$ CEMS shall be in accordance with the procedures described in 40 CFR 60, Appendix "F". For the purpose of determining the Relative Accuracy of the CEMS, the applicable standard shall be 25 ppmvd.<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv. | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv. "General Conditions" in Condition 3 - Table 1.e.1.v. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 4. Nitrogen Oxides ($NO_X$):<br>i. Emission Standard:<br>A. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. | ii. Compliance Method:<br>A. Compliance with the Emission Standards shall be based on CEMS. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1 dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br>A. $NO_X$ emissions shall be monitored by CEMS.<br>B. The CEMS for $NO_X$ and $O_2$ must be certified by satisfying the applicable Performance Specifications in 40 CFR, Part 60, Appendix "B". The QA/QC procedures for the $NO_X$ and $O_2$ CEMS shall be demonstrated in accordance with 40 CFR, Part 60, Appendix "F". *[Reference APC-82/0981 (A9)]*<br>C. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j.<br><br>iv. Recordkeeping:<br>Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.2 dated 12/11/00]* | v. Reporting: *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv and "General Conditions" in Condition 3 - Table 1.e.1.v.<br>B. [**RESERVED**]<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 5. Carbon Monoxide (CO):<br>i. Emission Standard: *[Reference APC-82/0981 (A9)]*<br>A. CO emissions from the FCCU WGS+ shall not exceed 500 ppmv dry as a 1-hour average, and 3,085 TPY.<br>B. The Owner/Operator shall not cause or allow the emission of carbon monoxide | ii. Compliance Method: *[Reference APC-82/0981 (A7)]*<br>A. Compliance with Emission Standard (A) shall be based on CEMS.<br>B. Compliance with Emission Standard (B) is defined as maintaining a firebox temperature of no less than 1300º F as measured on a minute average basis. | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "Conditions Applicable to Multiple Pollutants" in Condition 3, table 1.e.1.iv. "General Conditions" in Condition 3 - Table 1.e.1.v. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| from the FCCU unless it is burned at no less than 1300º F for at least 0.3 seconds in the FCCU COB, or combusted in the FCCU regenerator when operating in full burn mode. | iii. Monitoring/Testing: *[Reference APC-82/0981 (A9)]*<br>A. The Owner/Operator shall continuously monitor the temperature of the FCCU COB firebox.<br>B. CO emissions shall be monitored by CEMS.<br>C. The QA/QC procedures for the CO CEMS shall be in accordance with the procedures in Appendix "F" of 40 CFR Part 60.<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple pollutants" in Condition 3 - Table 1.e.1.iv. | vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 6. Volatile Organic Compounds (VOCs):<br>i. Emission Standard: *[Reference APC-82/0981 (A9)]*<br>A. VOC emissions from the FCCU WGS+ shall not exceed 0.40 lb/mmdcsf and 41.4 tons per year.<br>B. The leak detection and repair requirements to control fugitive VOC emissions from the FCCU shall be in accordance with the requirements in 40 CFR 60, Subpart GGG for existing components in light liquid and gaseous service and in accordance with 40 CFR 60, Subpart CC for new components in light liquid and gaseous service. The leak detection and repair requirements to control fugitive emissions from the FCCU shall be in accordance with the Consent Decree for both new and existing components in light liquid and | ii. Compliance Method: *[Reference APC-82/0981 (A7)]*<br>A. Compliance with Emission Standard A shall be based on monitoring/testing and recordkeeping requirements<br>B. Compliance with emission standard B for new components in light liquid and gaseous service shall be based on compliance with the standards in 40 CFR 63.162 through 63.177.<br>C. Compliance with the standards in 40 CFR subpart GGG for existing components in light liquid gaseous service shall be based on the test methods and procedures in 40 CFR 60.592 and compliance with the requirements of 40 CFR Part 63 subpart CC shall be based on the standards in 40 CFR 63.648.<br>D. [**RESERVED**]<br>E. [**RESERVED**] | v. Reporting Requirement:<br>A. That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "Conditions Applicable to Multiple Pollutants" in Condition 3, table 1.e.1.iv. "General Conditions" in Condition 3 - Table 1.e.1.v. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>B. Leak detection and repair reports shall be submitted as required by 40 CFR 60.592 for existing components in light liquid and gaseous service and 40 CFR 63.654 for new components in light liquid and gaseous service. *[Reference APC-82/0981 (A9)]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| gaseous service.<br>C. There shall be no emissions of uncondensed VOCs from the condensors, hot wells or accumulators of any vacuum producing system.<br><br>ii. RESERVED | iii. Monitoring/Testing: *[Reference APC-82/0981 (A9)]*<br>A. The Owner/Operator shall conduct performance testing every three years. Each performance test conducted shall be performed in accordance with Reference Method 25A in Appendix "A" of 40 CFR Part 60. The Company may petition the Department to decrease the frequency of testing based on the results of any performance testing.<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv. | *Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 7. Sulfuric Acid ($H_2SO_4$):<br>i. Emission Standard:<br>A. $H_2SO_4/SO_3$ emissions from the FCCU WGS+ shall meet one of the following standards: *[Reference APC-82/0981 (A9)]*<br>1. $H_2SO_4$ emissions shall be reduced by at least 40% across the wet gas scrubber system; or<br>2. The outlet concentration of $H_2SO_4/SO_3$ from the stack shall be no greater than 10 ppmvd. | ii. Compliance Method:<br>Compliance with the Emission Standard A shall be based on stack testing conducted in accordance with Condition 3 - Table 1.e.7.iii. monitoring/testing and recordkeeping requirements. *[Reference APC-82/0981 (A9)]*<br><br>iii. Monitoring/Testing:<br>The Owner/Operator shall conduct annual performance tests, unless the Department approves less frequent testing, in accordance with Reference Method 8 in Appendix "A" of 40 CFR Part 60, or other testing methodology approved by the Department. *[Reference APC-82/0981 (A9)]*<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv. | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv "General Conditions" in Condition 3 - Table 1.e.1.v. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 8. Lead (Pb):<br>i. Emission Standard:<br>Pb emissions from the FCCU WGS+ shall not exceed 4.37 E-04 pounds per thousand pounds of coke burned. *[Reference APC-82/0981 (A9)]* | ii. Compliance Method:<br>Compliance with the Emission Standard shall be based on the stack test based emission factor in terms of lb/Mlb coke burn rate. *[Reference APC-82/0981 (A9)]*<br><br>iii. Monitoring/Testing:<br>The Owner/Operator shall conduct performance testing every three years based on Reference Method 12 in Appendix "A" of 40 CFR Part 60, unless the Department approves less frequent testing. *[Reference APC-82/0981 (A9)]*<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv. | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv and "General Conditions" in Condition 3 - Table 1.e.1.v. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 9. Hazardous Air Pollutants (HAPs): *[Reference APC-82/0981 (A9)]*<br>i. Emission Standard:<br>The Owner/Operator shall comply with all the applicable requirements of 40 CFR Part 63, subpart UUU. | ii. Compliance Method: *[Reference Permit APC-82/0981 (A9)]*<br>Compliance with the Emission Standard shall be based on monitoring/testing and recordkeeping requirements<br><br>iii. Monitoring/Testing: *[Reference Permit APC-82/0981 (A9)]*<br>A. CO emissions shall be monitored by CEMS.<br>B. The QA/QC procedures for the CO CEMS shall be in accordance with the procedures in Appendix "F" of 40 CFR Part 60.<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv. | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. The Owner/Operator shall submit semiannual reports by January 31 and July 31 of each calendar year for the preceding semiannual period in accordance with the requirements of §63.1575(c). The report must include each instance in which an emission limit, operating standard or work practice standard is not met, or if no deviations occurred the report must contain a statement that there were no deviations during the reporting period and that no |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | | continuous monitoring system was inoperative, out of control, repaired or adjusted. An electronic copy of the report shall be sent to the Department's engineer for the refinery. *[Reference: 40 CFR 63, Subpart UUU, §63.1575(c)]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 10. Visible Emissions:<br>i. Emission Standard:<br>A. The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than 20 percent opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period. *[Reference 7 **DE Admin. Code** 1114, Sections 2.1 and 2.3, dated 7/17/84, 40 CFR Part 60, Subpart J, §60.102(a)(2) and 7 **DE Admin. Code** 1120 Section 11 dated 11/27/85 and APC-82/0981(A9)].*<br>B. [**RESERVED**] | ii. Compliance Method:<br>A. Compliance with Emission Standard A shall be based on Monitoring/Testing requirements. *[Reference APC-82/0981 (A9)]*<br>B. [**RESERVED**]<br><br>iii. Monitoring/Testing:<br>The Owner/Operator shall continuously monitor the pressure drop across the Agglo-filtering modules and Cyclolab Droplet Separators and the quench/pre-scrubber recirculation pump discharge pressure. The determination that the opacity from the FCCU WGS stack, when it is operating, satisfies the requirements of Emission Standard (A) shall be based upon the following parametric monitoring:<br>A. The minimum ΔP across the Agglo-Filtering modules and Cycolab Droplet Separators shall be 6 inches WC, evaluated on a one minute average basis; and<br>B. A minimum discharge pressure, evaluated on a one minute average basis, from the | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | quench/pre-scrubber recirculation pumps satisfying the less stringent of:<br>1. 115 psig, or<br>2. The discharge pressure equivalent to 95% of the average discharge pressure recorded during performance testing performed in accordance with the methods identified in Condition – Table 1.e.2.iv, provided that such performance testing also includes a demonstration of compliance with the visual emissions standard identified in Emission Standard (A) using EPA Method 9.<br>C. Notwithstanding Monitoring/Testing Conditions (A) and (B), when the COB is on line and operating, if either the differential pressure across the Agglo-Filtering Modules/Cyclolab Droplet Separators or the discharge pressure from the quench/prescrubber falls below the minimum levels established under Monitoring/Testing Conditions (A) and (B) for greater than 3 minutes in any hour or more than 15 minutes in any 24 hour period, the Owner/Operator may perform a visual emission test in accordance with EPA Reference Method 9 to establish that visible emissions do not exceed the opacity standard specified in Emission Standard (A) at the reduced parameter level. In such case, the new minimum value for the parameter in question shall be the average value recorded during the Method 9 test, and | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | shall be used in conjunction with Condition 3 - Table 1.e.10.iii.A to evaluate compliance with Emission Standard (A). *[Reference APC-82/0981 (A9)].*<br>D. [**RESERVED**]<br>E. [**RESERVED**]<br>F. During periods when the COB is bypassed, the Company shall perform a daily visual emission test in accordance with EPA Reference Method 9 to establish that the visible emissions do not exceed the opacity standard specified in Condition 2.2.<br><br>iv. Record keeping:<br>The following records shall be maintained in accordance with Condition 3(b):<br>Detailed daily records of observations of visible emissions or the absence of visible emissions, or daily visible emissions observations, or other records identified in an approved alternative plan. *[Reference APC-82/0981(A9)]* | |
| **f. Emission Unit 24: Refinery Gas Plant (No emission points, i.e., This unit has only fugitive emissions that are covered under Section o under the heading "Facility Wide Requirements")** | | |
| **ga. Emission Unit No. 25: Reformer and Reformulated Gasoline 2000 Project (RFG 2K Project): Cracked Naphtha Hydrotreater (CNHT) Unit, Butamer Unit and Cooling Tower (Emission points 25-1 and 25-2)** | | |
| 1. Conditions Applicable to Multiple Pollutants:<br>i. Operational Limitations:<br>A. [**RESERVED**]<br>B. [**RESERVED**] | ii. Compliance Method: *[Reference: APC-98/0522(A1)]*<br>A. [**RESERVED**]<br>B. [**RESERVED**]<br>C. Compliance with Operational Limitations (C) and (D) shall be based on recordkeeping. | v. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| C. [**RESERVED**]<br>D. Only desulfurized refinery fuel gas (RFG) or natural gas may be fired in units 25-H-401 and 25-H-402. *[Reference: APC-98/0523(A1)]*<br>E. The hydrogen sulfide ($H_2S$) content in the desulfurized RFG shall not exceed 162 ppmv(d) (0.10 gr/dscf) on a 3 hour rolling average basis. *[Reference: APC-98/0523(A1)]* | D. Compliance with Operational Limitation in (E) shall be based on CEMS<br><br>iii. Monitoring/Testing: *[Reference: APC-98/0522(A1), APC-98/0523(A1) and 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. The Owner/Operator shall monitor the fuel usage of 25-H-401 and 25-H-402 on an hourly basis.<br>B. The Owner/Operator shall monitor fuel HHV on a daily basis. The minimum data capture requirement for the HHV of the fuel shall be no less than 95 percent of the time in any twelve consecutive months, i.e., the Owner/Operator may miss no more than 18 days of sampling and/or analyzing the fuel in any twelve consecutive months. For any missing data the Owner/Operator shall substitute the highest recorded daily HHV for the previous month. *[Reference: APC-98/0522]*<br>C. The Owner/Operator shall monitor $H_2S$ concentration in RFG continuously. The monitoring instrument shall be located downstream of all process steps that increase the concentration of $H_2S$ in RFG prior to its being combusted in any fuel burning device. The $H_2S$ CEMS shall conform to the requirements of Performance Specification 7 of 40 CFR 60, Appendix "B" and comply with the Quality assurance requirements of 40 CFR 60, Appendix "F." The monitoring instrument shall conform to the requirements of Performance Specification 7 of 40 CFR 60, Appendix "B." | vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | The relative accuracy evaluation shall be conducted using Method 11 of 40 CFR 60, Appendix "A."<br>D. The Owner/Operator shall continuously monitor the cooling water flow rate.<br><br>iv. Recordkeeping: The Owner/Operator shall maintain the following records in accordance with Condition 3(b): *[Reference: APC-98/0522 and APC-98/0523].*<br>A. [**RESERVED**]<br>B. [**RESERVED**]<br>C. [**RESERVED**<br>D. [**RESERVED**]<br>E. [**RESERVED**]<br>F. [**RESERVED**]<br>G. All exceedances of the $H_2S$ in RFG as measured by the $H_2S$ CEMS.<br>H. Hourly fuel gas flow to each heater. | |
| 2. Particulate Matter:<br>i. Emission Standards:<br>A. $PM_{10}$ emissions shall not exceed the following: *[Reference: APC-98/0522(A1) and 7 **DE Admin. Code** 1104, Section 2.1 dated 2/1/81]*<br>1. For 25-H-401: 2.4 TPY on a rolling twelve month basis<br>2. For 25-H-402: 1.7 TPY on a rolling twelve month basis<br>3. [**RESERVED**]<br>B. [**RESERVED**]<br>C. Cooling tower $PM_{10}$ emissions shall not exceed 6.6 tons per year on a rolling twelve month basis. *[Reference:* | iii. Compliance Method:<br>A. Compliance with Emission Standard (A) shall be based on the fuel gas usage for each heater. *[Reference: APC-98/0522(A1)]*<br>B. [**RESERVED**]<br>C. Compliance with Emission Standard (C) shall be based on the proper operation of the high-efficiency mist eliminators having a vendor guaranteed emission factor of 0.002 percent drift loss per pound of cooling water circulated and on the monitoring requirements. *[Reference: APC-98/0523]*<br><br>iv. Monitoring/Testing: *[Reference: APC-98/0522(A1), APC-* | vi. Reporting Requirement:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vii. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| *APC-98/0523(A1)]* | *98/0523(A1) and 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. [**RESERVED**]<br>B. [**RESERVED**]<br>C. Compliance with Emissions Stand (C) shall be based on proper operation of the high-efficiency mist eliminators having a vendor guaranteed emission factor of 0.002% drift loss per pound of cooling water circulated and demonstrated by conducting a quarterly test of total solids using method 2504B of Standard Methods for the Examination of Water and Wastewater and by continuously monitoring the cooling water flow rate.<br>D. Compliance with Emission Standard A shall be based on performance testing for $PM_{10}$ in accordance with Methods 5B/202, or other testing methodology approved by the Department at five year intervals. *[Reference APC-98/0522(A1)]*<br><br>v. Recordkeeping:<br>The Owner/Operator shall maintain the following records in accordance with Condition 3(b):<br>*[Reference: APC-98/0522(A1), APC-98/0523(A1) and 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. Results of quarterly Method 2540B tests.<br>B. [**RESERVED**]<br>C. Results of cooling water flow rate and VOC concentration.<br>D. The rolling 12 month total emissions shall be calculated and recorded each month.<br>*[Reference: APC-98/0523(A1)]* | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 3. Sulfur dioxide ($SO_2$):<br>i. Emission Standards: *[Reference: APC-98/0522(A1)]*<br>A. For 25-H-401: 8.4 TPY on a rolling twelve month basis.<br>B. For 25-H-402: 6.0 TPY on a rolling twelve month basis. | iii. Compliance Method: *[Reference: Permit:APC-98/0522(A1)]*<br>A. Compliance with Emission Standards (A) and (B) shall be based on the rolling twelve month fuel usage and the rolling twelve month average S content of the fuel as determined using $H_2S$ CEMS.<br><br>iv. Monitoring/Testing: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.ga.1.iii.<br><br>v. Recordkeeping:<br>The Company shall maintain the following records in a readily accessible location for 5 years and shall make these records available to the Department upon request:<br>A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.ga.1.iv.<br>B. The rolling 12 month total emissions shall be calculated and recorded each month. *[Reference: APC-98/0523(A1)]* | v. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 4. Nitrogen Oxides ($NO_X$):<br>i. Emission Standards: *[Reference: APC-98/0522(A1)]*<br>A. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j.<br>B. From 25-H-401 and 25-H-402: 0.04 lb/mmBtu. | iii. Compliance Method: *[Reference: APC-98-0522(A1)]*<br>A. Compliance with the Emission Standards shall be based on the fuel gas usage for each heater, the HHV of the fuel obtained from daily samples and the annual stack test based emissions factors.<br>B. For 25-H-401 and 25-H-402, oxygen parametric monitoring may be used as an alternative method. Hourly average NOx emissions shall be calculated consistent with the methodologies of the Premcor submittals | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | to the Department dated November 19, 2007 and April 16, 2008 or by alternate methodologies approved by the Department.<br>C. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.1 dated 12/11/00].*<br><br>iv. Monitoring/Testing: *[Reference: APC-98-0522]*<br>A. Annual stack emission testing shall be conducted using EPA Reference Method 7 E in Appendix "A" of 40 CFR Part 60 on each heater to determine compliance with the $NO_X$ emission factor of 0.029 lb/mmBtu.<br>B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.1 dated 12/11/00].*<br><br>v. Recordkeeping:<br>Facility-wide Emission Limit for Nitrogen Oxides ($NO_X$)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.2 dated 12/11/00].* | |
| 5. Carbon Monoxide (CO):<br>i. Emission Standards: *[Reference: APC-98/0522(A1)]*<br>A. For 25-H-401: 10.9 TPY on a rolling twelve month basis.<br>B. For 25-H-402: 7.7 TPY on a rolling twelve month basis. | ii. Compliance Method: *[Reference: APC-98/0522(A1)]*<br>Compliance with the emission standards shall be based on the fuel gas usage for each heater.<br><br>iii. Monitoring/Testing:<br>A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.ga.1.iii.<br>B. The owner or operator shall conduct | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | performance testing for CO in accordance with Method 10, or other testing methodology approved by the Department at five year intervals. *[Reference APC-98/0522(A1)]*<br><br>iv. Recordkeeping:<br>The Company shall maintain the following records in a readily accessible location for 5 years and shall make these records available to the Department upon request:<br>A. The rolling 12 month total emissions shall be calculated and recorded each month. *[Reference: APC-98/0523(A1)]*<br>B. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.ga.1.iv. | *Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 6. Volatile Organic Compounds (VOCs):<br>i. Emission Standards:<br>A. For 25-H-401 and 25-H-402: VOC emissions shall not exceed 2.8lb/mmSCF of fuel combusted. *[Reference: APC-98/0522(A1)]*<br>B. [**RESERVED**]<br>C. Cooling tower fugitive VOC emissions shall not exceed 5.5 tons per year on a rolling quarterly basis. *[Reference: APC-98/0523 (A1)]*<br>D. Fugitive VOC emissions from the new equipment at the CNHT, SHU and DGA and new ancillary equipment and tie-ins shall not exceed 10.4 tons per year on a rolling quarterly basis. *[Reference: APC-98/0523 (A1)]*<br>E. With the exception of leak definitions | ii. Compliance Method:<br>A. Compliance with Emission Standard (A) shall be based on fuel gas usage for each heater. *[Reference: APC-98/0522(A1)]*<br>B. Compliance with Emission Standards (D) and (C) shall be based on the monitoring and testing requirements *[Reference: APC-98/0523(A1)]*<br>C. Compliance with Emission Standard (E):<br>1. For new components in light liquid and gaseous service, compliance shall be based on compliance with the standards in 40 CFR 63.648.<br>2. Compliance with the standards in 40 CFR 60 Subpart GGG shall be based on the test methods and procedures in 40 CFR 60.592. | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| for pumps and valves specified in Part 2, Condition 3 – Table 1.bg.1.i.B, the leak detection and repair requirements to control fugitive VOC emissions shall be in accordance with the requirements of 40 CFR 60, Subpart GGG for existing components in light liquid and gaseous service and in accordance with 40 CFR 63 Subpart CC for new components in light liquid and gaseous service. The leak detection and repair requirements to control fugitive emissions from the CNHT Unit shall be in accordance with the Consent Decree for both new and existing components in light liquid and gaseous service. | iii. Monitoring/Testing: *[Reference: APC-98/0522(A1) and APC-98/0523(A1), and 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. For determining compliance with Emission Standard (D) the Owner/Operator shall use the results of the quarterly LDAR monitoring program using the EPA Correlation Approach described in the 1995 Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017 dated November 1995.<br>B. Compliance with Emission Standard (C), shall be demonstrated by monitoring the cooling water flow rate and the concentration of the total VOC. The cooling water flow rate shall be monitored continuously and the VOC concentration in the cooling water shall be obtained quarterly using a method approved by the Department. To determine the cooling water VOC concentration, samples shall be taken at the entrance and exit of the cooling tower and at the point of makeup water addition. The entrance is the point at which cooling water leaves the cooling tower prior to being returned to the process equipment. The exit is the point at which the cooling water is introduced to the cooling tower after being used to cool the process fluid. A minimum of three sets of samples shall be taken at the entrance and exit and the point of make-up water entry. The average concentrations shall then be calculated for each set of samples.<br>C. At five year intervals the owner or operator shall conduct performance testing for VOC in | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | accordance with Reference Method 25A in Appendix "A" of 40 CFR Part 60 and shall determine and report results as total hydrocarbons or shall conduct such other testing methodology and/or report results as approved by the Department. *[Reference APC-98/0522(A1)]*<br><br>iv. Recordkeeping:<br>The following records shall be maintained in accordance with Condition 3(b): *[Reference: APC-98/0522(A1) and APC-98/0523(A1), 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. Results of quarterly LDAR monitoring showing calculated VOC emissions in tons per year by component type on a rolling quarterly basis.<br>B. Results of cooling water VOC monitoring.<br>C. [**RESERVED**] | |
| 7. Visible Emissions:<br>The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than 20% opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period. *[Reference 7 **DE Admin. Code 1114**, Section 2.1, dated 7/17/84].* | ii. Compliance Method: Compliance shall be demonstrated by proper operation and maintenance of the emission units, monitoring and testing requirements, and record keeping. *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3 dated 12/11/00].*<br><br>iii. Monitoring/Testing:<br>A. The Owner/Operator shall conduct daily qualitative stack observations to determine the presence of any visible emissions when the unit is in operation.<br>1. If visible emissions are observed, the Owner/Operator shall take corrective actions and/or conduct a visible | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | observation in accordance with Paragraph (B) below.<br>2. If no visible emissions are observed, no further action is required.<br>B. If required under paragraph A above, the Owner/Operator shall, in accordance with Subsection 1.5(c) of Regulation No. 20, conduct visual observations at fifteen-second intervals for a period of not less than one hour except that the observations may be discontinued whenever a violation of the standard is recorded. The additional procedures, qualification and testing to be used for visually determining the opacity shall be those specified in Section 2 & 3 (except for Section 2.5 and the second sentence of Section 2.4) of Reference Method 9 set forth in Appendix A, 40 CFR, Part 60, revised July 1, 1982. *[Reference 7 **DE Admin. Code** 1120 Section 1.5.3 dated 12/7/88] and 7 **DE Admin. Code** 1130 Section 6.1.3 dated 12/11/00].*<br><br>iv. Record keeping:<br>The Company shall maintain the following records in a readily accessible location for 5 years and shall make these records available to the Department upon request:<br>A. Records of daily qualitative emission observations and Method 9 evaluations when emissions are observed shall be maintained for 5 years. *[Reference: APC-98/0522(A1)]*<br>B. Records of all maintenance performed on these units. | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| **gb. Emission Units No. 24, 25 & 43: Tier 2 Gasoline Project involving modifications, ancillary equipment and tie-ins, and relocation of certain existing equipment to the existing cracked naphtha hydrotreater (CNHT, Unit 25), the existing Selective Hydrogenation Unit at the Ether Plant (SHU, Unit 43), and the Diglycolamine system (DGA, Unit 24)** | | |
| 1. Volatile Organic Compounds (VOCs):<br>i. Emission Standards:<br>*[Reference: APC-2005/0197 and APC-98/0523(A1)]*<br>A. Fugitive VOC emissions from the new equipment at the CNHT, SHU and DGA and the new ancillary equipment and tie-ins shall not exceed 10.4 tons per year on a rolling quarterly basis.<br>B. Fugitive VOC emissions from the new equipment shall utilize an internal leak definition of 2,000 ppm for all pumps and 500 ppm for all valves, excluding pressure relief devices.<br><br>ii. Operational Limitations:<br>*[Reference APC-98/0523(A1)]*<br><br>A. There shall be no emissions of uncondensed VOCs from the condensers, hot wells, or accumulators of any vacuum producing system.<br>B. The Company shall provide for the following during process unit turnarounds:<br>1. Depressurization venting of the process unit or vessel to a vapor | iii. Compliance Method<br>*[Reference: APC-2005/0197]*<br>A. Compliance with Emission Standard (A) shall be demonstrated by using the results of the quarterly LDAR monitoring program using the EPA Correlation Approach described in the 1995 Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017 dated November 1995.<br>B. Compliance with Emission Standard (B) shall be based on monitoring of pumps and valves performed in accordance with 40 CFR 60 Subpart GGG for existing components and 40 CFR 63 Subpart CC for new components in light liquid and gaseous service. Monitoring shall be performed using a method approved by the Department.<br>C. Compliance with Operational Limitations (A) and (B) shall be based on piping the uncondensed vapors to either a firebox or incinerator. Alternately, the vapors may be compressed and added to the refinery fuel gas. During process unit turnarounds, the Company shall conduct depressurization venting of the process unit or vessel to a vapor recovery system, flare or firebox. The Company shall monitor the pressure in each process unit or vessel until its internal pressure is 136 kPa or less. *[Reference APC-* | vi. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. VOC leak repair records required by 40 CFR 60.592 for existing components in light liquid and gaseous service and 40 CFR 63.654 for new components in light liquid and gaseous service. *[Reference APC-98/0523(A1)]*<br>B. Date of process unit or vessel turnarounds and the internal pressure of the process unit or vessel immediately prior to venting to the atmosphere. *[Reference APC-98/0523(A1)]*<br><br>vii. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| recovery system, flare or firebox.<br>2. No emission of VOC from a process unit or vessel until its internal pressure is 136kiloPascals (kPa) (19.7 psia) or less. | *98/0523(A1)]*<br><br>iv. Monitoring/Testing:<br>*[Reference: APC-2005/0197]*<br>None in addition to those listed in Condition 3 - Table 1.gb.1.ii.<br><br>v. Recordkeeping<br>*[Reference: APC-2005/0197]*<br>The following records shall be maintained for 5 years in accordance with Condition 3(b):<br>A. Results of the monitoring of pumps and valves required by Compliance Method (B).<br>B. Date of process unit turnarounds and internal pressure of the process unit or vessel immediately prior to venting to the atmosphere.<br>C. VOC leak repair records required by 40 CFR 60.592 for existing components in light liquid service and gaseous service and 40 CFR 63.654 for new components in light liquid and gaseous service. | |
| **h. Emission Unit No. 26: Polymerization Unit (No emission points, i.e, This unit has only fugitive emissions that are covered under Section o under the hearing "Facility Wide Requirements")** | | |
| **i. Emission Unit No. 27: Alkylation Unit (No emission points, i.e. This unit has only fugitive emissions that are covered under Section o under the heading "Facility Wide Requirements")** | | |
| **j. Emission Unit No. 28: Sulfur Recovery Area (SRA); Claus Units I and II; Sulfur Pits and Shell Claus Offgas Treatment (SCOT) Units I and II. (Emission points 28-1 and 28-2)** | | |
| 1. Conditions Applicable to Multiple Pollutants<br>i. Operational Limitations *[Reference: APC-98/0264(A7)]* | ii. Compliance Method *[Reference: APC-98/0264(A7)]*<br>A. Compliance with Operational Limitations (A), (B), (D), (H) and (I) shall be based upon | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| A. The SRA shall be operated so as to not exceed the following Equivalent Sulfur Plant Capacity (ESPC) expressed in long tons per day (LTPD), under the following operating scenarios:<br>1. When both Claus trains and SCOT units are in operation, the SRA shall not be operated at an ESPC greater than 822 LTPD on a 12 month rolling average.<br>2. When Claus train I (SRU I) and/or SCOT II is shutdown, Claus train II (SRU II) and SCOT I shall not operate at an ESPC greater than 499 LTPD on a 12 month rolling average.<br>3. When Claus train II (SRU II) and/or SCOT I is shutdown, Claus train I (SRU I) and SCOT II shall not operate at an ESPC greater than 510 LTPD on a 12 month rolling average.<br>B. The combined heat input to SCOT I (28-S-203) and SCOT II (28-S-804) shall not exceed 865,000 mmBtu in any rolling twelve month period.<br>C. Only desulfurized refinery fuel gas (RFG) and/or natural gas may be fired in the SCOT I and SCOT II units. The hydrogen sulfide content in the RFG combusted in the SCOT | recordkeeping.<br>B. Compliance with Operational Limitation (C) shall be based upon a continuous monitoring system ("CMS").<br>C. Compliance with Operational Limitation (F) is defined as maintaining a negative pressure at the sulfur pits as measured on a minute average basis.<br>D. [**RESERVED**]<br><br>iii. Monitoring/Testing: *[Reference: APC-98/0264(A7)]*<br>A. The Owner/Operator shall continuously monitor and record the concentration (dry basis) of $H_2S$ in RFG before it is combusted in any fuel burning device. The monitoring instrument shall be located downstream of all process steps that increase the concentration of $H_2S$ in RFG prior to its being combusted in any fuel burning device. The $H_2S$ CEMS shall conform to the requirements of Performance Specification 7 of 40 CFR 60, Appendix "B" and comply with the Quality assurance requirements of 40 CFR 60, Appendix "F" The relative accuracy evaluation shall be conducted using Method 11 of 40 CFR 60, Appendix "A." *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>B. The Owner/Operator shall continuously monitor the pressure at the sulfur pits.<br><br>iv. Recordkeeping<br>The following records shall be maintained in accordance with Condition 3(b): *[Reference: APC-98/0264(A7)]* | and the following: *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 and 6.1.3.3 dated 12/11/00 and APC-90/0264 (A7)]*<br>A. [**RESERVED**]<br>B. A quarterly $SO_2$ CERMS report for the preceding quarter shall be submitted to the Department by January 30, April 30, July 30 and October 30 of each calendar year and shall include the information required by 40 CFR 60.7(c) and (d).<br>C. The H2S CMS report shall include a report listing all rolling 3 hour periods during which the average concentration of H2S as measured by the H2S CMS exceeds 162 ppmv (dry) or 0.10 grain/dscf, quarterly audit results, data capture for the period and details of out of control periods. The data submitted with the Owner/Operator's quarterly H2S CMS NSPS report for the facility shall satisfy this reporting requirement.<br>D. The owner/operator shall notify the Department's Air Quality Management Section of shut downs and start ups with as much advanced notice as practicable.<br><br>vii. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| incinerators shall not exceed 0.10 grain/dscf on a 3 hour rolling average.<br>D. Except as provided in Condition 3, Table 1Condition j 2 ii, tail gases from SRU I and/or SRU II shall be treated by the SCOT I Unit and/or the SCOT II Unit at all times.<br>E. [**RESERVED**]<br>F. The steam eductor system shall be operating properly at all times when molten sulfur is stored in the sulfur pits.<br>G. [**RESERVED**]<br>H. The Owner/Operator shall carry out an annual tune up of each SCOT incinerator burner.<br>I. The sulfur pit vapors shall be routed to the Claus reactors at all times except during periods of low acid gas generation and other atypical operating conditions. | A. Daily sulfur production from each Claus Unit<br>B. Logs of annual tune up performed on the SCOT incinerator burners<br>C. The type of fuel combusted in SCOT I and SCOT II and the fuel usage, and HHV<br>D. All periods when the pressure at the sulfur pits is not below atmospheric pressure.<br>E. All periods when the sulfur pit vapors are diverted from the reactors into the SCOT incinerators and a description of the atypical operation causing the change. | |
| 2. Particulate Matter:<br>i. Emission Standards: *[Reference: APC-98/0264(A7) and 7 **DE Admin. Code** 1104 dated 2/1/81]*<br>A. $PM_{10}$ emissions shall not exceed 5.09 lb/hr in each SCOT stack and 22.3 TPY combined from both SCOT stacks. All TSP emissions shall be considered $PM_{10}$.<br>B. [**RESERVED**] | ii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-98/0264(A7)]*<br>Compliance with the Emission Standard (A) shall be based on stack testing conducted in accordance with Condition 3 - Table 1.j.2.iii.A.<br><br>iii. Monitoring/Testing: *[Reference: APC-98/0264(A7)]*<br>A. The Owner/Operator shall conduct a stack test at 5 year intervals while processing both | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.v. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | refinery acid gas and gasifier acid gas streams in the Claus units. The Owner/Operator shall conduct a Department approved stack test comprising of 3 runs of sufficient duration to evaluate compliance. Stack test results indicating below detection limits because of insufficient "catch" at the end of three 4 hour runs shall be accepted as proof of compliance. Stack testing shall be performed in accordance with Reference Method 5B in Appendix "A" of 40 CFR Part 60 and Reference Method 202 in Appendix "M" of 40 CFR Part 51, or other testing methodology proposed by the Owner/Operator and approved by the Department.<br><br>iv. Recordkeeping: *[Reference: APC-98/0264(A7)]* Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.iv. | permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 3. Sulfur dioxide ($SO_2$): *[Reference: APC-98/0264 (A7)]*<br>i. Emission Standard: $SO_2$ emissions shall not exceed 0.025 percent by volume (250 ppm) in each SCOT stack at zero percent oxygen on a dry basis on a twelve hour rolling average basis, except during startup or shutdown conditions, 122 lb/hour calculated on a 24 hour rolling average basis and 535 TPY combined from both SCOT stacks. During startup and shutdown conditions, the $SO_2$ emission limits listed in the | iii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-98/0264(A7)]*<br>A. Compliance with the Emission Standard shall be determined by using continuous emissions rate monitoring systems (CERMS) to continuously monitor $SO_2$ emissions from the stacks of both SCOT I and SCOT II.<br>B. Compliance with the Operational Limitation shall be demonstrated by the Monitoring/Testing requirement (B).<br><br>iv. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-* | vi. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. The Owner/Operator shall submit semiannual reports by January 31 and July 31 of each calendar year for the preceding semiannual period in accordance with the requirements of §63.1575(c). The report must include each instance in which an emission limit, operating standard or work practice standard is not met, or if no |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| Operational Limitation shall apply in lieu of the 250 ppm and 122 lb/hour limits.<br><br>ii. Operational Limitations: *[Reference: APC-98/0264(A7)]*<br>**SULFUR RECOVERY AREA START UP AND SHUT DOWN SCENARIOS**<br>The following short term emission limits listed below shall apply during start up and shut down scenarios in lieu of the short term emission limits (*i.e.*, 250 ppm and 122 lb/hr) identified in the Emission Standard:<br>A. **SCENARIO 1: Planned SCOT I and/or SCOT II Shut Down:** When either SCOT unit shut down is planned, the stand by SCOT unit shall be brought to a state of readiness for operation before the operating SCOT unit is taken out of service. Within 2 hours after the operating SCOT unit is shutdown, all of the tailgases shall be treated in the standby SCOT unit. The maximum amount of $SO_2$ that shall be emitted during this 2-hour period shall not exceed 4.2 tons.<br>B. **SCENARIO 2: Melting and Burnout After Planned Shut Down of SRU I and SRU II:**<br>After SRU I or SRU II has been shut down, the off gases resulting from the residual sulfur melting and burnout shall be incinerated before exiting the | *98/0264(A7)]*<br>A. The $SO_2$ CERMS on SCOT Units I and II shall conform to the Quality Assurance Procedures in Appendix "F" of 40 CFR Part 60.<br>B. During start-up and shutdown periods of incineration, ambient air monitoring data for the affected period shall be collected daily.<br><br>v. Recordkeeping:<br>The following records shall be maintained in accordance with Condition 3(b): *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-98/0264(A7)]*<br>A. CERMS data showing $SO_2$ emissions in lbs/hour from the stacks of SCOT I and SCOT II including results of daily calibration, quarterly cylinder gas audits and annual relative accuracy test audits for the CERMS. | deviations occurred the report must contain a statement that there were no deviations during the reporting period and that no continuous monitoring system was inoperative, out of control, repaired or adjusted. An electronic copy of the report shall be sent to the Department's engineer for the refinery. *[Reference: 40 CFR 63, Subpart UUU, §63.1575(c)]*<br>B. During planned start-up and shutdown periods of incineration, ambient air monitoring data for the affected period shall be submitted to the Department daily. At the Department's request, copies of available air monitoring data shall be furnished to the Air Quality Management Division.<br><br>vii. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| stack. The melting and burn-out procedure shall not exceed 7 days. The maximum amount of $SO_2$ resulting from this procedure shall not exceed 15 tons per day.<br>C. **SCENARIO 3: Planned Start Up of SRU I and SRU II:** When SRU-I or SRU-II is returned to service the tail gas from the unit being returned to service shall be incinerated until the proper ratio of $H_2S$:$SO_2$ in the acid feed gas is attained. This ratio shall be established within 2 hours at which time the tail gas shall be fed to either SCOT Unit. During this start-up period the emissions of $SO_2$ shall not exceed 4 tons per start up event for either SRU.<br>D. **SCENARIO 4: Burnout of SCOT Reactor During Shutdown of Either SCOT Unit:** After the planned shut down of either SCOT I or II, in order to save the catalyst it can be slowly burned free of sulfur. $SO_2$ emissions from this operation shall not exceed 9.6 tons, over a 6 day period.<br>During start-up and shutdown periods of incineration, corrective action shall be taken if there is any indication that an exceedance of ambient air standards might take place. | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 4. Nitrogen Oxides ($NO_x$):<br>i. Emission Standard:<br>A. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3, Table 1.j.<br>B. NOx emissions shall not exceed those achieved through an annual tune up performed by qualified personnel. *[Reference: 7 **DE Admin. Code** 1112 Section 3.3.2 dated 11/24/93]* | iii. Compliance Method:<br>A. Compliance with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3, Table 1.j shall be based on determination and use of a NOx emission factor based upon results of the most recent performance testing conducted in accordance with a protocol approved by DNREC, or performed in accordance with applicable performance testing methods established and published by EPA and appropriate for measuring NOx emissions from the relevant source or any other method proposed by the Owner/Operator and approved by the Department.<br>B. Compliance with Emission Standard B shall be demonstrated by conducting an annual tune up of each unit by qualified personnel. *[Reference: 7 **DE Admin Code** 1130 Section 6.3.1 dated 12/11/00]*<br><br>iv. Monitoring/Testing<br>A. The Owner/Operator shall conduct an annual stack test unless the Department approves less frequent testing. The Department reserves the right to require more frequent testing or require installation of CEMS. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-98/0264(A7)]*<br>B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3, Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.1 dated 12/11/00]* | vi. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.v. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vii Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | v. Recordkeeping:<br><br>A. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3, Table 1.j.<br>B. Maintain a log of all tune ups performed and documentation of qualifications of personnel responsible for conducting the tune up. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.2 dated 12/11/00]* | |
| 5. Carbon Monoxide (CO):<br>i. Emission Standard:<br>CO emissions shall not exceed 100 ppmvd in each SCOT stack and 90.4 TPY combined from both SCOT stacks. *[Reference: APC-98/0264(A7)]* | ii. Compliance Method:<br>Compliance with the Emission Standard shall be based on stack testing conducted in accordance with Condition 3 - Table 1.j.5.iii. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-98/0264(A7)]*<br><br>iii. Monitoring/Testing<br>The Owner/Operator shall conduct an annual stack test unless the Department approves less frequent testing. The Department reserves the right to require more frequent testing or require installation of CEMS. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-98/0264(A7)]*<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.iv. | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.v. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 6. Volatile Organic Compounds (VOCs):<br>i. Emission Standard: *[Reference: APC-98/0264(A6)]*<br>VOC emissions (as methane) shall not exceed 0.17 lb/hr in each SCOT stack and 1.3 TPY combined from both SCOT stacks. | ii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and Permit APC-98/0264(A7)]*<br>Compliance with Emission Standards (A) and (B) shall be based on stack testing conducted in accordance with Condition 3 - Table 1.j.6.iii.<br><br>iii. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-98/0264(A7)]*<br>A. The Owner/Operator shall conduct a stack test at 5 year intervals while processing both refinery acid gas and gasifier acid gas streams in the Claus units. The Owner/Operator shall conduct a Department approved stack test comprising of 3 runs of sufficient duration to evaluate compliance. Stack test results indicating below detection limits because of insufficient "catch" at the end of three 4 hour runs shall be accepted as proof of compliance. The Owner/Operator may petition the Department to decrease the frequency of VOC performance tests based on the results of any performance testing.<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.iv. | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.v. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 7. Hydrogen Sulfide ($H_2S$) and Total Reduced Sulfur (TRS) Compounds:<br>i. Emission Standard: *[Reference: APC-* | ii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-98/0264(A7)]* | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| *98/0264(A7)]*<br>$H_2S$ emissions shall not exceed 1.7 lb/hr in each SCOT stack and 12.7 TPY combined from both SCOT stacks. | Compliance with the Emission Standard shall be based on stack testing conducted in accordance with Condition 3 - Table 1.j.7.iii.<br><br>iii. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and Permit APC-98/0264(A7)]*<br>The initial performance test shall be conducted while processing both refinery acid gas and gasifier acid gas streams in the Claus units. The Owner/Operator shall conduct a Department approved stack test comprising of 3 runs of sufficient duration to evaluate compliance. Stack test results indicating below detection limits because of insufficient "catch" at the end of three 4 hour runs shall be accepted as proof of compliance. Upon demonstrating compliance in accordance with this provision, the Owner/Operator shall not be required to conduct additional stack testing to demonstrate compliance with the Emission Standard. However, if the initial stack test performed in accordance with this Condition does not demonstrate compliance with the Emission Standard, then the Owner/Operator shall conduct additional tests on an annual basis, as applicable. The Owner/Operator may at any time petition the Department to discontinue such annual stack tests based upon compliant test results.<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.iv. | and comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.v. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 8. Sulfuric Acid ($H_2SO_4$):<br>i. Emission Standard:<br>$H_2SO_4$ emissions shall not exceed 1.6 lb/hr and 12.7 TPY combined from both SCOT stacks. *[Reference: APC-98/0264(A7)]* | ii. Compliance Method:<br>Compliance with the Emission Standard shall be based on stack testing conducted in accordance with Condition 3 - Table 1.j.8.iii. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-98/0264(A7)]*<br><br>iii. Monitoring/Testing:<br>The initial performance test shall be conducted while processing both refinery acid gas and gasifier acid gas streams in the Claus units. The Owner/Operator shall conduct a Department approved stack test comprising of 3 runs of sufficient duration to evaluate compliance. Stack test results indicating below detection limits because of insufficient "catch" at the end of three 4 hour runs shall be accepted as proof of compliance. Upon demonstrating compliance in accordance with this provision, the Owner/Operator shall not be required to conduct additional stack testing to demonstrate compliance with the Emission Standard. However, if the initial stack test performed in accordance with this Condition does not demonstrate compliance with the Emission Standard, then the Owner/Operator shall conduct additional tests on an annual basis, as applicable. The Owner/Operator may at any time petition the Department to discontinue such annual stack tests based upon compliant test results. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-98/0264(A7)]*<br><br>iv. Recordkeeping: | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.v. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.iv. | |
| 9. Visible Emissions:<br>The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than twenty (20) percent opacity for an aggregate of more than three (3) minutes in any one (1) hour or more than fifteen (15) minutes in any twenty-four (24) hour period. *[Reference: 7 **DE Admin. Code** and 1114, Section 2.1, dated 7/17/84].* | ii. Compliance Method:<br>Compliance shall be demonstrated by monitoring and testing requirements, and record keeping. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00].*<br><br>iii. Monitoring/Testing:<br>A. The Owner/Operator shall conduct daily qualitative stack observations to determine the presence of any visible emissions when the unit is in operation.<br>1 If visible emissions are observed, the Owner/Operator shall take corrective actions and/or conduct a visible observation in accordance with Paragraph (B) below.<br>2 If no visible emissions are observed, no further action is required.<br>B. If required under paragraph A above, the Owner/Operator shall, in accordance with Subsection 1.5(c) of **7 DE Admin. Code** 1120, conduct visual observations at fifteen-second intervals for a period of not less than one hour except that the observations may be discontinued whenever a violation of the standard is recorded. The additional procedures, qualification and testing to be used for visually determining the opacity shall be those specified in Section 2 & 3 (except for Section 2.5 and the second sentence of Section 2.4) of Reference | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.v. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | Method 9 set forth in Appendix A, 40 CFR, Part 60, revised July 1, 1982. . *[Reference: 7 **DE Admin. Code** 1120 dated 12/7/88 and 7 **DE Admin. Code** 1130 Section 6.1.3 dated 12/11/00].*<br><br>iv. Record keeping: *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00].*<br>The following records shall be maintained in accordance with Condition 3(b):<br>A. Observation records shall be maintained and made available to the Department upon request. | |
| **k. <u>Emission Unit No. 37</u>: Steam Methane Reformer Hydrogen Plant, Heaters 37-H-1 A/B; (Emission points 37-1A and 37-1B)** | | |
| 1. Conditions applicable to Multiple Pollutants:<br>i. Operational Limitation:<br>A. The heat input to 37-H-1 A/B shall not exceed 439 mmBtu/hr on a 365 day rolling average basis. *[Reference: <u>APC-81/0965</u>]*<br>B. Only desulfurized refinery fuel gas (RFG) and/or natural gas may be fired in unit 37-H-1 A/B.<br>C. The hydrogen sulfide ($H_2S$) content in the desulfurized RFG shall not exceed 162 ppmv(d) (0.10 gr/dscf) on a three (3) hour rolling average basis. | ii. Compliance Method:<br>Compliance with the Operational Limitations shall be based on monitoring/testing and recordkeeping requirements. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br><br>iii. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. The Owner/Operator shall monitor the fuel usage by 37-H-1 A/B on an hourly basis.<br>B. The Owner/Operator shall obtain a daily sample of the fuel gas combusted in 37-H-1 A/B and analyze it to determine the daily heat input rate to this unit.<br>C. The Owner/Operator shall monitor $H_2S$ concentration in RFG continuously. The monitoring instrument shall be located downstream of all process steps that increase the concentration of $H_2S$ in RFG | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. [**RESERVED**]<br>B. The Owner/Operator shall submit the H2S quarterly CMS report by January 31, April 30, July 31 and October 31 of each calendar year. The $H_2S$ CMS report shall include a report listing all rolling 3 hour periods during which the average concentration of $H_2S$ as measured by the $H_2S$ CMS exceeds 162 ppmv (dry) or 0.10 grain/dscf, quarterly audit results, data capture for the period and details of out of control periods. The data submitted with the Owner/Operator's quarterly $H_2S$ CMS |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | prior to its being combusted in any fuel burning device. The $H_2S$ CEMS shall conform to the requirements of Performance Specification 7 of 40 CFR 60, Appendix "B" and comply with the quality assurance requirements of 40 CFR 60, Appendix "F." The relative accuracy evaluation shall be conducted using method 11 of 40 CFR 60, Appendix "A."<br><br>iv. Recordkeeping: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]*<br>The following records shall be maintained in accordance with Condition 3(b):<br>A. Daily fuel HHV.<br>B. All 3-hour rolling averages of $H_2S$ content in RFG.<br>C. CEMS data, calibration and audit results.<br>D. The type of fuel combusted in 37-H-1 A/B and the fuel usage. | NSPS report for the facility shall satisfy this reporting requirement.<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00* |
| 2. Particulate Matter:<br>i. Emission Standard:<br>PM emissions shall not exceed 0.3 lb/mmBtu heat input, maximum 2-hour average. *[Reference: 7 **DE Admin. Code** 1104 Section 2.1 dated 2/1/81]* | ii. Compliance Method: *[Reference :7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. Compliance with the Emission Standard shall be based on the fuel type and quality.<br><br>iii. Monitoring/Testing:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.k.1.iii.<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.k.1.iv. | vi. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vii. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 3. Sulfur dioxide ($SO_2$):<br>i. Operational Limitation:<br>A. No sulfur compounds shall be emitted to the atmosphere during regeneration of the carbon drum absorption system. *[Reference: APC-81/0965-0 dated September 9, 1981]* | ii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. Compliance with Operational Limitation (A) shall be based on routing all emissions during regeneration of the carbon drum absorption system to the refinery flare recovery system.<br><br>iii. Monitoring/Testing:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.k.1.iii.<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.k.1.iv. | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit.*[Reference :7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 4. Nitrogen Oxides ($NO_X$):<br>i. Emission Standard:<br>A. $NO_X$ emissions shall not exceed 0.20 lb/mmBtu on a 24 hour rolling average basis. *[Reference: 7 **DE Admin. Code** 1112 Section 3.2.1 dated 11/24/93]*<br>B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1 - Condition 3 - Table 1.j. | ii. Compliance Method:<br>Compliance with the Emission Standard A and on the "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j shall be determined by CEMS. *[Reference: 7 **DE Admin. Code** 1112 Section 3.2.4.1 dated 11/24/93]*<br><br>iii. Monitoring/Testing:<br>A. The CEMS for $NO_X$ and the diluent must be certified by satisfying the applicable Performance Specifications in 40 CFR, Part 60, Appendix "B". The QA/QC procedures for the $NO_X$ and diluent CEMS shall be demonstrated in accordance with 40 CFR, Part 60, Appendix "F". *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br><br>iv. Recordkeeping: | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.2 dated 12/11/00]* | |
| 5. Volatile Organic Compounds (VOCs):<br>i. Emission Standard:<br>Volatile Organic Compound (VOC) emissions from the $CO_2$ and deaerator vents combined shall be reduced by not less than 81% from baseline levels (Figure 2 of application dated February 12, 2003) and shall not exceed a rate defined by 24 tons during the first year and 13 tons during the last year of the six year catalyst replacement cycle. *[Reference: 7 **DE Admin. Code** 1124, Section 50 dated 11/29/94 and APC-81/0965]* | ii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>Compliance with the Emission Standard shall be based on the monitoring/testing requirements.<br><br>iii. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and Permit: APC-81/0965]*<br>The Owner/Operator shall conduct a stack test within 60 days of replacement of the LTS catalyst by the KATALCO 83-3X catalyst, at the end of the first year and at two year intervals thereafter. The tests shall be conducted simultaneously on the $CO_2$ and deaerator vents using the same Department approved test methodology as was used in determining baseline emissions testing in June 2002. The stack test results shall be used to quantify VOC emissions from the $CO_2$ and deaerator vents using the following equation:<br><br>% VOC reduction = 100 [1 – [($CO_2$ vent rate) (1 – fraction of $CO_2$ to Air Liquide) + (Deaerator vent rate) ]/Baseline $CH_3OH$]<br><br>where $CO_2$ and deaerator vent rates are stack test based VOC emission rates<br><br>iv. Recordkeeping: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]* | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference:7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | The following records shall be maintained in accordance with Condition 3(b):<br>A. [**RESERVED**]<br>B. Annual quantities of $CO_2$ produced and exported to *Air Liquide.* | |
| 6. Visible Emissions:<br>The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than twenty (20) percent opacity for an aggregate of more than three (3) minutes in any one (1) hour or more than fifteen (15) minutes in any twenty-four (24) hour period. *[Reference: 7 **DE Admin. Code**. 1114, Section 2.1, dated 7/17/84].* | ii. Compliance Method: Compliance shall be demonstrated by proper operation and maintenance of the emission units, monitoring and testing requirements, and record keeping. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3. dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br><br>A. The Owner/Operator shall conduct daily qualitative stack observations to determine the presence of any visible emissions when the unit is in operation.<br>1. If visible emissions are observed, the Owner/Operator shall take corrective actions and/or conduct a visible observation in accordance with Paragraph (B) below.<br>2. If no visible emissions are observed, no further action is required.<br>*[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3. dated 12/11/00]*<br>B. If required under paragraph A, above, the Owner/Operator shall in accordance with Subsection 1.5(c) of 7 **DE Admin. Code** 1120 conduct visual observations at fifteen-second intervals for a period of not less than one hour except that the observations may be discontinued whenever a violation | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | of the standard is recorded. The additional procedures, qualification and testing to be used for visually determining the opacity shall be those specified in Section 2 & 3 (except for Section 2.5 and the second sentence of Section 2.4) of Reference Method 9 set forth in Appendix A, 40 CFR, Part 60, revised July 1, 1982. *[Reference: 7 **DE Admin. Code** 1120, Section 1.5.3 dated 12/7/88].*<br><br>iv. Recordkeeping: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3. dated 12/11/00]*<br>A. Observation records shall be maintained and made available to the Department upon request. | |
| **l. [RESERVED]** | | |
| **m. Emission Unit No. 42: Continuous Catalyst Regenerator (CCR) Reformer, Reformer Charge Heater and Reboiler Heater (Emission points 42-1 and 42-2)** | | |
| 1. Conditions applicable to Multiple Pollutants:<br>i. Operational Limitations: *[Reference: APC-82/0073 and APC-82/0632]*<br>A. The heat input to 42-H-1,2,3 shall not exceed 458 mmBtu/hr on a 365 day rolling average basis.<br>B. The heat input to 42-H-7 shall not exceed 80 mmBtu/hr on a 365 day rolling average basis.<br>C. Only desulfurized refinery fuel gas | ii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.1.2 dated 12/11/00]*<br>Compliance with the operational limitations shall be based on monitoring/testing and recordkeeping requirements.<br><br>iii. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. The Owner/Operator shall monitor the fuel usage by 42-H-1,2,3 and 42-H-7 on an hourly basis. | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. [**RESERVED**]<br>B. [**RESERVED**]<br>C. The Owner/Operator shall submit the $H_2S$ quarterly CMS report by January 31, April 30, July 31 and October 31 of each calendar year. The $H_2S$ report shall |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| (RFG) and/or natural gas may be fired in 42-H-1,2,3 and 42-H-7.<br>D. The hydrogen sulfide ($H_2S$) content in the desulfurized RFG shall not exceed 162 ppmvd (0.10 gr/dscf) on a 3 hour rolling average basis.<br>E. Unit 42-H-1,2,3 may combust process vent gases from the reactor lift engager (42-D-11) and from the CCR lift engager (42-D-17). | B. The Owner/Operator shall obtain a daily sample of the fuel gas combusted in 42-H-1,2,3 and 42-H-7 and analyze it to determine the daily heat input rate to this unit.<br>C. The Owner/Operator shall monitor $H_2S$ concentrations in RFG continuously. The monitoring instrument shall be located downstream of all process steps that increase the concentration of $H_2S$ in RFG prior to its being combusted in any fuel burning device. The $H_2S$ CEMS shall conform to the requirements of Performance Specification 7 of 40 CFR 60, Appendix "B" and comply with the quality assurance requirements of 40 CFR 60, Appendix "F." The relative accuracy evaluation shall be conducted using Method 11 of 40 CFR 60, Appendix "A."<br>D. [**RESERVED**]<br><br>iv. Recordkeeping: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]*<br>The following records shall be maintained in accordance with Condition 3(b):<br>A. the type of fuel combusted in 42-H-1,2,3 and 42-H-7 and the fuel usage.<br>B. All 3-hour rolling averages of H2S content in RFG.<br>C. CEMS data calibration and audit results. | include a report listing all rolling 3-hour periods during which the average concentration of $H_2S$ as measured by the $H_2S$ CEMs exceeds 162 ppmv(d) (0.10 gr/dsef), quarterly results, data capture for the period and details out of control periods. The data submitted with the Owner/Operator's quarterly $H_2S$ CMS NSPS report for the facility shall satisfy this reporting requirement.<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*. |
| 2. Particulate Matter:<br>i. Emission Standards for 42-H-1,2,3 and 42-H-7:<br>PM emissions shall not exceed 0.3 | ii. Compliance Method: *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.1.2 dated 12/11/00]*<br>A. Compliance with the Emission Standard shall be based on the fuel type and quality. | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| lb/mmBtu heat input, maximum 2-hour average. *[Reference: 7 **DE Admin. Code.** 110 4 Section 2.1 dated 2/1/83].* | iii. Monitoring/Testing:<br>Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.m.1.iii<br><br>iv. Recordkeeping:<br>Comply with "Conditions Applicable to multiple Pollutants" in Condition 3 - Table 1.m.iv. | *Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00].* |
| 3. Nitrogen Oxides ($NO_X$):<br>i. Emission Standard:<br>For Unit 42-H-1,2,3:<br>A. $NO_X$ emissions shall not exceed 0.20 lb/mmBtu on a 24 hour rolling average basis. *[Reference: 7 **DE Admin. Code** 1112, Section 3.2.1 dated 11/24/93].*<br>B. For 42-H-1,2,3 and 42-H-7: Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin. Code** 1112, Section 5 dated 11/24/93]*<br>C. For 42-H-7: $NO_X$ emissions shall not exceed those achieved by the installation of either low excess air and low $NO_X$ burner technology or flue gas recirculation technology. *[Reference: 7 **DE Admin. Code** 1112, Section 3.3.1 dated 11/24/93]* | ii. Compliance Method:<br>A. Compliance with the Emission Standards (A) and on the "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" from 42-H-1,2,3 in Part 1, Condition 3 - Table 1.j (B) shall be determined by CEMS. *[Reference: 7 **DE Admin. Code** 1112 Section 3.2.4.1 dated 11/24/93].*<br>B. Compliance with Emission Standard (C) shall be based on the operation and maintenance of the Low $NO_X$ burners in accordance with the manufacturer's specifications.<br>C. Compliance with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j for 42-H-7 shall be based on determination and use of a NOx emission factor based upon results of the most recent performance testing conducted in accordance with a protocol approved by DNREC, or performed in accordance with applicable performance testing methods established and published by EPA and appropriate for measuring NOx emissions from the relevant source or any other method proposed by the Owner/Operator and approved by the Department. *[Reference: 7 **DE Admin Code** 1130 Section 6.3.1* | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | *dated 12/11/00]*<br><br>iii. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. The CEMS for $NO_X$ and the diluent must be certified by satisfying the applicable Performance Specifications in 40 CFR, Part 60, Appendix "B". The QA/QC procedures for the $NO_X$ and diluent CEMS shall be demonstrated in accordance with 40 CFR, Part 60, Appendix "F".<br>B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 Table 1.j.<br>*[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.1 dated 12/11/00]*<br><br>iv. Recordkeeping:<br>Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.2 dated 12/11/00]* | |
| 4. Visible Emissions:<br>The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than 20 percent opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period. *[Reference 7 **DE Admin. Code** 1114, Section 2.1, dated 7/17/84].* | ii. Compliance Method: Compliance shall be demonstrated by proper operation and maintenance of the emission units, monitoring and testing requirements, and record keeping. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br>A. The Owner/Operator shall conduct daily qualitative stack observations to determine the presence of any visible emissions when the unit is in operation. | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | 1. If visible emissions are observed, the Owner/Operator shall take corrective actions and/or conduct a visible observation in accordance with Paragraph (B) below.<br>2. If no visible emissions are observed, no further action is required.<br>*[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3 dated 12/11/00]*<br>B. If required under paragraph A, above, the Owner/Operator shall, in accordance with 7 **DE Admin. Code** 1120 Section 1.5 conduct visual observations at fifteen-second intervals for a period of not less than one hour except that the observations may be discontinued whenever a violation of the standard is recorded. The additional procedures, qualification and testing to be used for visually determining the opacity shall be those specified in Section 2 and 3 (except for Section 2.5 and the second sentence of Section 2.4) of Reference Method 9 set forth in Appendix A, 40 CFR, Part 60, revised July 1, 1982. *[Reference 7 **DE Admin. Code** 1120, Section 1.5.3 dated 12/7/88].*<br><br>iv. Record keeping: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. Observation records shall be maintained and made available to the Department upon request. | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 5. Hazardous air pollutants: *[Reference: APC-82/0073]*<br>i. Emission standards:<br>A. The wet gas scrubber shall reduce uncontrolled emissions of HCl by 97% by weight at all times.<br>B. Total HCl emissions from the CCR Reformer unit shall not exceed 1.6 tons on a 12-month rolling basis.<br>C. The wet gas scrubber shall reduce uncontrolled emissions of chlorine by 95% by weight at all times.<br>D. Total chlorine emissions shall not exceed 0.80 tons on a 12-month rolling basis.<br><br>ii. Operational limitations:<br>A. The Owner/Operator shall operate the wet gas scrubber at all times according to the procedures of the operation, maintenance and monitoring (OMM) plan, which shall include the information specified in 40 CFR Part 63.1574(f).<br>B. The minimum daily average pH of the scrubbing liquid exiting the scrubber shall be 6.56.<br>C. The minimum daily average liquid-to-gas ratio shall be 0.12.<br>D. During periods of startup, shutdown, and malfunction, the Owner/Operator shall operate the CCR Reformer unit and wet gas scrubber in accordance | iii. Compliance method: *[Reference: APC-82/0073]* Compliance with the Emission Standards and Operational Limitations shall be based on Monitoring/Testing and Recordkeeping requirements.<br><br>iv. Monitoring/Testing: *[Reference: APC-82/0073]*<br>A. To demonstrate compliance with the Operational Limitations, the Owner/Operator shall operate a continuous monitoring system to measure the following parameters, in accordance with the requirements of 40 CFR Part 63, Subpart UUU, Table 41.<br>1. The pH of the scrubbing liquid exiting the scrubber;<br>2. The gas flow rate to the scrubber;<br>3. The total scrubbing liquid flow rate;<br>4. The differential pressure across the scrubber.<br>B. To demonstrate compliance with Operational Limitations (B) and (C) during coke burn-off and catalyst rejuvenation, the Owner/Operator shall:<br>1. Collect the hourly and daily average pH monitoring data according to §63.1572;<br>2. Maintain the daily average pH above the operating limit established during the performance test;<br>3. Collect the hourly average gas flow rate and scrubbing liquid flow rate monitoring data; | vi. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00 and APC-82/0073]*<br>A. The Owner/Operator shall submit semiannual reports by January 31 and July 31 of each calendar year for the preceding semiannual period in accordance with the requirements of §63.1575(c). The report must include each instance in which an emission limit, operating standard or work practice standard is not met, or if no deviations occurred the report must contain a statement that there were no deviations during the reporting period and that no continuous monitoring system was inoperative, out of control, repaired or adjusted. An electronic copy of the report shall be sent to the Department's engineer for the refinery.<br><br>vii. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| with a written startup, shutdown, malfunction plan (SSMP) pursuant to 40 CFR Part 63.6(e)(3). | 4. Determine and record the hourly and daily average liquid-to-gas ratio;<br>5. Maintain the daily average liquid-to-gas ratio above the limit established during the performance test; and<br>6. Comply with the OMM plan.<br><br>v. Recordkeeping: *[Reference: APC-82/0073]*<br>The following records shall be maintained in accordance with Condition 3(b):<br>A. A copy of each notification and report submitted pursuant to or supporting any initial Notification of Compliance Status pursuant to §63.10(b)(2)(xiv);<br>B. Records in §63.6(e)(1)(iii) through (v) related to startup, shutdown and malfunction; and<br>C. Records of performance tests required in §63.10(b)(2)(vii). | |
| **n. Emission Unit No. 45: Refinery Utilities, North & South Flares and Gas Recovery System; Spent Caustic Stripper (Emission points 45-1 and 45-2):** | | |
| 1. Flares<br>i. Emission Standard:<br>Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j.<br><br>ii. Operational Limitations:<br>A. [**RESERVED**]<br>B. The flare shall be operated at all | ii. Compliance Method<br>A. Compliance with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j for NOx emissions associated with the combustion of pilot gas shall be based on published NOx emission factors for such source or category of sources or any other method proposed by the Owner/Operator and approved by the Department. | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vii. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| times when emissions may be vented to it. *[Reference: 40 CFR 60, Subpart A, §60.18(e), dated 7/1/06]*<br>C. At least one flare recovery compressor shall be operational at all times, except during periods of malfunction as defined in Condition 2(e)(5).<br>D. The flares shall be designed for and operated with no visible emissions as determined by methods specified in paragraph (f) of 40 CFR 60.18 except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. *[Reference Regulation 40 CFR 60.18(c)(1) dated 7/1/06].*<br>E. Except as provided in D above, operation of the flare shall be smokeless. *[Reference: Permit APC-81/0830]*<br>F. The flare shall be operated with a flame present at all times. *[Reference: 40 CFR 60.18(c)(2), dated 7/1/06]*<br>G. The flare flame detection device shall be in proper operation whenever the flare is in operation. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* | B. Compliance with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j for NOx emissions associated with the combustion of process gas shall be estimated in accordance with best engineering judgment or any other method proposed by the Owner/Operator and approved by the Department.<br>C. Compliance with the Operational Limitations shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements of this condition. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br><br>iii. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. The Owner/Operator shall continuously monitor the gas flow to the flares (i.e., the gas not recovered by the recovery compressors).<br>B. A gas sample shall be collected from the flare header weekly and analyzed by a gas chromatograph.<br>C. Delaware reportable quantities of pollutants in the flare emissions shall be calculated based on the flow and concentrations measured from the weekly samples unless more representative process operating data can be used to provide concentrations that are different from those obtained from the daily analysis.<br>D. Visible emissions from the flare shall be | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | monitored as follows:<br>1. The Owner/Operator shall monitor the opacity from both flare stacks at all times using a video camera. The monitor for the camera shall be in plain sight in the control room at all times.<br>2. The Owner/Operator shall conduct daily qualitative observations of the flare using Method 22 to evaluate the presence or absence of smoke and/or visible air contaminants during a continuous fifteen (15) minute period while the flare is in operation.<br>3. If visible emissions are detected during any daily qualitative survey of visible emissions or is observed at any other time, the Owner/Operator shall take corrective action and/or conduct a visible emission test using 40 CFR 60, Appendix A, Reference Method 22, dated 7/11/06. The observation period is 2 hours and shall be done according to Method 22. *[Reference: 40 CFR 60, Subpart A, §60.18(f)(1), dated 7/1/06]*<br>4. The presence of a flare pilot flame shall be monitored at all times using a thermocouple or any other equivalent device to detect the presence of a flame. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and 40 CFR 60.18(f)(2), dated* | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | *7/1/06]*<br>E. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j.<br><br>iv. Recordkeeping:<br>In addition to the requirements of Conditions 3(b)(1)(ii) and 3(b)(2) of this permit, the Company shall: *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 and 6.2.1 dated 12/11/00]*<br>A. Date, time and duration of the flaring event.<br>B. Quantity of material flared.<br>C. Calculations showing the amount of reportable quantity releases.<br>D. Results of weekly samples.<br>E. Daily visible emission record.<br>F. Method 22 observations.<br>G. Records indicating the presence of a flame during flare operation.<br>H. Periods of time when the camera monitoring equipment is not operational.<br>I. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. | |
| 2. Spent Caustic Stripper:<br>**State Enforceable Only**<br>i. Emissions Standards: *[Reference: APC-95/0381]*<br>A. There shall be no direct air contaminant emissions to the atmosphere from this unit.<br>B. The sulfide concentration in the spent caustic shall not exceed 600 ppm (wt) | iii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*<br>A. Compliance with Emission Standard (A) is based on routing the stripper overhead gases as feed to the refinery SRA only.<br>B. Compliance with Emission Standard (B) is based on the monitoring/testing requirements.<br>C. Compliance with the Operational Limitation | vi. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference:7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vii. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| and a rolling average of 200 ppm (wt) calculated on the last 30 days of actual operation. For the purpose of this condition, a day is defined as a calendar day.<br><br>ii. Operational Limitation:<br>A. No spent caustic streams from any of the following units shall enter any part of the WWTP until they are treated by the spent caustic stripper in accordance with Emission Standard B. *[Reference: APC-95/0381]*<br>1. Fluid Catalytic Cracking Unit<br>2. Crude Unit<br>3. Alkylation Plant<br>4. Polymerization Plant<br>5. Ether Unit | is based on the Recordkeeping requirements.<br><br>iv. Monitoring/Testing:<br>The treated spent caustic shall be sampled and tested for sulfide concentration daily. Testing shall be conducted utilizing the CHEMetrics VACUettes sulfide test kit. An alternative test method may be substituted if approved by the Department. *[Reference: APC-95/0381]*<br><br>v. Recordkeeping:<br>The following records shall be maintained in accordance with Condition 3(b): *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-95/0381]*<br>A. Log of daily sampling results<br>B. Log indicating all periods when the spent caustic discharge to the WWTP exceeds Emission Standard (B). | *Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| **oa. Facility Wide Requirement for Fugitive VOC Emissions, i.e., Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries (40 CFR 60, Subpart GGG); National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries (40 CFR Part 63 Subpart CC) Standards of Performance for Equipment Leaks of VOC in SOCMI (40 CFR 60, Subpart VV), and Regulation No. 24, Section 29, Leaks from Petroleum Refinery Equipment** | | |
| 1. **Pumps in Light Liquids Service.**<br>i. Operational Standards<br>A. Each pump in light liquid service shall be monitored by the methods and procedures in accordance with (iii)(A) of this section. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, subpart VV, §60.482-2(a) dated 7/1/00 and 40 CFR 63.648(a)(1) dated 8/18/98].* | ii. Compliance Methods<br>Compliance with the operational standards of this condition shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements of this section. *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3 dated 11/15/93]* | v. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference :7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>A. [**RESERVED**]<br>B. Other reporting requirements are |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| B. Leak Repair<br>1. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 8 of this unit. *[Reference: 7 **DE Admin. Code** 1124, Section 28, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-2(c)(1) dated 7/1/00 and 40 CFR 63.648(a)(1) dated 8/18/98]*<br>2. A first attempt at repair shall be made no later than5 calendar days after each leak is detected. *[Reference: 7 **DE Admin. Code** 1124, Section 28, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-2(c)(2) dated 7/1/00 and 40 CFR 63.648(a)(1) dated 8/18/98]*<br>C. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (A) of this section, provided the following requirements are met:<br>1. Each dual mechanical seal system is:<br>a. Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or<br>b. Equipment with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of Section 9 of this unit; or, | iii. Monitoring/Testing<br>A. Periodic Monitoring<br>1. Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60, Subpart VV, §60.485(b), dated 7/1/00, except as given in paragraphs (i)(C), (i)(D), and (i)(E) of this section.<br>2. Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60,Subpart VV, §60.482-2(a), dated 7/1/00]*<br>B. Detection of Leaks<br>1. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected for existing pumps as defined in 40 CFR 63.640. If an instrument reading of 2,000 ppm or greater is measured, a leak is detected for new pumps as defined in 40 CFR 63.640. *[Reference: 7 **DE Admin. Code** 1124, Section 28, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-2 dated 7/1/00 and 40 CFR 63.648(a)(1) dated 8/18/98]*<br>2. If there are indications of liquids dripping from the pump seal, a leak is detected. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60,Subpart VV, §60.482-2(b), dated 7/1/00]*<br>iv. Recordkeeping *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* | covered under Section 13 of this unit.<br>vi. Compliance Certification<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| c. Equipped with a system that purges the barrier fluid into process stream with zero VOC emissions to the atmosphere.<br>2. The barrier fluid system is in heavy liquid service or is not in VOC service.<br>3. Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.<br>4. Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.<br>5. a. Each sensor as described in paragraph (3) of this section is checked daily or is equipped with an audible alarm, and<br>b. The Owner/Operator determines, based on design considerations and operation experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.<br>6. a. If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in paragraph | The following records shall be maintained in accordance with Condition 3(b):<br>VOC leak repair records required by 40 CFR 60.592 for existing components in light liquid and gaseous service and 40 CFR 63.654 for new components in light liquid and gaseous service. | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| (C)(5)(b), a leak is detected.<br>b. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 9 of this unit.<br>c. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. *[Reference: 7 **DE Admin. Code** 1124, Section 28, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-2(d), dated 12/14/2000 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>D. Any pump that is designed for no detectable emission, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (i)(A), (i)(B), (i)(C), and (iii) of this section if the pump:<br>1. Has no externally actuated shaft penetrating the pump housing.<br>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, Subpart VV, §60.485(c), dated 7/1/00, and<br>3. Is tested for compliance with | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| paragraph (D)(2) initially upon designation, annually, and at other times required by the Department. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-2(e) dated 12/14/2000 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>E. If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system, it is exempt from this section. [*Reference: 7 **DE Admin. Code** 112, Section29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-2(f) dated 12/14/2000 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>F. Any pump that is designated as an unsafe-to-monitor pump is exempt from the Monitoring/Testing requirements of this section if:<br>1. The Owner/Operator demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to immediate danger as a consequence if complying with part (iii)(A) of this section; and<br>2. The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| applicable, and repair of the equipment according to the procedures in part (iii)(B) of this section if a leak is detected. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94; 40 CFR 60 Subpart VV §60.482-2(g) dated 12/14/2000 and §63.648(a)(1) dated 8/18/98].* | | |
| 2. Compressors.<br>i. Operational Standards<br>A. Each compressor shall be equipped 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 60.482-91(c) and Operational Standards (E) and (F) of this section. *[Reference: 7 **DE Admin. Code** 1124, Section 28, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-3(a) dated 7/1/00 and 40 CFR 63.468(a)(1) dated 8/18/98]*<br>B. Each compressor seal system as required in paragraph (A) shall be:<br>1. Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or<br>2. Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of Section 9 of this unit; or<br>3. Equipped with a system that purges the barrier fluid into a process | ii. Compliance Method<br>Compliance with the Operational Standards of this condition shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements of this section. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3 dated 12/11/00]*<br><br>iii. Monitoring/Testing<br>A. Each barrier fluid system as described in paragraph (i)(A) of this unit shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. *[Reference: 7 **DE Admin. Code** 1124, Section 28, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-3(d), dated 7/1/00]*<br>B. 1. Each sensor as required in paragraph (A) shall be checked daily or shall be equipped with an audible alarm.<br>2. The Owner/Operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. *[Reference: Regulation No.2 4, Section28, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-3(e), dated 7/1/00]* | v. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference :7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>A. [**RESERVED**]<br>B. Other reporting requirements are covered under Section 13 of this unit.<br><br>vi. Certification<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| stream with zero VOC emissions to the atmosphere. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-3(b) dated 12/14/2000 and 40 CFR 63.648(a)(1) dated 8/18/98]*<br>C. The barrier fluid system shall be in heavy liquid service or shall not be in VOC service. *[Reference: 7 **DE Admin. Code** 1124, Section29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-3(c) dated 7/1/00 and 40 CFR 63.468(a)(1) dated 8/18/98]*<br>D. 1. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 8 of this unit.<br>2. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 28, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-3(g) dated 7/1/00 and 40 CFR 63.468(a)(1) dated 8/18/98].*<br>E. A compressor is exempt from the requirements of Operational Standards (A) and (B) of this section, if it is equipped with a closed vent system to capture and transport any leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of Section 9 of this unit. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-3(h) dated 12/14/2000 and 40 CFR* | C. If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (B)(2), a leak is detected. *[Reference: : 7 **DE Admin. Code** 1124, Section28, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-3(f), dated 7/1/00]*<br><br>iv. Recordkeeping<br>None in addition to the requirements of Section 12 of this unit. | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| *63.648(a)(1) dated 8/18/98]*<br>F. Any compressor 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 this section if the compressor:<br>1. 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, Subpart VV, §60.485(c), dated 7/1/00.<br>2. Is tested for compliance with Operational Standard (F)(1) initially upon designation, annually, and at other times requested by the Department. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-3(i) dated 12/14/2000 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>G. Any existing reciprocating compressor in a process unit which becomes an affected facility is exempt from this section provided the Owner/Operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of this section. *[Reference: 40 CFR 60, Subpart VV,* | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| *§60.482-3(j) dated 12/14/2000 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>H. Compressors in hydrogen service are exempt from the requirements of this section if the Owner/Operator demonstrates that a compressor is in hydrogen service. *[Reference: 40 CFR 60, Subpart GGG, §60.593(b)(1) dated 7/1/2000].*<br>I. Each compressor is presumed to be in hydrogen service unless the Owner/Operator demonstrates that it is not in hydrogen service. For a piece of equipment to be considered in hydrogen service, it must be determined that the percent hydrogen concentration can be reasonably expected to exceed 50% by volume. *[Reference: 40 CFR 60.593(b)(1) & (2) dated 10/17/2000 and 40 CFR 63.648(g) dated 8/18/98].* | | |
| 3. **Pressure Relief Devices in Gas/vapor Service.**<br>i. Operational Standards<br>A. 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, Subpart VV, §60.485(c), dated 7/1/00. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-4(a) dated 7/1/00* | ii. Compliance Method *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3 dated 11/15/93]*<br>Compliance with the operational standards of this condition shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements of this section.<br><br>iii. Monitoring/Testing<br>A. 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 | v. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference :7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>A. RESERVED<br>B. Other reporting requirements are covered under Section 13 of this unit.<br><br>vi. Certification<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| *and 40 CFR 63.648(a)(1) dated 8/18/98].*<br><br>B. Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in Section 9 of this unit is exempted from the requirements of paragraphs (i)(A) and (iii) of this section *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-4(c) dated 12/14/2000 and 40 CFR 63.648(a)(1) dated 8/18/98.]*<br>C. 1. Any pressure relief device that equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements in (i)(C)(2) below.<br>2. After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §60.482-9. *[Reference 40 CFR 60, Subpart VV, §60.482-4(d) dated 12/14/2000]*. | pressure release, except as provided in Section 8 of this unit. *[Reference: 7 **DE Admin. Code** 1124, Section 28, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-4(b)(1), dated 7/1/00]*<br><br>B. No later than 5 calendar days after a pressure release, the pressure relief device shall be monitored to confirm the conditions 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, Subpart VV, §60.485©, dated 7/1/00. *[Reference: 7 **DE Admin. Code** 1124, Section 28, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-4(b)(2), dated 7/1/00]*<br><br>iv. Recordkeeping:<br>None in addition to the requirements of Section 12 of this unit. | |
| 4. **Sampling Connection Systems.**<br>i. Operational Standards.<br>A. Each sampling connection system | ii. Compliance Method *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3 dated 11/15/93]*<br>Compliance with the operational standards of | v. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| shall be equipped with a closed-purged, closed-loop, or closed-vent system, except as provided in the provisions for determining an equivalent means of limitation. Gasses displaced during filling of the sample container are not required to be collected or captured. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-5(a) dated 12/14/2000 and 40 CFR 63.648(a)(1) dated 8/18/98.]*<br>B. Each closed-purge, closed-loop, or closed vent system as required in paragraph (A) of this section shall comply with the following requirements:<br>1. Return the purged process fluid directly to the process line; or<br>2. Collect and recycle the purged process fluid to a process; or<br>3. Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of Section 9 of this unit.<br>4. Collect, store, and transport the purged process fluid to any of the following systems:<br>5. A waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to, and operate in | this condition shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements of this section. *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3 dated 12/11/00]*<br><br>iii. Monitoring/Testing<br>None.<br><br>iv. Recordkeeping<br>None in addition to the requirements of Section 12 of this unit. | and the following: *[Reference :7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. RESERVED<br>B. Other reporting requirements are covered under Section 13 of this unit.<br>vi. Certification<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| compliance with the provision of 40 CFR part 63, subpart G, application to Group 1 wastewater streams;<br>b. A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266; or<br>3. A facility permitted, licensed, or registered by the State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261. *[Reference: 7 **DE Admin. Code** 1124, Section 28,dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-5(b) dated 7/1/00 and 40 CFR 63.468(a)(1) dated 8/18/98].*<br>4. In situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (A) and (B) of this section. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-5(c) dated 12/14/2000 and 40 CFR 63.648(a)(1) dated 8/18/98].* | | |
| 5. **Open-ended Valves or Lines.**<br>i. Operational Standards<br>A. 1. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve. | ii. Compliance Method:<br>Compliance with the operational standards of this condition shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements of this section. *[Reference: 7 **DE*** | v. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 2. The cap, blind flange, plug or second valve shall seal the open end at all times except during operations requiring process fluid flow throughout he open-ended valve or line. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-6(a) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>B. 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 value is closed. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-6(a) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98]*<br>C. 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 paragraph (A) at all other times. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-6(a) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98]*<br>D. Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (i)(A), (B), and (C) of this | ***Admin. Code** 1130, Section 6.1.3 dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br>None<br><br>iv. Recordkeeping<br>None in addition to the requirements of Section 12 of this unit. | A. RESERVED<br>B. Other reporting requirements are covered under Section 13 of this unit.<br><br>vi. Compliance Certification<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| section. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-6(a) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98]*<br>E. Open-ended valves or lines containing materials which would automatically polymerize or would present an explosion, serious over pressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (i)(A) through (C) of this section are exempt from the requirements of paragraphs (i)(A) through (C) of this section. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-6(a) dated 12/14/00 and 40 CFR 63.648(a)(1) dated* 8/18/98] | | |
| 6. **Valves in Gas/vapor Service and in Light Liquid Service.**<br>i. Operational Standards<br>A. Each valve shall be monitored as given in section (iii) of this unit and shall comply with Operational Standards (B) through (D), except as provided in Operational Standards (E) and (F) and Sections 10 and 11 of this unit. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-6(a) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98]*<br>B. 1. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 | ii. Compliance Method<br>Compliance with the operational standards of this condition shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements of this section. *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3 dated 12/11/00].*<br><br>iii. Monitoring/Testing<br>A. Each valve shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60 Subpart VV, §60.485(b), dated 7/1/00. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-6(a) dated 12/14/00]*<br>B. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected for | v. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference :7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. RESERVED<br>B. Other reporting requirements are covered under Section 13 of this unit.<br><br>vi. Certification<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| calendar days after the leak is detected, except as provided in Section 8 of this unit.<br>2. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-6(a) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98]*<br>3. First attempts at repair include, but are not limited to, the following best practices where practicable:<br>1. Tightening of bonnet bolts;<br>2. Replacement of bonnet bolts;<br>3. Tightening of packing gland nuts;<br>4, Injection of lubricant into lubricated packing. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-6(a) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98]*<br>D. Any valve 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 Operational Standard (A) of this section if the valve:<br>1. Has no external actuating mechanism in contact with the process fluid,<br>2. Is operated with emissions less than 500 ppm above background | existing valves as defined in 40 CFR 63.640. If an instrument reading of 500 ppm or greater is measured, a leak is detected for new valves as defined in 40 CFR 63.640. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94, 40 CFR 60, Subpart VV, §60.482-6(a) dated 12/14/00 and 40 CFR 63.648]*<br>C. 1. 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.<br>2. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-6(a) dated 12/14/00]*<br><br>iv. Recordkeeping<br>None in addition to the requirements of Section 12 of this unit. | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| as determined by the method specified in 40 CFR 60, Subpart VV, § 60.485(c), dated 7/1/00, and<br>3. Is tested for compliance with paragraph (D)(2) initially upon designation, annually, and at other times requested by the Department.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-6(a) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98]*<br>E. Any valve that is designated as an unsafe-to-monitor valve is exempt from the requirements of Operational Standard (A) if:<br>1. The Owner/Operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (A), and<br>2. The Owner/Operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times. *[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-6(a) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98]*<br>F. Any valve that is designated as a difficult-to-monitor valve is exempt from the requirements of Operational | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| Standard (A) if:<br>1. The Owner/Operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.<br>2. The Owner/Operator designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and<br>3. The Owner/Operator follows a written plan that requires monitoring of the valve at least once per calendar year.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29, dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-6(a) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98]* | | |
| 7. **Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges Connectors.**<br>i. Operational Standards<br>A. If evidence of a potential leak is found by visual, audible, olfactory, or other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the Owner/Operator shall follow either one of the monitoring requirements in part (iii)(A) of this section. *[Reference: 7 **DE** | ii. Compliance Method<br>Compliance with operational standards of this condition shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements of this section. *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3 dated 12/11/00]*<br><br>iii. Monitoring/Testing<br>A. 1. The Owner/Operator shall monitor the equipment within 5 days by the method specified in 40 CFR 60.485(b) and comply with the requirements of paragraphs (B) through (D) below *[Reference: 7 **DE Admin. Code** 1124, Section 29* | vi. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference :7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. RESERVED<br>B. Other reporting requirements are covered under Section 13 of this unit.<br><br>vi. Certification<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| *Admin. Code 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-8(a) dated 12/14/2000].* | *dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-8(a)(1), dated 12/14/00].*<br>2. The Owner/Operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak. *[Reference: 7 DE Admin. Code 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-8(a)(2), dated 12/14/00].*<br>B. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. *[Reference: 7 DE Admin. Code 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-8(a)(2), dated 12/14/00].*<br>C. 1. When a leak is detected it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in §60.482-9.<br>2. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. *[Reference: 7 DE Admin. Code 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-8(a)(2), dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br><br>iv. First attempts at repair include, but are not limited to the best practices described under Section 6(i)(C) of this unit. *[Reference: 7 DE Admin. Code 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-8(a)(2), dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br><br>v. Recordkeeping<br>None in addition to the requirement of Section 12 of this unit. | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 8. **Delay of Repair**<br>i. Operational Standard<br>A. Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-9(a), dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>B. Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-8(a)(2), dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>C. Delay of repair for valves will be allowed if:<br>1. The Owner/Operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and<br>2. When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with Section 9 of this unit. *[Reference: 7 **DE Admin. Code** | ii. Compliance Method<br>Compliance with the operational standards of this condition shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements of this section. *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3 dated 12/11/00]*<br><br>iii. Monitoring/Testing<br>None<br><br>iv. Recordkeeping<br>None in addition to the requirements of Section 12 of this unit. | v. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference :7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. RESERVED<br>B. Other reporting requirements are covered under Section 13 of this unit.<br><br>vi. Certification<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| *1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-8(a)(2), dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>D. Delay of repair for pumps will be allowed if:<br>1. Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and<br>2. Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-8(a)(2), dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>E. Delay or 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.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-9(e)(2), dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98].* | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 9. **Closed Vent Systems and Control Devices.**<br>i. Operational Standards<br>A. Vapor recovery systems (for example, condensers and adsorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater or to an exit concentration of 20 ppmv, whichever is less stringent. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-10(b) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>B. Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater or to an exit concentration of 20 ppmv dry corrected to 3% oxygen, whichever is less stringent, or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816°C. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-10(c) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>C. Flares used to comply with this subpart shall comply with the requirements of 40 CFR 60, Subpart A, §60.18, dated 7/1/00 and Unit 1 of this Table. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-10(d) dated 12/14/00* | ii. Compliance Method<br>Compliance with the operational standards of this condition shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements of this section. *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3 dated 12/11/00]*<br><br>iii. Monitoring/Testing<br>A. Control devices used to comply with the provisions of this unit shall be monitored to ensure that they are operated and maintained in conformance with their designs. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-10(e) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>B. Except as provided in paragraphs (C) through (E) below, each closed vent system shall be inspected according to the procedures:<br>1. If the vapor collection system or closed vent system is constructed of hard-piping, the Owner/Operator shall comply with the requirements specified in paragraphs (B)(1)(a) and (B)(1)(b) of this section:<br>i. Conduct an initial inspection according to the procedures 40 CFR 60, Subpart VV, §60.485(b), dated 7/1/00; and<br>ii. Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. | v. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference :7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. RESERVED<br>B. Other reporting requirements are covered under Section 13 of this unit.<br><br>vi. Certification<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| *and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>D. Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practicable except as provided in paragraph (E) of this section.<br>1. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.<br>2. Repair shall be completed no later than 15 calendar days after the leak is detected.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-10(g) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>E. Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the Owner/Operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-10(h) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98].*<br>F. Closed vent systems and control | 2. If the vapor collection system or clod vent system is constructed of ductwork, the Owner/Operator shall:<br>i. Conduct an initial inspection according to the procedures in 40 CFR 60, Subpart VV, §60.485(b), dated 7/1/00); and<br>ii. Conduct annual inspections according to the procedures in Sec. 60.485(b).<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-10(f), dated 12/14/00]*<br>C. If a vapor collection system or clod vent system is operated under a vacuum, it is exempt from the inspection requirements of paragraphs (B)(1)(a) and (B)(2) of this section.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482108(i), dated 12/14/00].*<br>D. Any parts of the closed vent system that are designated as unsafe to inspect are exempt from the inspection requirements of paragraphs (B)(1)(a) and (B)(2) of this section if they comply with the requirements specified in paragraphs (D)(1)(a) and (D)(2) of this section:<br>1. The Owner/Operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (B)(1)(a) or (B)(2) of this | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-10(m) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98].* | section; and<br>2. The Owner/Operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-10(j) dated 12/14/00].*<br>E. Any parts of the closed vent system that are designated as difficult to inspect are exempt from the inspection requirements of paragraphs (B)(1)(a) or (B)(2) of this section if they comply with the requirements specified in paragraphs (E)(1) through (E)(3) of this section:<br>1. The Owner/Operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and<br>2. The owner or operator designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and<br>3. The Owner/Operator has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-10(k) dated 12/14/00].* | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | iv. Recordkeeping<br>In addition to the records required by Section 12 of this unit, the Owner/Operator shall record the following and keep it for at least five years.<br>A. Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.<br>B. Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.<br>C. For each inspection conducted in accordance with §60.485(b) dated 10/17/2000 during which a leak is detected, a record of the information specified in 40 CFR 60, Subpart VV, §60.486(c), dated 12/14/00.<br>D. For each inspection during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.<br>E. For each visual inspection conducted in accordance with paragraph (B)(1)(b) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.482-10(l) dated 12/14/00 and 40 CFR 63.648(a)(l) dated 8/18/98].* | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 10. **Alternative Standards for Valves – Allowable Percentage of Valves Leaking.**<br>i. Operational Standards<br>A. The Owner/Operator may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.483-1(a) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98]*<br>B. Owners and operators who elect to comply with this alternative standard shall not have an affected facility with a leak percentage greater than 2.0 percent. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.483-1(d) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98]* | ii. Compliance Method<br>Compliance with the operational standards of this condition shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements of this section. *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3 dated 12/11/00]*<br><br>iii. Monitoring/Testing<br>A. A performance test as specified in paragraph (C) of this section shall be conducted initially upon designation, annually, and at other times requested by the Department. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.483-1(b)(2) dated 12/14/00]*<br>B. If a valve leak is detected, it shall be repaired in accordance with Section 6(B) and (C) of this unit. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.483-1(b)(3) dated 12/14/00].*<br>C. Performance tests shall be conducted in the following manner:<br>1. All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by the methods specified in 40 CFR 60, Subpart VV, §60.485(b), dated 7/1/00.<br>2. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.<br>3. The leak percentage shall be determined by dividing the number of valves for which leaks are detected by the number of valves in gas/vapor and light liquid | v. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. The Owner/Operator must notify the Department that the Owner/Operator has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard as specified in section 13(c)(D). *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.483-1 dated 12/14/00]*<br>.<br>vi. Certification<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>. |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | service within the affected facility. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.483-1(c) dated 12/14/00 and 40 CFR 63.648(a)(1) dated 8/18/98]*<br><br>iv. Recordkeeping<br>None in addition to the requirements of Section 12 of this unit. | |
| 11. **Alternative Standards for Valves-Skip Period Leak Detection and Repair.**<br>i. The Owner/Operator may elect to comply with one of the alternative monitoring frequencies specified in paragraphs (iii)(B) and (iii)(C) of this section. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.483-2(a) dated 12/14/00].* | ii. Compliance Method<br>Compliance with the operational standards of this condition shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements of this section. *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3 dated 12/11/00]*<br><br>iii. Monitoring/Testing<br>A. A Owner/Operator shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in Section 6 of this unit. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.483-2(b) dated 12/14/00].*<br>B. After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.483-2(b)(2), dated 12/14/00].* | v. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference :7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. A Owner/Operator must notify the Department before implementing one of the alternative work practices as specified in section 13(v)(D) of this unit. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/94 and 40 CFR 60, Subpart VV, §60.483-2(a) dated 12/14/00].*<br>B. Other reporting requirements as specified in Section 13 of this unit.<br><br>vi. Certification<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | C. After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/04 and 40 CFR 60, Subpart VV, §60.483-2(b)(3), dated 12/14/00]*<br>D. If the percent of valves leaking is greater than 2.0, the owner or operator shall comply with the requirements as described in Section 6 of this unit but can again elect to use this section. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/04 and 40 CFR 60, Subpart VV, §60.483-2(b)(4), dated 12/14/00]*<br>E. The percent of valves leaking shall be determined by dividing the sum of valves found leaking during current monitoring and valves for which repair has been delayed by the total number of valves subject to the requirements of this section. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/04 and 40 CFR 60, Subpart VV, §60.483-2(b)(5), dated 12/14/00]*<br>iv. Recordkeeping<br>A. The Owner/Operator must keep a record of the percent of valves found leaking during each leak detection period. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/04 and 40 CFR 60, Subpart VV, §60.483-2(b)(6), dated 12/14/00]*<br>B. The Owner/Operator shall keep all the other records listed in Section 12 of this unit. | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 12. **Recordkeeping requirements:**<br>i. The Owner/Operator shall comply with the recordkeeping requirements of this section. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/04 and 40 CFR 60, Subpart VV, §60.486(a), dated 12/14/00]* | ii. Compliance Method<br>Compliance with this section will be accomplished by maintaining the records required by section (iv).<br><br>iii. Monitoring/Testing<br>None in addition to the requirements of the other sections of this unit.<br><br>iv. Recordkeeping<br>A. When each leak is detected, as specified in Sections 1, 2, 6, 7, and 11 of this unit, the following requirements apply:<br>1. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.<br>2. The identification on a valve may be removed after it has been monitored for 2 successive months and no leak has been detected during those 2 months.<br>3. The identification on equipment except for a valve, may be removed after it has been repaired.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/04 and 40 CFR 60, Subpart VV, §60.486(b), dated 12/14/00]*<br>B. When each leak is detected, as specified in Sections 1, 2, 6, 7 and 11 of this unit, the following information shall be recorded in a log and shall be kept for 5 years in a readily accessible location:<br>1. The instrument and operator identification numbers and the | v. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Compliance Certification<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | equipment identification number.<br>2. The date the leak was detected and the dates of each attempt to repair the leak.<br>3. Repair methods applied in each attempt to repair the leak.<br>4. "Above 10,000" if the maximum instrument reading measured by the methods specified in 40 CFR 60, Subpart VV, §60.485(a), dated 7/1/00 after each repair attempt is equal to or greater than 10,000 ppm.<br>5. "Repair delayed" and the reasons for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.<br>6. The signature of the Owner/Operator (or designate) whose decision it was that repair could not be effected without a process shutdown.<br>7. The expected date of successful repair of the leak if a leak is not repaired within 15 days.<br>8. Dates of process unit shutdowns that occur while the equipment is unrepaired.<br>9. The date of successful repair of the leak.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/04 and 40 CFR 60, Subpart VV, §60.486(c), dated 12/14/00]*<br>C. The following information pertaining to the design requirements for closed vent systems and control devices described in Section 9 of this unit shall be recorded and kept in a readily accessible location:<br>1. Detailed schematics, design specifications, and piping and | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | instrumentation diagrams.<br>2. The dates and description of any changes in the design specifications.<br>3. A description of the parameter or parameters monitored, as required in 40 CFR 60, Subpart VV, §60.482-10(e), dated 12/14/00, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.<br>4. Periods when the closed vent systems and control devices required in Sections 1-4 of this unit are not operated as designed, including periods when a flare pilot light does not have a flame.<br>5. Dates of startups and shutdowns of the closed vent systems and control devices required in Sections 1-4 of this unit.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/04 and 40 CFR 60, Subpart VV, §60.486(d), dated 12/14/00]*<br>D. The following information pertaining to all equipment subject to the requirements in Sections 1-9 of this unit shall be recorded in a log that is kept in a readily accessible location:<br>1. A list of identification numbers for equipment subject to the requirements of this subpart.<br>2. a. A list of identification numbers for equipment that are designed for no detectable emissions under the | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | provisions of Sections 1(i)(D), 2(i)(F) and 6(i)(D) of this unit.<br>b. The designation of equipment as subject to the requirements of Sections 1(i)(D), 2(i)(F) and 6(i)(D) of this unit shall be signed.<br>3. A list of equipment identification numbers for pressure relief devices required to comply with Section 3 of this unit.<br>4. a. The dates of each compliance test as required in Section 1(i)(D), 2(i)(F), 3, and 6(i)(D) of this unit.<br>b. The background level measured during each compliance test.<br>c. The maximum instrument reading measured at the equipment during each compliance test.<br>5. A list of identification numbers for equipment in vacuum service.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/04 and 40 CFR 60, Subpart VV, §60.486(e), dated 12/14/00]*<br>E. The following information pertaining to all valves subject to the requirements of Sections 6(i)(E) and (F) of this unit and to all pumps subject to Section 1(i)(F) of this unit shall be recorded in a log that is kept in a readily accessible location:<br>1. A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve and pump stating why the valve is unsafe-to-monitor, and the plan for monitoring each valve and pump. | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | 2. 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.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/04 and 40 CFR 60, Subpart VV, §60.486(f), dated 12/14/00]*<br>F. The following information shall be recorded for valves complying with Section 1 of this unit:<br>1. A schedule of monitoring.<br>2. The percent of valves found leaking during each monitoring period.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/04 and 40 CFR 60, Subpart VV, §60.486(g), dated 12/14/00]*<br>G. The following information shall be recorded in a log that is kept in a readily accessible location:<br>1. Design criterion required in Sections 1(i)(C)(5) and 2(iii)(B)(2) of this unit and explanation of the design criterion; and<br>2. Any changes to this criterion and the reasons for the changes.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/04 and 40 CFR 60, Subpart VV, §60.486(h), dated 12/14/00]*<br>H. Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location. *[Reference: 7 **DE Admin. Code** 1124, Section 29 dated 11/29/04 and 40 CFR 60, Subpart VV, §60.486(j), dated 7/1/00].* | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 13. **Reporting requirements:**<br>i. Standards:<br>The Owner/Operator shall submit reports as given in section (v). | ii. Compliance Method<br>Compliance with this condition shall be demonstrated in accordance with the reporting requirements of this section. *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3 dated 11/15/93*]<br><br>iii. Monitoring/Testing<br>None.<br><br>iv. Recordkeeping<br>None in addition to the requirements of Section 12 of this unit. | v. Reporting<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit and the following: *[Reference :7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>A. The Owner/Operator shall submit semiannual reports to the Department on February 1 and July 1 of each year. [Reference: 40 CFR 60, Subpart VV, §60.487(a), dated 12/14/00].<br>B. The initial semiannual report to the following Department shall include the following information:<br>1. Process unit identification.<br>2. Number of valves subject to the requirements of Section 6 of this unit, excluding those valves designated for no detectable emissions.<br>3. Number of pumps subject to the requirements of Section 1 of this unit, excluding those pumps designated for no detectable emissions and those pumps complying with Section 2(i)(E) of this unit.<br>4. Number of compressors subject to the requirements of Section 2 of this unit, excluding those compressors designated for no detectable emissions and those compressors complying with Section 2(i)(G).<br>*[Reference: 40 CFR 60, Subpart VV, §60.487(n), dated 12/14/00].*<br>C. All semiannual reports to the Department shall include the following information: |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | | 1. Process unit identification.<br>2. For each month during the semiannual reporting period,<br>a. Number of valves for which leaks were detected as described in Section 6(iii)(B) or Section 11 of this unit.<br>b. Number of valves for which leaks were not repaired as required in Section 6(i)(B)(1) of this unit.<br>c. Number of pumps for which leaks were detected as described in Section 1(iii)(B)(1) and 1(i)(C)(6)(a) of this unit.<br>d. Number of pumps for which leaks were not repaired as required in Section 1(i)(B)(1) and 1(i)(C)(6)(b) of this unit.<br>e. Number of compressors for which leaks were detected as described in Section 2(iii)(C) of this unit.<br>f. Number of compressors for which leaks were repaired as required in Section 2(i)(D)(1) of this unit; and<br>g. The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.<br>3. Dates of process unit shutdowns which occurred within the semiannual reporting period.<br>4. Revisions to items reported according to paragraph (2) if changes have occurred since the initial report or subsequent |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | | revisions to the initial report. *[Reference: 40 CFR 60, Subpart VV, §60.487(c), dated 12/14/00].*<br>D. An owner or operator electing to comply with the provisions of Sections 10 and 11 of unit shall notify the Department of the alternative standard selected 90 days before implementing either of the provisions. *[Reference: 40 CFR 60, Subpart VV, §60.487(d), dated 12/14/00].*<br><br>vi. Compliance Certification<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| **ob. <u>Facility Wide Requirements for all emission units listed in Condition 1</u> of this permit and any insignificant activity listed in 7 DE Admin. Code 1130, Appendix A operated by the Owner/Operator or included in the permit application.** | | |
| 1. **Visible Emissions Standard:**<br>i. The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than 20 percent opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period. *[Reference: 7 **DE Admin. Code** 1114 Section 2.1 dated 7/17/84]* | ii. Compliance Method:<br>Except for units where compliance with the visible emission standard is required to be demonstrated by an alternative monitoring plan. Compliance with the emission standard of this condition shall be demonstrated in accordance with 7 **DE Admin. Code** 1120 Section 1.5 and the recordkeeping requirements of this condition. *[Reference: 7 **DE Admin. Code** 1114, Section 4.1 dated 7/17/84 and 7 **DE Admin. Code** 1130, Section 6.1.3 dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br>A. In accordance with 7 **DE Admin. Code** 1120 Section 1.5, conduct visual observations at | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification Requirement:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| | fifteen second intervals for a period of not less than one hour except that the observations may be discontinued whenever a violation of the standard is recorded. The additional procedures, qualification and testing to be used for visually determining the opacity shall be those specified in Section 2 and 3 (except for Section 2.5 and the second sentence of Section 2.4) of reference Method 9 set forth in Appendix A, 40 CFR Part 60 revised July 1, 1982. *[Reference: 7 **DE Admin. Code** 1120, Section 1.5.3 dated 12/7/88]*<br>B. The Owner/Operator shall conduct weekly qualitative observations to determine the presence of any visible emissions.<br>1. If visible emissions are observed, the Owner/Operator shall take corrective actions and/or determine compliance by conducting a visible observation in accordance with Paragraph (A) above.<br>2. If no visible emissions are observed or are within permitted limits, no further action is required.<br>*[Reference: R7 **DE Admin. Code** 1130, Section 6.1.3 dated 12/11/00]*<br><br>iv. Record Keeping:<br>The following records shall be maintained in accordance with Condition 3(b):<br>Records of qualitative emission observations and Reference method 9 evaluations when emissions were observed. *[Reference: R7 **DE Admin. Code** 1130, Section 6.1.3.1.2 dated 12/11/00]* | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| 2. **Odor – State Enforceable Only**<br>i. The Owner/Operator shall not cause or allow the emission of an odorous air contaminant such as to cause a condition of air pollution. *[Reference: 7 **DE Admin. Code** 1119, Section 2.1 dated 2/1/81]* | ii. Compliance Method:<br>Compliance with the emission standard of this condition shall be demonstrated in accordance with the monitoring/testing and record keeping requirements of this condition. *[Reference: R7 **DE Admin. Code** 1130, Section 6.1.3 dated 12/11/00]*<br>iii. Monitoring/Testing: Includes but is not limited to scentometer tests, air quality monitoring, and affidavits from affected citizens and investigators. *[Reference: 7 **DE Admin. Code** 1119, Section 2.1 dated 2/1/81]*<br>iv. Recordkeeping:<br>Records of all monitoring/testing shall be maintained in accordance with Condition 3(b). *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3.1.2 dated 12/11/00]* | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 3. **Petroleum Refinery Sources**<br>i. Operational Limitations:<br>With the exception of segregated storm water runoff drain systems and non-contact cooling water systems, the Owner/Operator shall comply with the following standards for process unit turnarounds:<br>A. Process Unit Turnarounds: The owner or operator of a petroleum refinery shall provide for the following during process unit turnaround:<br>1. Depressurization venting of the process unit or vessel to a vapor recovery system, flare, or firebox.<br>2. No emission of VOC from a process unit or vessel until its internal pressure is 136 | ii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1124 Section 28(c) and (d) dated 11/11/93 and 7 **DE Admin. Code** 1130, Section 6.1.3.1.2 dated 12/11/00]*<br>A. Compliance with Operational Limitation (A), i.e., during process unit turnarounds, shall be based upon the Owner/Operator conducting depressurization venting of the process unit or vessel to a vapor recovery system, flare or firebox. The Owner/Operator shall monitor the pressure in each process or vessel until its internal pressure is 136 kPa or less.<br>B. Compliance with Operational Limitation (B) shall be based on either piping the uncondensed vapors to a firebox or incinerator. Alternately, the vapors may be compressed and added to the refinery fuel gas. | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| kiloPascals (kPa)(19.7 pounds per square inch atmospheric [psia]) or less.<br>*[Reference: 7 **DE Admin. Code** 1124 Section 28(c) dated 11/11/93].* | iii. Monitoring/Testing:<br>None in addition to those listed in Condition 3(b)(1)(ii).<br><br>iv. Record Keeping:<br>The following records shall be maintained in accordance with Condition 3(b):<br>A. Date of every process unit or vessel turnaround.<br>B. The internal pressure of the process unit or vessel immediately prior to venting to the atmosphere.<br>*[Reference: 7 **DE Admin. Code** 1124, Section 28(c) and (d) dated 11/11/93].* | |
| 4. **General conditions applicable to all pollutants:**<br>i. Operational Limitations:<br>A. At all times, including periods of startup, shutdown, and malfunction, the Owner/Operator shall maintain and operate the equipment and processes covered by this Permit, including all structural and mechanical components of all equipment and processes and all associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3.1.2 dated 12/11/00]* | ii. Compliance Methodology:<br>Compliance with the Operational Limitation shall be based on whether acceptable operating procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3.1.2 dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br>None in addition to those listed in Condition 3(b)(1)(ii).<br><br>iv. Record Keeping:<br>None in addition to those listed in Condition 3(b)(2) of this permit. | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 5. **Sulfur Dioxide** | ii. Compliance Methodology: | v. Reporting: |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| i. Operational Limitation:<br>The Owner/Operator shall not purchase for use and shall not use any fuel having a sulfur content greater than 1.0 percent. *[Reference: Regulation No. 1108, Section 2.1 dated 5/9/85]* | Compliance with the operational limitation shall be based on the fuel type and quality. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.1.2 dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br>None in addition to those listed in Condition 3(b)(1)(ii).<br><br>iv. Record Keeping: The Owner/Operator shall maintain a record of the type of fuel purchased for use or used in any emission unit. *[Reference:7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* | That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |
| 6. **Volatile Organic Compounds Handling, Storage and Disposal of VOCs.**<br>i. Work Practice Standards:<br>A. The Owner/Operator shall not cause, allow, or permit the disposal of more than eleven (11) pounds of a Volatile Organic Compound (VOC), or of any materials containing more than eleven (11) pounds of any VOCs, in any one (1) day, in a manner that would permit the evaporation of VOC into the ambient air. This includes but is not limited to the disposal of VOC from any VOC control devices. This provision does not apply to:<br>1. Any VOC or material containing VOC emitted from a | ii. Compliance Method:<br>Compliance shall be demonstrated by adherence with the VOC handling work practices and by providing appropriate training and posting of instructions, and record keeping for storage, use and disposal of VOCs. *[Reference:7 **DE Admin. Code** 1130 Section 6.1.3 dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br>Monitor employee training records on an annual basis and update records as needed. *[Reference:7 **DE Admin. Code** 1130 Section 6.1.3 dated 12/11/00]*<br><br>iv. Recordkeeping: The Owner/Operator shall keep a record of postings, and employee training related to these work practice standards of handling, storage, and disposal of VOCs. *[Reference:7 **DE Admin. Code** 1130 Section 6.1.3 dated 12/11/00]* | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| regulated entity that is subject to a VOC standard under Regulation No. 24.<br>2. Any VOC or material containing VOCs used during process maintenance turnarounds for cleaning purposes, provided that the provisions of paragraph (B), (C), and (D) of this condition are followed.<br>3. Waste paint (sludge) handling systems, water treatment systems, and other similar operations at coating facilities using complying coatings.<br>B. No owner or operator of a facility subject to this regulation shall use open containers for the storage or disposal of cloth or paper impregnated with VOCs that are used for surface preparation, cleanup, or coating removal. Containers for the storage or disposal of cloth or paper impregnated with VOCs shall be kept closed, except when adding or removing material.<br>C. No owner or operator of a facility subject to this regulation shall store in open containers spent or fresh VOC to be used for surface preparation, cleanup or coating | | |

**Condition 3 - Table 2 (Specific Requirements)**

| Emission Limitation(s)/Standard(s) and/or Operational Limitation(s)/Standard(s) | Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Record Keeping | Reporting/Compliance Certification |
|---|---|---|
| removal. Containers for the storage of spent or fresh VOCs shall be kept closed, except when adding or removing material.<br>D. No owner or operator shall use VOC for the cleanup of spray equipment unless equipment is used to collect the cleaning compounds and to minimize their evaporation to the atmosphere.<br>*[Reference: 7 **DE Admin. Code** 1124 Section 8 dated 11/29/93]* | | |
| 7. **Insignificant Emissions Units**<br><br>i. The facility is allowed to operate the insignificant emissions units listed in Attachment "C" of this permit. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.1 dated 12/11/00]* | ii. Compliance Method:<br>Compliance shall be based on following good air pollution control practices, the monitoring/testing and recordkeeping requirements. *[Reference:7 **DE Admin. Code** 1130 Section 6.1.3 dated 12/11/00]*<br><br>iii. Monitoring/Testing:<br>None in addition to Condition 3(b) of this permit.<br><br>iv. Recordkeeping:<br>None in addition to Condition 3(b) of this permit. | v. Reporting:<br>That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*<br><br>vi. Certification:<br>That required by Condition 3(c)(3) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* |

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Ravi Rangan, P.E.