STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENTAL CONTROL
DIVISION OF AIR QUALITY
STATE STREET COMMONS
100 W. Water Street, Suite 6A
DOVER, DELAWARE 19904

Telephone: (302) 739 - 9402
Fax No.: (302) 739 - 3106

October 10, 2019

Associate Director
Office of Permits and Air Toxics (**3AP10**)
United States Environmental Protection Agency
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

ATTENTION: Mary Cate Opila
Acting Associate Director

Dear Ms. Opila:

Enclosed is a "Final" significant permit modification for the Delaware City Refining Company having a facility at 4550 Wrangle Hill Road, in Delaware City, Delaware. This significant permit modification (**Permit: AQM-003/00016 – Part 1 (Renewal 2)(Revision 4), Part 2 (Renewal 1)(Revision 4),** and **Part 3 (Renewal 2)(Revision 4)**) was issued in accordance with the requirements of 7 **DE Admin. Code** 1130. This permit will expire on May 27, 2020.

Sincerely,

Lindsay Rennie

Lindsay Rennie
Environmental Engineer
Engineering & Compliance Branch

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pc: Dover Title V File
Lindsay Rennie
Matthew Willson – EPA Region III

RECEIVED
OCT 08 2019
AIR QUALITY MGT.

MEMORANDUM

TO: Angela D. Marconi, P.E., BCEE

FROM: Lindsay T. Rennie

SUBJECT: **Delaware City Refining Company**
***Final* 7 DE Admin. Code 1130 Significant Permit Modification**
Permit: AQM– 003/00016 – Part 1 (Renewal 2)(Revision 4)
AQM 003/00016 – Part 2 (Renewal 1)(Revision 4)
AQM 003/00016 – Part 3 (Renewal 2)(Revision 4)

DATE: October 3, 2019

BACKGROUND
The Delaware City Refining Company, LLC submitted an application for a significant permit modification on May 3, 2018 and July 30, 2018 to incorporate into the Title V permit Regulation 1102 amendments issued in 2017; EPA Inorganic HAP Work practice standards during startup, shutdown, malfunction, and hot standby events; and applicable requirements of the recent Refinery Sector Rule including fenceline monitoring provisions, process vent and pressure release device provisions, startup and shutdown work practice standards, flare management plan requirements, catalytic cracking unit operation, maintenance, and monitoring plan requirements, and emission standards during catalyst depressuring and purging operations.

APPLICATION
A "Pre-Notification Draft" Significant Permit Modification was prepared and sent to Thomas Godlewski, Environmental Manager, on July 25, 2019. DCRC requested that the Marine Vapor Recovery System application, submitted February 19, 2019 be permitted separately.

A "Draft/Proposed" for the Significant Permit Modification was completed on August 25, 2019. Copies of the "Draft" Significant Permit Modification and Memorandum were sent to Jeffery Coleman, the Responsible Official by certified mail and to Matthew Willson of the EPA Region III Office by e-mail. The States of Maryland, Pennsylvania, and New Jersey were given notice by email of the Department's intent to approve a Significant Permit Modification for DCRC on August 26, 2019. The "Draft/Proposed" Significant Permit Modification was advertised for public notice on Sunday, August 25, 2019 in the Sunday News Journal and the Delaware State News. The public comment period ended on Monday, September 23, 2019. Matt Willson of the EPA Region III Office submitted comments. These comments, and the Department's responses, were addressed in a Reconciliation Table. The Table and modified "Proposed" Significant Permit Modification were e-mailed to Mary Cate Opila, Acting Associate Director, and Matthew Willson, of the EPA Region III office on October 2, 2019 for a standard 45 day review period. On October 2, 2019, EPA responded indicating that they do not have any substantial concerns and are not planning to object to the permit issuance. Though the EPA cannot waive the review period, DNREC can issue the permit at its discretion.

RECOMMENDATION
It is recommended that the attached Significant Permit Modification be issued to the Delaware City Refining Company LLC. In addition, it is recommended that a copy of the Significant Permit Modification shall be sent to EPA Region III.

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pc: Dover Title V File
Lindsay T. Rennie

Rennie, Lindsay (DNREC)

From: Willson, Matthew <Willson.Matthew@epa.gov>
Sent: Wednesday, October 02, 2019 5:11 PM
To: Rennie, Lindsay (DNREC); Opila, MaryCate
Cc: Marconi, Angela D. (DNREC); Slaughter, Christine J (DNREC); DNRECAWM, AQMFOIA1 (MailBox Resources); Mattson, Tracy M. (DNREC)
Subject: RE: DCRC Significant Permit Modification 2nd Review

Mrs. Rennie,

Thank you for submitting the proposed significant modification, review memo and response to comments for Delaware City Refining Company (AQM-003/00016). Based on our review we do not have any substantial concerns and are not planning to object the permit issuance. Though EPA cannot waive the remainder of the review period, DNREC is welcome to issue the permit at its discretion. Please be sure to send the final permit when issued.

If you have any questions in this regard, please contact me.

Thank you

Matthew Willson
Life Scientist
Permits Branch (3AD10)
Air & Radiation Division
U.S. EPA Region 3
1650 Arch Street
Philadelphia, PA 19103
215-814-5795

From: Rennie, Lindsay (DNREC) <Lindsay.Rennie@delaware.gov>
Sent: Wednesday, October 02, 2019 3:34 PM
To: Willson, Matthew <Willson.Matthew@epa.gov>; Opila, MaryCate <Opila.MaryCate@epa.gov>
Cc: Marconi, Angela D. (DNREC) <Angela.Marconi@delaware.gov>; Slaughter, Christine J (DNREC) <Christine.Slaughter@delaware.gov>; DNRECAWM, AQMFOIA1 (MailBox Resources) <DNREC_AWM_AQMFOIA1@delaware.gov>; Mattson, Tracy M. (DNREC) <Tracy.Mattson@delaware.gov>
Subject: DCRC Significant Permit Modification 2nd Review

Dear Mary Cate Opila:

As specified in the Memorandum of Understanding between EPA, Region III and DNREC, State of Delaware, attached is a proposed significant permit modification for Permit: AQM-003/00016 for the Delaware City Refining Company having a facility at 4550 Wrangle Hill Road in Delaware City, Delaware. Please note that the forty-five (45) day review period ends November 16, 2019. Please submit any comments on the proposed significant permit modification on or before November 16, 2019.

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENTAL CONTROL
DIVISION OF AIR QUALITY
STATE STREET COMMONS
100 W. Water Street, Suite 6A
DOVER, DELAWARE 19904

Telephone: (302) 739 - 9402
Fax No.: (302) 739 - 3106

October 3, 2019

Delaware City Refining Company
4550 Wrangle Hill Road
Delaware City, DE 19706

Certified Mail # 7018 1130 0000 5799 6955
Return Receipt Requested

ATTENTION: Jeffery Coleman
Refinery Manager

SUBJECT: **Permit: AQM-003/00016 – Part 1 (Renewal 2)(Revision 4)**
AQM 003/00016 – Part 2 (Renewal 1)(Revision 4)
AQM 003/00016 – Part 3 (Renewal 2)(Revision 4)

"Final" 7 DE Admin. Code 1130 Significant Permit Modification

Dear Mr. Coleman:

The Department has completed processing the Delaware City Refining Company's AQM-1001 series significant permit modification application that was submitted on May 3, and June 30, 2018, to the Department pursuant to 7 **DE Admin. Code** 1130. Attached is the Delaware City Refining Company's "Final" 7 **DE Admin. Code** 1130 Operating Permit.

As the designated responsible official for the Delaware City Refining Company, it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission unit subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular unit.

The attached permit specifies the terms and conditions, Conditions 2 through 6, under which the Delaware City Refining Company is permitted to operate the emission units listed in Condition 1. In addition to the emission units listed in Condition 1, the Delaware City Refining Company is permitted to operate all activities with air emissions that are not listed in Condition 1 and that are designated as insignificant activities under 7 **DE Admin. Code** 1130 or designated as trivial activities under Appendix "A" of the Department's summary of the July 10, 1995, EPA "White Paper for Streamlined Development of Part 70 Permit Applications," notwithstanding 7 **DE Admin. Code** 1102.

The attached permit covers only the operating permit requirements of 7 **DE Admin. Code** 1102 and 1130. The attached permit does not satisfy future construction permit obligations. Prior to initiating any construction or modification activity the Delaware City Refining Company must evaluate the applicability of, and, if required, secure necessary construction permit(s) pursuant to 7 **DE Admin. Code** 1102 or 1125,

Sincerely,

Lindsay Rennie
Environmental Engineer
Division of Air Quality
DNREC, State of Delaware
(302)323-4542

State of Delaware
Department of Natural Resources and Environmental Control
Division of Air Quality
100 W. Water Street, Suite 6A
Dover, DE 19904

7 DE Admin. Code 1130 (Title V) Operating Permit
Significant Permit Modification
Facility I.D. Number: 1000300016
Permit Number: AQM-003/00016 – Part 1 (Renewal 2)(Revision 4)
AQM-003/00016 – Part 2 (Renewal 1)(Revision 4)
AQM-003/00016 – Part 3 (Renewal 2)(Revision 4)

Effective Date: October 3, 2019 Expiration Date: May 27, 2020
Renewal Application Due Date: May 27, 2019

Pursuant to 7 **Del. C.**, Ch 60, Section 6003, 7 **DE Admin. Code** 1102, Section 2.0 and 7 **DE Admin. Code** 1130, Section 7.2, approval by the Department of Natural Resources and Environmental Control ("Department") is hereby granted to operate the emission units listed in Condition 1 of this permit subject to the terms and conditions of this permit.

This approval is granted to:

Permittee/Owner (hereafter referred to as "Company Owner")	**Operator** (hereafter referred to as "Operator")
Delaware City Refining Company, LLC 4550 Wrangle Hill Road Delaware City, Delaware 19706 Responsible Official: Jeffery Coleman Title: Refinery Manager	Delaware City Refining Company, LLC
Facility Site Location	**Facility Mailing Address**
Delaware City Refining Company, LLC 4550 Wrangle Hill Road Delaware City, Delaware 19706	Delaware City Refining Company, LLC 4550 Wrangle Hill Road Delaware City, Delaware 19706

The nature of business of the Facility is Petroleum Refining. The Standard Industrial Classification code is 2911. The North American Industry Classification System code is 324110.

Lindsay Rennie

Lindsay T. Rennie / 10.3.2019
Engineer
Engineering & Compliance Branch
(302) 323-4542

ADMarconi

Angela D. Marconi, P.E., BCEE / 10.3.2019
Program Manager
Engineering & Compliance Branch
(302) 323-4542

and/or initiate necessary permit revision procedures pursuant to 7 **DE Admin. Code** 1102 and 7 **DE Admin. Code** 1130.

Please contact Lindsay Rennie at (302)323-4542 if you have any questions or comments regarding the attached permit.

Sincerely,

ADMarconi

Angela D. Marconi, P.E., BCEE
Program Manager
Engineering & Compliance Branch

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pc: Dover File
Lindsay Rennie

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Condition 1- Emission Unit Identification

*[Reference: 7 **DE Admin. Code** 1130 Section 3.3 dated 11/15/93]*

a. Emission Units Information.

Emission Unit	Emission Point	Emission Unit Description
HDS	29-1	Catalytic Hydrodesulfurizer Train 1 feed heater (29-H-101) and fractionator heater (29-H-8)
	29-2	Catalytic Hydrodesulfurizer Train 2 feed/fractionator heater (29-H-2), Train 3 feed heater (29-H-3) and fractionator reboiler heater (29-H-9)
	29-3	Catalytic Hydrodesulfurizer Train 4 feed heater (29-H-4) and Train 4 fractionator heater (29-H-7)
	29-4	Catalytic Hydrodesulfurizer Train 5 fractionator heater (29-H-6) and Train 5 feed heater (29-H-5)
Tetra	fugitives	Tanks
	32-1	Tetra unit feed heater (32-H-101)
SHU	33-1	Selective hydrogenation unit start up heater (33-H-1)
	33-2	Selective hydrogenation unit reboiler heater (33-H-2)
Olefins	34-1	Olefins reboiler heater (34-H-101)
HC	36-1	Hydrocracker unit feed heater (36-H-1)
	36-2	Hydrocracker unit vacuum column reboiler (36-H-2)
	36-2	Hydrocracker unit fractionator reboiler (36-H-3)
FES	40-1	Refinery frozen earth propane storage flare system
TF	Various	Refinery Tank Farm classified under 11 groups based on type of construction, type of seal, vapor pressure of the stored liquid and the regulatory applicability of different regulations.
EP	fugitives	Ether Plant
WWTP	Carbon canister locations	Oily Sewer System, API/CPI separators, flash mix tank, spill diversion and equalization tanks, 2 flocculation tanks and dissolved nitrogen floatation (DNF) system
	10-1	DNF Oil Recovery System and Vapor Combustion Unit (VCU)
	Various	Secondary and tertiary treatment equipment (downstream of DNF), 1st and 2nd stage activated sludge, sand filtration and assorted

Reference Number	Full Regulation No. 1102 Permit Designation
APC-90/0289(A10) APC-90/0290(A11) APC-90/0291(A4) APC-97/0503(A9)	APC-90/0289-OPERATION(Amendment 10), APC-90/0290-OPERATION(Amendment 11), APC-90/0291-OPERATION(Amendment 4), APC-97/0503-OPERATION(Amendment 9)(NSPS) issued December 23, 2013 for DCRC's CO2 Budget Units at the Delaware City Power Plant (DCPP) for purposes of allowing DCRC to participate in Delaware's CO2 Budget Trading Program.
APC-2009/ 0089(A1)	APC-2009/0089-CONSTRUCTION/OPERATION (Amendment 1) – 3 package Boilers issued May 26, 2009. 4 Package Boilers

Condition 2 - General Requirements

a. Certification.

1. Each document submitted to the Department/EPA as required by this permit shall be certified by a Responsible Official as to truth, accuracy, and completeness. Such certification shall be signed by a Responsible Official and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete." *[Reference: 7 **DE Admin. Code** 1130 Section 5.6 dated 11/15/93 and 6.3.1 dated 12/11/00]*

2. Any report of deviations required under Conditions 3(c)(2)(ii) or 3(c)(2)(iii) that must be submitted to the Department within ten calendar days of discovery of the deviation, may be submitted in the first instance without a certification provided a certification meeting the requirements of Condition 2(a)(1) is submitted to the Department within ten calendar days thereafter, together with any corrected or supplemental information required concerning the deviation. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.3.4 dated 12/11/00]*

3. Each document submitted to the Department/EPA pursuant to this permit shall be sent to the following addresses:

State of Delaware – DNREC Division of Air Quality State Street Commons 100 W. Water Street, Suite 6A Dover, DE 19904 ATTN: Division Director	United States Environmental Protection Agency Region III Enforcement and Compliance Assurance Division (3ED21) 1650 Arch Street Philadelphia, PA 19103-2029
No. of Originals: **1** & No. of Copies: **1**	No. of Copies: **1**

4. In lieu of submitting a physical copy of the Compliance Certification report specified in Condition 3(c)(3) of this permit to the EPA, the Owner and/or Operator may, and is encouraged to, submit an electronic copy of the report to ***R3_APD_Permits@epa.gov*** as a PDF document. The signed original annual General Certification report must be submitted to the Department at the address in Condition 2(a)(3).

b. Compliance.

1. The Owner and/or Operator shall comply with all terms and conditions of this permit. Any noncompliance with this permit constitutes a violation of the applicable requirements under the Clean Air Act, and/or 7 **DE Admin. Code** 1100, and is grounds for an enforcement action; for

E. The results of such analyses. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2.1.5 dated 12/11/00]*

F. The operating conditions as existing at the time of sampling or measurement. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2.1.6 dated 12/11/00]*

iii. If the Owner and/or Operator is claiming the affirmative defense of emergency or malfunction as provided in Condition 2(b)(5); a properly signed, contemporaneous operating logs, or other relevant evidence which indicates that: *[Reference: 7 **DE Admin. Code** 1130 Section 6.7.3 dated 12/11/00]*

A. An emergency or malfunction occurred and the causes of the emergency or malfunction. *[Reference: 7 **DE Admin. Code** 1130 Section 6.7.3.1 dated 12/11/00]*

B. The facility was at the time of the emergency or malfunction being operating in a prudent and professional manner and in compliance with the generally accepted industry operations and maintenance procedures. *[Reference: 7 **DE Admin. Code** 1130 Section 6.7.3.2 dated 12/11/00]*

C. During the period of the emergency or malfunction the Owner and/or Operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements of this permit. *[Reference: 7 **DE Admin. Code** 1130 Section 6.7.3.3 dated 12/11/00]*

iv. A copy of the written notice required by Condition 3(c)(2)(iii) for each change made under Condition 4(c) [Operational Flexibility] of this permit shall be maintained with a copy of this permit. *[Reference: 7 **DE Admin. Code** 1130 Section 6.8.1 dated 12/11/00]*

c. Reporting and Compliance Certification Requirements.

1. Specific Reporting/Certification Requirements. The Owner and/or Operator shall comply with the Reporting/Certification Requirements detailed in Condition 3 – Table 1 of this permit, which are in addition to those of Conditions 3(c)(2) and 3(c)(3) of this permit. Each report that contains any deviations from the terms of Condition 3– Table 1 shall identify the probable cause of the deviations and any corrective actions or preventative measures taken. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.3 dated 12/11/00, 6.1.3.3.3.3 dated 12/11/00, and 6.1.3.3.3.4 dated 12/11/00]*

2. General Reporting Requirements.

i. The Owner and/or Operator shall submit to the Department a report of any required monitoring not later than the first day of August (covering the period from January 1 through June 30 of the current calendar year) and the first day of February (covering the period July 1 through December 31 of the previous calendar year) of each calendar year. Each report shall identify any deviations from the monitoring, record keeping, and reporting requirements under this permit; and the probable cause of the deviations; and any corrective actions or preventative measures taken. If no deviations have occurred, such shall be stated in the report. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.3.1 dated 12/11/00, 6.1.3.3.2 dated 12/11/00, and 6.1.3.3.3.4 dated 12/11/00]*

ii. In addition to the semiannual monitoring reports required under Condition 3(c)(2)(i), the Owner and/or Operator shall submit to the Department supplemental written reports and/or notices identifying all deviations from permit conditions, probable cause of the deviations, and any corrective actions or preventative measures as follows: *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.3.3.3 dated 12/11/00 and 6.1.3.3.3.4 dated 12/11/00]*

A. If the Owner and/or Operator is claiming the affirmative defense of emergency or malfunction as provided in Condition 2(b)(5) of this permit, a notice of any deviation resulting from emergency or malfunction conditions shall be reported to the Department within two working days of the time when the technology-based emission limitations were exceeded. Such notice shall contain a description of the emergency or malfunction, any steps taken to mitigate emissions, and any corrective actions taken. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.3.3.1 dated 12/11/00 and 6.7.3.4 dated 12/11/00]*

B. Emissions in excess of any permit condition or emissions which create a condition of air pollution shall be reported to the Department immediately upon discovery and after activating the appropriate site emergency plan, in the following manner: *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.3.3.3 dated 12/11/00 and 6.1.3.3.3.2 dated 12/11/00]*

1. Emissions that pose an imminent and substantial danger to public health, safety or the environment must be reported by calling the Department's Environmental Emergency Notification and Complaint number (800) 662-8802. *[Reference: 7 **DE Admin. Code** No 1130, Section 6.1.3.3.3.2 dated 12/11/2000]*

2. Emissions in excess of any permit condition or emissions which create a condition of air pollution but do not pose an imminent and substantial danger to public health, safety or the environment must either be called in to the Environmental Emergency Notification and Complaint number (800) 662-8802 or faxed to (302) 739-2466. The ability to fax notifications to the Department may be revoked by the Department upon written notice to the Company and at the Department's sole discretion. *[Reference: 7 **DE Admin. Code** No 1130, Section 6.1.3.3.3.2 dated 12/11/2000]*

C. All emissions in excess of any permit condition or emissions which create a condition of air pollution shall be reported to the Department in a written report pursuant to Condition 3(c)(2)(1) and/or the specific reporting requirements listed in Condition 3 – Table 1 of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.3.3.3 dated 12/11/00 and 6.1.3.3.3.4 dated 12/11/00]*

D. Discharges to the atmosphere in excess of any quantity specified in the 7 **DE Admin. Code** 1203 ("**Reporting of a Discharge of a Pollutant or an Air Contaminant**") shall be reported, immediately upon discovery and after activating the appropriate site emergency plan, either in person or to the Department's 24-hour Environmental Emergency Notification and Complaint line (1-800-662-8802). Discharges in compliance with this permit and excess emissions previously reported under Condition 3(c)(2)(ii)(B) of this permit are exempt from this reporting requirement. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.3.3.5 dated 12/11/00 and 7 **DE Admin. Code** 1203]*

III. Prior to making a change as provided in Condition 4 [Operational Flexibility] of this permit the Owner and/or Operator shall give written notice to the Department and EPA at least seven calendar days before the change is to be made. *[Reference: 7 **DE Admin. Code** 1130 Section 6.8.1 dated 12/11/00]*

A. The seven day period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. *[Reference: 7 **DE Admin. Code** 1130 Section 6.8.1 dated 12/11/00]*

B. If less than seven calendar days notice is provided because of a need to respond more quickly to such unanticipated conditions, the Owner and/or Operator shall provide notice to the Department and EPA as soon as possible after learning of the need to make the change, together with the reasons why advance notice could not be given. *[Reference: 7 **DE Admin. Code** 1130 Section 6.8.1 dated 12/11/00]*

C. The written notice shall include all of the following information: *[Reference: 7 **DE Admin. Code** 1130 Section 6.8.1 dated 12/11/00]*

1. The identification of the affected emission units and a description of the change to be made.

2. The date on which the change will occur.

3. Any changes in emissions.

4. Any permit terms and conditions that are affected, including any new applicable requirements.

iv. The Owner and/or Operator shall submit to the Department an annual emissions statement in accordance with 7 **DE Admin. Code** 1117 Section 7.0 not later than April 30 of each year, or other date as established by the Department, unless an extension by the Department is granted. Such emissions statement shall cover the preceding calendar year. *[Reference: 7 **DE Admin. Code** 1117 Section 7 .0 dated 1/11/93]*

v. If required, the Owner and/or Operator shall submit to the Department a progress report for applicable requirements identified in Condition 5 – Table 1 of this permit. Such reports shall be submitted not later than the first day of August (covering the period from January 1 through June 30 of the current calendar year) and the first day of February (covering the period July 1 through December 31 of the previous calendar year) of each calendar year. Each progress report shall include the following: *[Reference: 7 **DE Admin. Code** 1130 Sections 5.4.8 dated 11/15/93 and 6.3.4 dated 12/11/00]*

A. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance *were achieved.* *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.4.1 dated 12/11/00]*

B. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.4.2 dated 12/11/00]*

vi. Nothing herein shall relieve the Owner and/or Operator from any reporting requirements under federal, state, or local laws. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.3.3.5 dated 12/11/00]*

vii. Emissions units 21, 22, 23 and 28 have specific emissions limitations applicable during periods of planned/controlled start up and shut down. The owner and/or operator shall notify the Department 24 hours prior to implementing such a planned/controlled start up or shut down, or as soon as practicable thereafter. Notification shall be made to the Environmental Emergency Notification and Complaint number (800) 662-8802 or faxed to (302) 739-2466.

3. General Compliance Certification Requirements.

i. Compliance with terms and conditions of this permit shall be certified to the Department not later than the first day of February of each year unless the terms or conditions in Condition 3– Table 1 of this permit require compliance certifications to be submitted more frequently. Such certification shall cover the previous calendar year and shall be submitted on Form AQM-1001BB. The Compliance Certification shall include the following information: *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.5.1 dated 12/11/00]*

A. The identification of each term or condition of the permit that is the basis of the certification. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.5.3.1 dated 12/11/00]*

B. The Owner and/or Operator's current compliance status, as shown by monitoring data and other information reasonably available to the Owner and/or Operator. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.5.3.2 dated 12/11/00]*

C. Such certification shall indicate whether compliance was continuous or intermittent during the covered period. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.5.3.3 dated 12/11/00]*

D. The methods used for determining the compliance status of the Owner and/or Operator, currently and over the reporting period as required by the monitoring, record keeping, and reporting required under Condition 3. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.5.3.4 dated 12/11/00]*

E. Such other facts as the Department may require to determine the compliance status of the source. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.5.3.5 dated 12/11/00]*

ii. Each compliance certification shall be submitted to the Department and EPA and shall be certified in accordance with Condition 2(a) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.5.4 dated 12/11/00]*

iii. Any additional information possessed by the Owner and/or Operator that demonstrates non-compliance with any applicable requirement must also be used as the basis for compliance certifications. *[Reference: 62 FR 8314 dated 2/24/97]*

Condition 3 - Table 1 (Specific Requirements)

Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
a. Emission Unit 29: Catalytic Hydrodesulfurizer Trains 29-1 through 29-5 and Process Heaters 29-H-101 and 29-H-2 through 29-H-9; Emission Points 29-1 through 29-4		
1. Particulate Emissions i. Emission Standard: 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: 7 **DE Admin. Code** 1104 Section 2.1 dated 2/1/81]* ii. Operational Limitation: The process heaters 29-H-2 through 29-H-9 and 29-H-101 are subject to the following fuel usage restrictions: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]* A. 29-H-3, 29-H-4, 29-H-5, 29-H-7 and 29-H-9 shall only combust desulfurized RFG. In addition, 29-H-9 may combust process vent gas from 29-D-36, Alky Merox, and Poly Merox. B. 29-H-2 may combust either natural gas or desulfurized RFG. In addition, it may combust process off gas from the Alky Merox, Poly Merox and vent gas from 29-D-36. C. 29-H-6 and 29-H-8 may combust either natural gas or desulfurized RFG. In addition, they may combust process off gas from the ether plant Merichem vapors. D. 29-H-101 may combust either natural gas or desulfurized RFG. In addition, it may combust vapors displaced from benzene storage and loading operations subject to the requirements in Condition 3 - Table 1(ba) of this permit.	iii. Compliance Method: Compliance with this emission standard and these operation limitations will be demonstrated by adherence to the appropriate monitoring, testing, QA/QC, and recordkeeping requirements and the following: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.7.3 dated 12/11/00]* A. Compliance with the emission standard is based on fuel type and quality. B. Compliance with the operational limitation shall be demonstrated by record keeping. iv. Monitoring/Testing: A. The Owner/Operator shall continuously monitor and record the concentration (dry basis) of H2S 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 H2S in RFG prior to its being combusted in any fuel burning device. The H2S 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]* B. The following streams are exempt from the monitoring requirement in iv.A of this subsection, as they are inherently low in sulfur: 1. Merichem Off-gas from the Ether unit 2. 29-D-36 Vent gas 3. Spent Air form Poly Merox	vi. Reporting: 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]* vii. Certification Requirement: 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 1 (Specific Requirements)

Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
	4. Spent Air form Alky Merox v. Record Keeping: In addition to the requirements of Conditions 3(b)(1)(ii) and 3(b)(2) of this permit, the Owner/Operator shall: *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 and 6.2.1 dated 12/11/00]* A. The Owner/Operator shall maintain records of the fuel combusted in each unit. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*	
2. Sulfur Dioxide (SO2) i. Emission Standards: A. **[RESERVED]** B. The Owner/Operator shall not burn in any fuel gas combustion device any fuel gas including process off-gases from 29-D-36, Alky Merox, Poly Merox, Merichem vapors, and benzene vapors that contain H2S 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 and 7 **DE Admin. Code** 1108 Section 2.1 dated 12/8/1983]*	ii. Compliance Method: Compliance with this emission standard and these operation limitations will be demonstrated by adherence to the appropriate monitoring, testing, QA/QC, and recordkeeping requirements and the following: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.7.3 dated 12/11/00]* A. **[RESERVED]** B. Compliance with Emission Standard (B) shall be based on the H2S CEMS for the RFG. iii. Monitoring/Testing: A. The Owner/Operator shall continuously monitor and record the concentration (dry basis) of H2S 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 H2S in RFG prior to its being combusted in any fuel burning device. The H2S 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*	v. Reporting: 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]* vi. Certification Requirement: 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 1 (Specific Requirements)

Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
	DE Admin. Code 1130 Section 6.1.3.1.2 dated 12/11/00] B. *The following streams are exempt from the monitoring requirement in iii.A of this subsection as they are inherently low in sulfur:* 1. *Merichem Off-gas from the Ether Unit* 2. *29-D-36 Vent gas* 3. *Spent Air from Poly Merox* 4. *Spent Air from Alky Merox* iv. Recordkeeping: A. The Owner/Operator shall keep records of all H2S CEMS calibration, maintenance, quarterly cylinder gas audits and annual relative accuracy test audits for at least 5 years. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]*	
3. Nitrogen Oxides (NO_X) i. Emission Standards: A. For 29-H-101: 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]* B. For Units 29-H-101 and Units 29-H-2 through 29-H-9: 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]* C. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NO_X)" in Condition 3 - Table 1.j.	ii. Compliance Method: Compliance with this emission standard and these operation limitations will be demonstrated by adherence to the appropriate monitoring, testing, QA/QC, and recordkeeping requirements and the following: *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.1 dated 12/11/00]* A. For 29-H-101: Compliance demonstration with Emission Standard (A) shall be based on the operation and maintenance of the Low NO_X burners in accordance with the manufacturer's specifications. B. For Units 29-H-2 through 29-H-9: Compliance demonstration with Emission Standard (B) shall be by conducting an annual tune up of each unit by qualified personnel. C. Compliance with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Condition 3, Table 1.j for 29-H-101, 29-H-4, 29-H-5, 29-H-6 and 29-H-8 shall be based on determination and use of a NOx emission factor based upon	v. Reporting: 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]* vi. Certification Requirement: 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 1 (Specific Requirements)

Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
	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. D. Compliance with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j for 29-H-2, 29-H-3, 29-H-7 and 29-H-9 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. iii. Monitoring & Testing: *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.1 dated 12/11/00]* A. For Units 29-H-2 through 29-H-9: Annual tune up required in Compliance Method (B). B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NO_X)" in Condition 3 - Table 1.j. iv. Record Keeping: 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 Standard: 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	ii. Compliance Method: Compliance with this emission standard and these operation limitations will be demonstrated by adherence to the appropriate monitoring, testing, QA/QC, and recordkeeping requirements. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.7.3 dated 12/11/00]*	v. Reporting Requirement: 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 1 (Specific Requirements)

Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
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]*	iii. Monitoring/Testing: A. Visual observations in accordance with paragraph (C) below shall be conducted within one (1) week of the annual tune-up. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3 dated 12/11/00]* B. The Owner/Operator shall conduct daily qualitative stack observations to determine the presence of any visible emissions when the unit is in operation. 1. If visible emissions are observed, the Owner/Operator shall take corrective actions and/or conduct a visible observation in accordance with Paragraph (C) below. 2. If no visible emissions are observed, no further action is required. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3. dated 12/11/00]* C. 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. 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]* iv. Record Keeping: 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 Sections*	vi. Certification Requirement: 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 1 (Specific Requirements)

Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
	6.1.3.1.2 dated 12/11/00] A. Observation records shall be maintained and made available to the Department upon request. B. Records of all maintenance performed on these units shall be maintained and made available to the Department upon request.	
ba. Emission Unit 32: Benzene Emissions From Benzene Storage Tanks 331-TC-1, 332-TC-1, 570-TC-10; and the Benzene Transfer Facility at the Tetra Unit; and the Transfer Rack (Emission Point 32-1)		
1. Benzene Emissions: i. Emission Standards for Unit 32-H-101 when waste is introduced into the flame zone: A. Process heater 32-H-101 shall reduce benzene emissions to an exit concentration of not greater than 20 ppmv (dry) corrected to 3 percent O_2 during all benzene loading cycles. *[Reference: 40 CFR Part 63.126(b)(1), 7/1/05 ed.]* B. Unit 32-H-101 shall reduce the inlet emissions of total organic HAP emissions from the storage tanks 331-TC-1, 332-TC-1 and 570-TC-10 by 95 weight percent or greater. *[Reference: 40 CFR 61.271(c) dated 12/14/2000 and 40 CFR Part 63.119(e)(1), 7/1/05 ed.]* ii. Operational Limitations: A. Process Heater 32-H-101 shall be the primary control device for benzene vapors	iii. Compliance Method: *[Reference: **APC-81/0832** and 7 **DE Admin Code** 1130 Sections 6.1.3.2.3 dated 12/11/00]* A. Compliance with Emission Standard (A) and Operational Limitation (A) is based upon continuously monitoring the firebox temperature of unit 32-H-101 during all benzene loading cycles unless the Owner/Operator is complying with Operational Limitation B. B. Compliance with Emission Standard (B) shall be based on compliance with Compliance Method (A) in addition to continuously monitoring the firebox temperature in Unit 32-H-101 when it is serving as the control device for the closed vent system of the storage tanks unless the Owner/Operator is complying with Operational Limitation B. C. Compliance with Operational Limitation (B) shall be demonstrated by conducting a stack test at the maximum loading rate to demonstrate that pre-mixing the waste in either	vi. Reporting Requirement: 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]* A. A Notification of Compliance Status (NCS) in accordance with 40 CFR Part 63.152 shall be submitted semi-annually, no later than 60 days after the end of each 6 month period. The 6 month periods for this facility shall end on May 19 and November 19, respectively each year. B. All periods when Unit 29-H-101 is used in place of Unit 32-H-101. This notification may be submitted quarterly. C. Storage vessel reports in accordance with 40 CFR Part 63.122 and transfer operations reports in accordance with 40 CFR Part 63.129. vii. Certification Requirement:

Condition 3 - Table 1 (Specific Requirements)

Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
	3. For each vapor collection system or closed vent system that contains by-pass lines that could divert a vent stream away from the control device to the atmosphere, the Company shall keep a record of the following: a. Where a flow indicator is used, hourly records of whether the flow indicator specified in (iv)(B)(5)(a) was operating and whether a diversion was detected at any time during the hour as well as records of all times of all periods when the vent stream is diverted or the flow indicator is not operating; b. Where a seal mechanism is used to comply with (iv)(B)(5)(b) the Company shall record whether the monthly visual inspection of the seals or closure mechanisms has been done and record when the seal mechanism is broken, the bypass line valve position has changed, or the key for the lock-and-key has been checked out, and records of any car seal that has broken; 4. For each visual inspection conducted in accordance with (iv)(B)(1) & (iv)(B)(2) 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. *[Reference 7 DE Admin Code 1130 Section 6.1.3.1.2 dated 12/11/00]*	
bb. **Emission Unit 32**: Volatile Organic Compound (VOC) Emissions from Benzene Storage tanks 331-TC-1, 332-TC-1, 570-TC-10; and the Benzene Transfer Facility at the Tetra Unit; and the Transfer Rack (Emission Point 32-1) (Volatile Organic Compounds (VOCs) SOCMI HON Conditions for Equipment Leaks)		
1. General Standards: i. Emission Standard: A. The provisions apply to the pumps,	iii. Compliance Method: Determination of whether such operation and maintenance procedures required by the	vi. Reporting Requirement: In addition to the requirements of Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of

Condition 3 - Table 1 (Specific Requirements)

Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, and control devices or closed vent systems that operate in HAP service 300 hours or more during the calendar year. *[Reference: 40 CFR 63, Subpart H, §63.160(a) dated 7/1/05]* B. Service definitions: 1. In gas/vapor service means that a piece of equipment in organic hazardous air pollutant service contains a gas or vapor at operating conditions. *[Reference: 40 CFR 63, Subpart H, §63.161 dated 7/1/05]* 2. In heavy liquid service means that a piece of equipment in organic hazardous air pollutant service is not in gas/vapor service or in light liquid service. *[Reference: 40 CFR 63, Subpart H, §63.161 dated 7/1/05]* 3. In light liquid service means that a piece of equipment in organic hazardous air pollutant service contains a liquid that meets the following conditions: a. The vapor pressure of one or more of the organic compounds is greater than 0.3 kilopascals at 20 deg. C, b. The total concentration of the pure organic compounds constituents having a vapor pressure greater than 0.3 kilopascals at 20 deg. C is equal to or greater than 20 percent by weight of the total process stream, and c. The fluid is a liquid at operating conditions. Note: Vapor pressures may be determined by the methods described in 40 CFR 60, Subpart VV, §60.485(e)(1) dated 7/1/00. *[Reference: 40 CFR 63, Subpart H, §63.161*	Operational Limitations are being used will be based on information available to the Department which may include, but not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan), review of operation and maintenance records, and inspection of the source. *[Reference 40 CFR 63.6(e)(1)(i) dated 7/1/05]* iv. Monitoring/Testing: A. Each piece of equipment in a process unit to which this section applies shall be identified such that it can be distinguished readily from equipment that is not subject to this section. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process unit boundaries by some form of weatherproof identification. *[Reference: 40 CFR 63, Subpart H, §63.162(c) dated 7/1/05]* B. Equipment that is in vacuum service is excluded from the requirements of this section. *[Reference: 40 CFR 63, Subpart H, §63.162(d) dated 7/1/05]* C. [**RESERVED**] D. Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in paragraph (ii)(B) of this section), review of operation and maintenance records, and inspection of the source. *[Reference: 40 CFR 63, Subpart A, §63.6(e) dated 7/1/00]*	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]* A. [**RESERVED**] B. Periodic startup, shutdown, and malfunction reports. If actions taken by the Owner/Operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan, the Owner/Operator shall state such information in a startup, shutdown, and malfunction report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report shall consist of a letter, containing the name, title, and signature of the Owner/Operator or other responsible official who is certifying its accuracy, that shall be submitted to the Department semiannually. The startup, shutdown, and malfunction report shall be delivered or postmarked by the January 30 and July 30 of each year for the periods of July 1 - December 31 and January 1 - June 30 respectively. This report may be submitted simultaneously with the periodic report required by Section 12(v) of this unit. *[Reference: 40 CFR 63, Subpart A, §63.10(d) dated 7/1/00]* C. Immediate startup, shutdown, and malfunction reports. Any time an action taken by an Owner/Operator during a startup, shutdown, or malfunction (including actions taken to correct a

Condition 3 - Table 1 (Specific Requirements)

Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
dated 7/1/00] ii. Operational Limitations: A. Operation and maintenance: 1. At all times, including periods of startup, shutdown, and malfunction, owners or operators shall operate and maintain any affected source, including associated air pollution control equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the Owner/Operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. 2. Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan required in paragraph (B) of this section. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, the Owner/Operator must comply by	v. Recordkeeping: 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]* A. All records and information required by this section shall be maintained in a manner that can be readily accessed at the plant site. *[Reference: 7 **DE Admin Code** 1130.6.1.3 dated 12/11/00]* B. **[RESERVED]** C. The Owner/Operator must maintain a current SSM plan and must make the plan available upon request for inspection and copying by the Department. In addition, if the SSM plan is subsequently revised, the Owner/Operator must maintain each previous (i.e., superseded) version of the SSM plan, and must make each such previous version available for inspection and copying by the Administrator, for a period of 5 years after each revision to the plan. The Administrator may at any time request in writing that the Owner/Operator submit a copy of any SSM plan (or a portion thereof) which is maintained at the affected source or in the possession of the Owner/Operator. Upon receipt of such a request, the Owner/Operator must promptly submit a copy of the requested plan (or a portion thereof) to the Administrator. The Administrator must request that the Owner/Operator submit a particular SSM plan (or a portion thereof) whenever a member of the public submits a specific and reasonable request to examine or to receive a copy of that plan or portion of a plan. The Owner/Operator may elect to submit the required copy of any SSM plan to the Administrator in an electronic format. If the Owner/Operator claims that any portion of such a SSM plan is confidential	malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the Owner/Operator shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan followed by a letter within 7 working days after the end of the event. The immediate report required under this paragraph shall consist of a telephone call (or facsimile (FAX) transmission) to the Department within 2 working days after commencing actions inconsistent with the plan, and it shall be followed by a letter, delivered or postmarked within 7 working days after the end of the event, that contains the name, title, and signature of the Owner/Operator or other responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred. *[Reference: 40 CFR 63, Subpart A, §63.10(d) dated 7/1/00]* vii. Compliance Certification: 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 1 (Specific Requirements)

Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
minimizing emissions during such a startup, shutdown, or malfunction event consistent with safety and good air pollution control practices. *[Reference: 40 CFR 63, Subpart A, §63.6(e)(1) dated 7/1/05]* B. [RESERVED]	business information entitled to protection from disclosure under section 114(c) of the Act or 40 CFR 2.301, the material which is claimed as confidential must be clearly designated in the submission. *[Reference: 40 CFR 63, Subpart A, §63.6(e)(3)(v) dated 7/1/05]* D. General recordkeeping requirements: 1. The Owner/Operator of an affected source subject to the provisions of this part shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche. 2. The Owner/Operator of an affected source subject to the provisions of this part shall maintain relevant records for such source of: a. The occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment); b. The occurrence and duration of each malfunction of the air pollution control equipment; c. All maintenance performed on the air pollution control equipment; d. Actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation)	

Condition 3 - Table 1 (Specific Requirements)

Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
	when such actions are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan; e. All information necessary to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events); f. All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report); g. All results of performance tests, and opacity and visible emission observations; h. All measurements as may be necessary to determine the conditions of performance tests and performance	

Condition 3 - Table 1 (Specific Requirements)

Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
	evaluations; i. All documentation supporting notifications of compliance status. *[Reference: 40 CFR 63, Subpart A, §63.10(b) dated 7/1/00]*	
2. **Pumps in Light Liquid Service.** i. Emission Standard: The Owner/Operator shall monitor and repair each pump that is in light liquid service according to the provisions of this section. *[Reference: 40 CFR 63, Subpart H, §63.163(a) dated 7/1/05]*	ii. Compliance Method: Compliance with this emission standard and these operation limitations will be demonstrated by adherence to the appropriate monitoring, testing, QA/QC, and recordkeeping requirements. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.7.3 dated 12/11/00]* iii. Monitoring/Testing: A. The Owner/Operator of a process unit subject to this subpart shall monitor each pump monthly to detect leaks by the method specified in 40 CFR 63, Subpart H, §63.180(b) dated 7/1/00 and shall comply with the requirements of paragraphs (A) through (C) of this section, except as provided in paragraphs (D) through (H) of this section. 1. The instrument reading, as determined by the method specified in 40 CFR 63.180(b), that defines a leak is 1,000 parts per million. 2. Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected. *[Reference: 40 CFR 63, Subpart H, §63.163(b) dated 7/1/00]* B. Leak Repair 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 §63.163(C)(3) or Section 9 of this unit.	v. Reporting: 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]* A. [RESERVED] B. Other reporting requirements are covered under Condition 3 - Table 1(bb)(12). vi. Compliance Certification: 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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Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
	2. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable: a. Tightening of packing gland nuts. b. Ensuring that the seal flush is operating at design pressure and temperature. 3. Repair is not required unless an instrument reading of 2,000 parts per million or greater is detected at the pump. *[Reference: 40 CFR 63, Subpart H, §63.163(c) dated 7/1/00]* C. Pump Quality Improvement: 1. If calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak, the Owner/Operator shall implement a quality improvement program for pumps that complies with the requirements of 40 CFR 63, Subpart H, §63.176 dated 7/1/00. 2. The number of pumps at a process unit shall be the sum of all the pumps in organic HAP service, except that pumps found leaking in a continuous process unit within 1 month after start-up of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only. 3. Percent leaking pumps shall be determined by the following equation: $\%P_L=((P_L-P_S)/(P_T-P_S))X100$ where, $\%P_L$ = Percent leaking pumps P_L = Number of pumps found leaking	

Condition 3 - Table 1 (Specific Requirements)

Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
	P_T = Total number of pumps in organic HAP service, including those meeting the criteria of paragraphs (D) and (E) of this section. P_S = Number of pumps leaking within 1 month of start-up during the current monitoring period. *[Reference: 40 CFR 63, Subpart H, §63.163(d) dated 7/1/00]* D. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraphs (A) through (C) of this section, provided the following requirements are met: 1. Each dual mechanical seal system is: a. Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or b. Equipped 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 10 of this unit; or c. Equipped with a closed-loop system that purges the barrier fluid into a process stream. 2. The barrier fluid is not in light liquid service. 3. Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both. 4. Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. a. If there are indications of liquids dripping from the pump seal at the	

Condition 3 - Table 1 (Specific Requirements)

Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
fc. **Emission Unit 40: Refinery Tank Farm Units With External Floating Roofs with Double and Single Seals Subject to 7 DE Admin. Code 1124, Section 30 and 40 CFR Part 63, Subpart CC:** Tanks 001-TF-200. 002-TF-200, 003-TF-200, 004-TF-200, 005-TF-200, 006-TF-200, 007-TF-200, 008-TF-200, 009-TF-400, 10-TF-274, 11-TF-274, 12-TF-274, 044-TF-12, 048-TF-112, 050-TF-78, 051-TF-78, 065-TF-50, 072-TF-50, 073-TF-78, 135-TF-78, 136-TF-78, 137-TF-78, 145-TF-78, 146-TF-78, 147-TF-78, 161-TF-78, 162-TF-78,163-TF-153, 165-TF-153, 167-TF-50, 181-TF-78, 182-TF-78, 183-TF-153, 185-TF-153, 186-TF-112, 187-TF-50, 203-TF-112, 204-TF-50, 223-TF-112, 224-TF-112, 225-TF-133, 227-TF-400, 241-TF-50, 242-TF-153, 243-TF-112, 248-TF-200, 262-TF-153, 263-TF-112, 268-TF-200, 281-TF-200, 282-TF-200, 283-TF-200, 284-TF-200, 285-TF-200, 286-TF-200, 580-TF-10 (Includes Group 1 and Group 2 MACT Tanks as defined in the Semi-Annual MACT-1 SSM reports)		
1. **Volatile Organic Compounds (VOC).** i. Emission Standard: A. The emissions from Tanks 001-TF-200, 002-TF-200, 003-TF-200, 004-TF-200, 005-TF-200, 006-TF-200, 007-TF-200, 008-TF-200, 9-TF-400, 10-TF-274, 11-TF-274, 12-TF-274, and 281-TF-200 shall not exceed 27 tons of VOCs in any twelve consecutive months. *[Reference: **APC-80/0870(A3)** Cond. 1 and **APC-95/0471-C/O(A3)** Cond. 2.1.3.3]* B. The emissions from Tanks 47-TF-78, 166-TF-112, 205-TF-153, and 261-TF-50 shall not exceed 4.9 tons per 12 month rolling period. *[Reference: **APC-80/0868**]* C. The emissions from Tank 243-TF-112 shall not exceed 2.7 tons per 12 month rolling period. *[Reference: **APC-80/0868(A6)**]* ii. Equipment Standards: With the exception of Tanks 048-TF-112, 051-TF-78, 225-TF-133, 248-TF-200, 263-TF-112, 268-TF-200, 282-TF-200, 283-TF-200, 284-TF-200, 285-TF-200, and 286-TF-200 the following equipment standards are applicable: *[Reference: 7 **DE Admin Code** 1124, Section 30.c.3.i. dated 11/29/94 and 40 CFR 63.119 and 63.120 dated 1/17/1997]* A. The primary mechanical shoe-type seal shall completely cover the annular space between the edge of the floating roof and the tank wall. B. The accumulated area of gaps between the	iv. Compliance Method: Compliance with the standards and limitations will be demonstrated by adherence to the appropriate monitoring, testing, QA/QC, and recordkeeping requirements. The Owner/Operator shall also: *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.1, dated 12/11/00]* A. Compliance with the Emission Standard shall be demonstrated either by using EPA's TANKS 4.09 program or an updated equivalent methodology approved by the Department, using monthly liquid throughput and the monthly average storage temperature of each tank. *[Reference: **APC-80/0868 and 0870**]* v. Monitoring/Testing: In addition to the requirements of Conditions 3(b)(1)(ii) of this permit, the Company shall: A. Perform semiannual inspections of the floating roofs and associated components detailed n Equipment Standards (E) through (I). *[Reference: 7 **DE Admin Code** 1124 Section 30.4 dated 11/29/94].* B. The Owner/Operator shall comply with the Monitoring/Testing requirements of Condition 3 – Table 1(fb)(v). *[Reference: 40 CFR 63.120(b) dated 1/17/97]* vi. Recordkeeping: In addition to the requirements of Conditions 3(b)(1)(ii) and 3(b)(2) of this permit, the Company	vii. Reporting: A. For all inspections, provide a 15 day telephone notification to allow the administrator to afford the opportunity to inspect the storage vessel prior to refilling. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00 and 40 CFR 63.646(l) dated 2/21/97]* B. Within 60 days of performing the gap measurements required by 7 **DE Admin. Code** 1124 section 30.6 , submit a report containing: 1. The date of measurement. 2. The raw data obtained in the measurement. 3. The calculations described in 7 **DE Admin. Code** 1124 section 30.6. *[Reference Regulation No. 30 Section 6(a)(3)(ii) dated 12/11/00]* C. When seal gap measurements exceed those specified in 7 **DE Admin. Code** 1124 section 30.6, a report shall be furnished within 60 days of the date of seal gap measurements. The report shall identify the vessel and list each reason why the vessel did not meet the specification of Section 30.6. The report shall also describe the actions necessary to bring the storage tank into compliance with the specification of Section 30.6. *[Reference: 7 **DE Admin Code** 1124 Section 30.6 dated 11/29/94 and 7 **DE**

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Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
vessel wall and the primary seal shall not exceed 212 cm^2/meter of tank diameter and the width of any portion of the gap shall not exceed 3.81 cm. *[Reference: 40 CFR 63.120(b)(3) dated 1/17/97]* C. The secondary seal shall be installed above the primary seal so that it completely covers the space between the roof edge and the vessel wall. *[Reference: 40 CFR 63.(b)(6)(i) dated 1/17/97]* D. The accumulated area of gaps between the vessel wall and the secondary seal shall not exceed 21.2 cm^2/meter of tank diameter and the width of any portion of the gap shall not exceed 1.27cm. *[Reference:40 CFR 63.120(b)(4) dated 1/17/97]* E. There shall be no holes tears or other openings in either the shoe, seal fabric or seal envelope of both primary and secondary seals. *[Reference: 7 **DE Admin Code** 1124 Section 30.3.2.1 dated 11/29/94 and 40 CFR 63.120(b)(5)(ii) and (6)(ii) dated 1/17/97]* F. All openings in the external floating roof, except for automatic bleeder vents, rim space vents and leg sleeves are equipped with: *[Reference: 7 **DE Admin Code** 1124 Section 30.3.3 dated 11/29/94]* 1. Covers, seals or lids in the closed position except when the openings are in actual use. 2. Projections into the tank that remain below the liquid surface at all times. G. Automatic bleeder vents are closed at all times except when the roof is being floated off or being landed on the roof leg supports. *[Reference: 7 **DE Admin Code** 1124, Section 30.c.4. dated 11/29/94 and 40 CFR 63.119(c)(5)(ii) dated 1/17/1997]* H. Rim space vents are to be set to open only	shall: *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 and 6.2.1 dated 12/11/00]* A. Keep records describing the results of each seal gap measurement. The records shall include the date of the measurement, the raw data obtained in the measurement, and the calculations. *[Reference 40 CFR 654(i) dated 8/18/1998 and 40 CFR 63.123(d) dated 12/23/2004]* B. Records of the types of volatile petroleum liquids stored. *[Reference: 7 **DE Admin Code** 1124 sec 30.5.1.1 dated 11/29/94]* C. Records of the maximum true vapor pressure of the liquid as stored. *[Reference: 7 **DE Admin Code** 1124 sec 30(e)(1)(ii) dated 11/29/94]* D. Records of the semiannual inspections required by Monitoring/Testing (A). *[Reference: 7 **DE Admin Code** 1124 sec 30(e)(1)(iii) dated 11/29/94]* E. For tanks containing liquid with a maximum true vapor pressure less than 1.5 psia but greater than 1.0 psia, the following records shall be kept: 1. Average monthly storage temperature; 2. Type of liquid stored; and 3. Maximum true vapor pressure. *[Reference: 7 **DE Admin Code** 1124 sec 30.5.2 dated 11/29/94]* F. For Tanks 166-TF-112, 205-TF-153 and 261-TF-50, the rolling 12 month VOC emissions. *[Reference: APC-80/0868]*	*Admin Code* 1130 Section 6.1.3.2 dated 12/11/00]* D. The Owner/Operator shall submit the reports listed below for the MACT Tanks: *[Reference: 40 CFR 63.654(e) dated 8/18/1998]* 1. A Notification of Compliance Status report in accordance with 40 CFR 63.654(f); and 2. Periodic Reports in accordance with 40 CFR 63.654(g); and 3. Other reports in accordance with 40 CFR 63.654(h). 4. In the event an out of service tank is being returned to HAP service, the Owner/Operator shall comply with the reporting requirements in 40 CFR 63.654. viii. Certification: 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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Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
when the floating roof is not floating or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting. *[Reference: 7 **DE Admin Code** 1124, Section 30.3.5. dated 11/29/94]* I. Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers that cover at least 90 percent of the area of the opening. *[Reference: 7 **DE Admin Code** 1124, Section 30.c.6. dated 11/29/94 40 CFR 63.119(c)(2)(vi) dated 1/17/1997]* iii. Operational Limitations: A. **[RESERVED]** B. **[RESERVED]** C. **[RESERVED]** D. The practice of pumping of crude oil from one tank to another shall be minimized in an effort to control the emission of VOCs. *[Reference: **APC-80/0870(A3)** Cond. 4]* E. Tanks 48-TF-112 and 51-TF-78 shall contain only petroleum liquids with a maximum true vapor pressure of less than 1.0 psia (7.0 kPa). If the maximum true vapor pressure of greater than 1.0 psia (7.0 kPa), then the tank(s) shall comply with Regulation No. 1124 Section 30 as applicable. *[Reference: **APC-80/0869(A5)** Cond. No. 7]* F. Tanks 248-TF-200, 263-TF-112, 268-TF-200, 282-TF-200, 283-TF-200, 284-TF-200, 285-TF-200, and 286-TF-200 shall only be allowed to store petroleum liquids whose maximum true vapor pressure does not exceed 1.5 psia. *[Reference: 40 CFR 63.641 dated 8/18/98]* G. **[RESERVED]** H. The external floating roof shall be floating on the liquid surface at all times except when the floating roof must be supported by the		

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Emission Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
leg supports except during the initial fill, after the vessel has been completely emptied and degassed, and when the vessel is completely emptied before being subsequently refilled. *[Reference: 40 CFR 63.119(c)(3) dated 12/21/2006]* I. When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as practical. *[Reference: 40 CFR 63.119(c)(4) dated 12/21/2006]* J. Tanks 166-TF-112, 205-TF-153 and 261-TF-50 shall only be allowed to store petroleum liquids whose maximum true vapor pressure does not exceed 76.6 kilopascals (11.1 psia). *[Reference: APC-80/0868]*		
fd. **Emissions Unit 40 - Refinery Tank Farm Units With Fixed Roofs Subject to 40 CFR Part 63 - Subpart CC, 40 CFR Part 60 - Subpart Kb and Regulation 1124, Section 31**: Tanks 71-TF-28, 78-TC-78, 470-TF-50 (Tank 71-TF-28 is a Group 1 MACT Tank and Tank 78-TC-78 is a Group 2 MACT Tank) Tanks 71-TF-28 and 470-TF-50 are fixed roof tanks with internal floating roofs to comply with the provisions of 40 CFR Part 60, Subpart Kb except as provided for in paragraphs 63.640(n)(8)(i) through 63.640(n)(8)(vi).		
1. **Volatile Organic Compounds (VOC).** i. Emission Standard: VOC emissions from Tank 470-TF-50 shall not exceed 0.9 tons in any rolling twelve month period. *[Reference: **81/0120(A2)**]* ii. Operational Limitations for Tanks 71-TF-28 and 470-TF-50: A. The internal floating roofs shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the surface of the liquid at all times, except during initial fill and during those intervals when the tank is completely emptied or subsequently emptied and refilled. The process of filling	iv. Compliance Method: A. Compliance with the Emission Standard shall be based on a maximum of 270 equivalent turnovers *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.2 dated 12/11/00]* B. Compliance with the Operational Limitations will be demonstrated by adherence to the appropriate monitoring, testing, QA/QC, and recordkeeping requirements. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.1, dated 12/11/00]* v. Monitoring/Testing In addition to the requirements of Conditions 3(b)(1)(ii) of this permit, the Owner/Operator shall: A. For Tanks 71-TF-28 and 470-TF-50: Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in	vii. Reporting: In addition to Condition 3(c)(2) of this permit, the Owner/Operator shall submit the following reports: A. If any of the conditions described in Monitoring Testing requirement (B)(3) are detected during the inspections required by Monitoring/Testing requirement (B), a report shall be furnished to the Department within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made. *[Reference: 40 CFR 60.115b(a) dated 8/11/89]* B. If an extension is utilized in accordance with Monitoring/Testing requirement (C) of

Condition 3 - Table 1 (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. 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: i. Operational Limitations: *[Reference: **APC-82/0981(A12)**]* 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). B. Except as provided in Operating Limitation J, the 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. 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]* A. Compliance with Operational Limitations A and B shall be based on monitoring/testing and recordkeeping requirements. 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. C. Compliance with the operational limitations F and G shall be demonstrated by monitoring/testing and record keeping requirements. 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: 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)]* 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: 1. [**RESERVED**] 2. [**RESERVED**] 3. A summary of all periods when the FCCU WGS has been bypassed.

Condition 3 - Table 1 (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. These planned start up and shut down provisions will not apply to the COB if the FCCU regenerator is operating in full burn mode. D. [**RESERVED**] E. [**RESERVED**] 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]* 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]* 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	E. Compliance with Operational Limitations H shall be determined based on engineering calculations. iii. Monitoring/Testing: 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]* B. [**RESERVED**] 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)]* iv. Recordkeeping: *[Reference APC-82/0981(A9)]* A. CEMS data, including O_2 concentration, calibration and audit results. B. The type of fuel combusted in the FCCU COB and 23-H-1 A and B and the daily FCCU COB	4. Actual hourly SO_2 emissions during periods when the FCCU WGS was bypassed. 5. [**RESERVED**] 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: 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. 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. 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. C. [**RESERVED**] D. Quarterly SO_2 and CO CEMS reports for the preceding quarter shall be submitted

Condition 3 - Table 1 (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 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 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: 1. VOC – 9.5 lb/hr 2. PM – 500 lbs/hr 3. SO_2 – 165 lbs/hr For CO and inorganic HAP emissions during startup, shutdown, and hot standby, the following control device parameters will be used to comply with the inorganic HAP work practice standards specified in 40 CFR Parts 63.1565(a)(5): 1. CO emissions from the catalyst regenerator vent or CO Boiler must not exceed 500 ppmv (dry basis); or 2. Maintain the oxygen (O_2) concentration in the exhaust	fuel usage. C. **[RESERVED]** D. **[RESERVED]** E. **[RESERVED]** F. **[RESERVED]** G. FCCU COB firebox temperature H. **[RESERVED]** I. **[RESERVED]** 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. K. Stack test results; L. The daily FCCU COB fuel usage; 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; N. Date of each FCCU process unit or vessel turnaround; O. Date and duration of seamless bypass operation; P. Internal pressure of the process unit or vessel immediately prior to venting to the atmosphere; and 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. R. The depressurization venting of process units	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). vi. Certification: 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 1 (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
gas from the catalyst regenerator at or above 1 volume percent (dry basis). I. In the event of an unplanned shutdown and/or bypass of the CO Boiler, operation of the FCCU shall be in accordance with Attachment "A" of **Permit: APC-82/0981-OPERATION (Amendment 9)(NSPS)** dated April 30, 2012. In the event of a planned shutdown of the CO Boiler or in the event of planned operation of the CO Boiler at firebox temperatures less than 1300 deg F, the Owner/Operator shall initiate promoted burn in the FCCU and control CO emissions in accordance with Condition 3, Table 1.e.5.i of **Permit: AQM-003/00016** prior to bypassing shutting down the CO Boiler and/or reducing firebox temperature below 1300 deg F in the CO Boiler. J. Except as provided in Operational Limitation M, 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	and vessels during turnaround shall be documented. *[Reference APC-82/0981(A9)]*	

Condition 3 - Table 1 (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
unplanned shutdown of the FCCU, or any unplanned shutdown or bypass of the FCCU COB and SNCR, 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 and SNCR, 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		

Condition 3 - Table 1 (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 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 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. K. During process unit turnarounds the Company shall provide for the following: 1. Depressurization venting of the process unit or vessel to a vapor recovery system, flare or firebox. 2. No emission of VOC from a process unit or vessel until its internal pressure is 136 kiloPascals (kPa) (19.7 psia) or less.		

Condition 3 - Table 1 (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
L. The Company shall evaluate the performance of the FCCU over a 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. (Condition complete). M. In the event of an unplanned shutdown and/or bypass of the CO Boiler, operation of the FCCU shall be in accordance with Attachment G of this permit. In the event of a planned shutdown of the CO Boiler or in the event of planned operation of the CO Boiler at firebox temperatures less than 1300 deg F, the Owner/Operator shall initiate promoted full burn in the FCCU and control CO emissions in accordance with Condition 3, Table 1.e.5.i of this permit prior to		

Condition 3 - Table 1 (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
bypassing/ shutting down the CO Boiler and/or reducing the firebox temperature below 1300 deg F in the CO Boiler. *[Reference: **APC-82/0981(A12)**]* N. SNCR Operation: 1. Except as provided by Part 2 Condiction3 – Table 1.e.i.N.3 the FCCU COB shall be operated while in partial burn mode unless the SNCR system is in use and operating properly whenever the SNCR system is available Compliance with emission limitations in Part 2, Condition 3 - Table 1.e.4.i.B shall constitute proper operation. 2. The owner or operator shall operate the SNCR system in accordant with manufacturer's recommendations and shall be operated at all times that it is available. 3. The SNCR system is considered available except during periods of planned maintenance or malfunction. 4. Malfunction means any sudden and unavoidable failure of air pollution control equipment or process to operate in a normal or usual manner, and that causes the source to exceed a technology based		

Condition 3 - Table 1 (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
emission limitation under the permit, due to unavoidable increases in emission attributable to the malfunction. An emergency or malfunction shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.		
2a. Particulate Matter: i. Emission Limitations: A. [**RESERVED**] B. Particulate Matter (TSP/PM_{10}) emissions from the WGS + system shall not exceed 1lb/1000 lb of coke burned and 203 TPY. *[Reference: **APC-82/0981(A12)**]*	iii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* A. [**RESERVED**] B. Compliance with Emission Limitation (B) is based on stack testing conducted in accordance with Condition 3 - Table 1.e.2a.iv. iv. Monitoring/Testing: *[Reference: APC-81/0829(A9) and 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* The Owner/Operator shall conduct performance testing as follows annually, unless the Department approves less frequent testing: A. [**RESERVED**] B. TSP: in accordance with Reference Method 5B in Appendix "A" of 40 CFR Part 60, or other testing methodology approved by the Department. 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	v. Reporting Requirement: 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]* vi. Certification Requirement: 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 1 (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 any performance testing. v. Record Keeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv.	
2b. Compliance Assurance Monitoring Plan for Particulate Matter		
i. Emission Standard 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]* B. For the FCCU WGS: 1. TSP emissions shall not exceed 1 lb/1000 lb of coke burned and 203 TPY. *[Reference APC-82/0981(A9)]* ii. Operational Limitations: A. Indicators: *[Reference: 40 CFR Part 64.6(c)(1)(i) dated 10/22/97]* 1. Scrubber pressure drop shall be used as the primary indicator 2. Scrubber pump discharge shall be used as the secondary indicator B. Indicator Ranges *[Reference: 40 CFR Part 64.6(c)(1)(i) dated 10/22/97]* 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. 2. For the secondary indicator:	iii. Compliance Method 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]* iv. Monitoring *[Reference: 40 CFR Part 64.3 and 64.4 dated 10/22/97]* A. Data Representativeness *[Reference: 40 CFR Part 64.6(c)(1)(iii) dated 10/22/97]* 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. 2. For the secondary indicator: pressure drop indication shall be based on a pressure indicator located after the quench/pre-scrubber recirculation pumps. B. Verification of Operational Status for both indicators: 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]* C. QA/QC Practices for both indicators shall be Annual stack testing conducted in accordance with Condition 3 - Table	v. Reporting A. Quality Improvement Plan (QIP) 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]* 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]* B. The Company shall notify the Department at least 30 days prior to any reestablishment of excursion values. *[Reference: 40 CFR Part 64.6(c)(2) dated 10/22/97]* 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]* 1. Summary information on the number, duration, and cause of excursions or exceedances; 2. The corrective actions taken after an excursion or exceedance; 3. Summary information on the number, duration, and cause of monitor

Condition 3 - Table 1 (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
Minimum discharge pressure satisfying the less stringent of: 115 psig or 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. 3. 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 Table 1 e.2b.ii.B.1 and e.2b.ii.B.2 for greater than 3 minutes in any hour or more than 15 minutes in any 24 hour period, the Company may perform a visual emission test in accordance with EPA Reference Method 9 to establish that the visible emissions do not exceed the opacity standard specified in Table 1 e.10.i at the reduced parameter level. In such a case, the new minimum value for the parameter in question shall be the average value recorded during the Method 9 test, and shall be used in conjunction with Table 1 e.2b.ii.B.1 to evaluate	1da.2a.iv.A. *[Reference: 40 CFR Part 64.6(c)(1)(ii) dated 10/22/97]* D. Frequency for both indicators shall be continuous. *[Reference: 40 CFR Part 64.6(c)(1)(iii) dated 10/22/97]* 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]* 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]*	downtime incidents; and 4. If triggered, a description of the actions taken to implement the QIP. vi. Certification 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 1 (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 Table 1 e.10.i. *[Reference APC-82/0981(A11)]"* 4. During periods of full burn operation with the COB bypassed or the COB operating at a reduced level, if visible emissions are observed to be greater than 20% opacity, the Company shall perform a visual emission is in accordance with EPA Reference Method 9 to establish that the visible emissions do not exceed the opacity standard specified in Condition 3 – Table 1.e.10. *[Reference: **APC-82/0981-O(A12)**]* C. Excursions *[Reference: 40 CFR Part 64.6(c)(2) dated 10/22/97]* 1. An excursion shall be defined as any deviation from the ranges specified in the Indicator Ranges (B)(1) or (B)(2). 2. An excursion shall trigger an inspection, corrective action, and a reporting requirement. *[Reference: 40 CFR Part 64.7(d) dated 10/22/97]* D. Monitoring/Measurement Approach *[Reference: 40 CFR Part 64.6(c)(1)(ii) dated 10/22/97]* 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.		

Condition 3 - Table 1 (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 drop for the secondary indicator shall be based on pressure transducer measurements obtained at the quench/pre-scrubber recirculation pumps discharge. 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]* 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 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]*		

Condition 3 - Table 1 (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): i. Emission Standards: 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(A12)**]*	ii. Compliance Method: *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* A. Compliance with Emission Standard (A) shall be based on a continuous monitoring system and recordkeeping. iii. Monitoring/Testing: *[Reference APC-82/0981 (A9)]* A. The SO_2 emissions shall be continuous monitored by CEMS. B. **[RESERVED]** 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. iv. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv.	v. Reporting Requirement: 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]* vi. Certification Requirement: 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 1 (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): i. Emission Standard: A. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. B. NOx emissions shall not exceed the following: 1. 108.2 ppmvd @ 0 % oxygen on a 7-day rolling average basis. 2.79.6 ppmvd @ 0 % oxygen on a 365-day rolling average basis. *[Reference: **APC-82/0981(A12)**]*	ii. Compliance Method: A. Compliance with the Emission Standards shall be based on CEMS. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1 dated 12/11/00]* iii. Monitoring/Testing: A. NO_x emissions shall be monitored by CEMS. 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)]* C. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. iv. Recordkeeping: A. For Emission Standard A, 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]* 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. B. [**RESERVED**] vi. Certification: 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): i. Emission Standard: *[Reference: **APC-82/0981 (A12)**]* A. CO emissions from the FCCU WGS+ shall not exceed 500 ppmv dry as a 1-hour average, and 3,085 TPY. B. The Owner/Operator shall not cause or allow the emission of carbon monoxide from the FCCU unless it is burned at no less than 1300° F for at least 0.3	ii. Compliance Method: *[Reference APC-82/0981 (A7)]* A. Compliance with Emission Standard (A) shall be based on CEMS. B. Compliance with Emission Standard (B) is defined as maintaining a firebox temperature of no less than 1300° F as measured on a minute average basis. iii. Monitoring/Testing: *[Reference APC-82/0981 (A9)]* A. The Owner/Operator shall continuously	v. Reporting Requirement: 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]* vi. Certification Requirement:

Condition 3 - Table 1 (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
seconds in the FCCU COB, or combusted in the FCCU regenerator when operating in full burn mode.	monitor the temperature of the FCCU COB firebox. B. CO emissions shall be monitored by CEMS. C. The QA/QC procedures for the CO CEMS shall be in accordance with the procedures in Appendix "F" of 40 CFR Part 60. iv. Recordkeeping: Comply with "Conditions Applicable to Multiple pollutants" in Condition 3 - Table 1.e.1.iv.	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): i. Emission Standard: *[Reference APC-82/0981 (A9)]* A. VOC emissions from the FCCU WGS+? shall not exceed 0.40 lb/mmdcsf and 41.4 tons per year. 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 gaseous service. C. There shall be no emissions of uncondensed VOCs from the	ii. Compliance Method: *[Reference APC-82/0981(A7)]* A. Compliance with Emission Standard A shall be based on monitoring/testing and recordkeeping requirements 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. 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. D. [**RESERVED**] E. [**RESERVED**] iii. Monitoring/Testing: *[Reference APC-82/0981(A9)]* A. The Owner/Operator shall conduct performance testing every three years. Each	v. Reporting Requirement: 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]* 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)]* vi. Certification Requirement: 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 1 (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
condensers, hot wells or accumulators of any vacuum producing system. ii. [**RESERVED**]	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. iv. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv.	
7. Sulfuric Acid (H_2SO_4): i. Emission Standard: A. H_2SO_4/SO_3 emissions from the FCCU WGS+ shall meet one of the following standards: *[Reference APC-82/0981(A9)]* 1. H_2SO_4 emissions shall be reduced by at least 40% across the wet gas scrubber system; or 2. The outlet concentration of H_2SO_4/SO_3 from the stack shall be no greater than 10 ppmvd.	ii. Compliance Method: 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)]* 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-82/0981(A9)]* iv. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv.	v. Reporting Requirement: 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]* vi. Certification Requirement: 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]*
8. Lead (Pb): i. Emission Standard: Pb emissions from the FCCU WGS+ shall	ii. Compliance Method: Compliance with the Emission Standard shall be based on the stack test based emission factor in	v. Reporting Requirement: 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 1 (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
not exceed 4.37 E-04 pounds per thousand pounds of coke burned. *[Reference: **APC-82/0981(A12)**]*	terms of lb/Mlb coke burn rate. *[Reference APC-82/0981(A9)]* iii. Monitoring/Testing: 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)]* iv. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv.	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]* vi. Certification Requirement: 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)**]* i. Emission Standard: A. The Owner/Operator shall comply with all the applicable requirements of 40 CFR Part 63, subpart UUU. B. Hydrogen Cyanide (HCN) emissions from the FCCU WGS shall not exceed 45 lb/hour. *[Reference: **APC-82/0981(A11)**]* ii. Operational Limitations: A. The Owner/Operator shall operate the FCCU 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).	iii. Compliance Method: A. Compliance with the Emission Standard A shall be based on monitoring/testing and recordkeeping requirements. *[Reference: **Permit APC-82/0981 (A9)**]* B. Compliance with Emission Standard B shall be based on compliance with CO emission limit as specified in Condition 3 – Table 1.e.5.i.A. C. Alternatively, during startup, shutdown, malfunction and hot standby events, compliance may be demonstrated based on the work practice standard to maintain the Oxygen (O_2) concentration in the exhaust gas from the regenerator overhead at or above 1 volume percent (dry basis). iii. Monitoring/Testing: *[Reference Permit APC-82/0981 (A9) and A(11)]* A. CO emissions shall be monitored by CEMS.	v. Reporting Requirement: 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]* 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

Condition 3 - Table 1 (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. The QA/QC procedures for the CO CEMS shall be in accordance with the procedures in Appendix "F" of 40 CFR Part 60. C. The owner/Operator shall shall conduct a performance test for HCN within 180 days of issuance of the operating permit and commencement of full burn operation in accordance with Reference Method 320 in Appendix "A" of 40 CFR Part 63, Other Test Method (OTM)-029, or other testing methodology approved by the Department. The Company shall propose a surrogate stack CO concentration based on correlated stack test data for the Department's approval and incorporation in the permit for future compliance evaluation. D. Operate at all times according to the procedures in the OMMP. *[Reference: 40 CFR 63.1564(a)(3) and (c)(2)].* iv. Recordkeeping: A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.e.1.iv. B. Maintain records to document conformance with the procedures in your OMMP. Follow all applicable recordkeeping requirements specified at 40 CFR Part 63.1576. *[Reference: 40 CFR 63.1564(c)(3).]*	shall be sent to the Department's engineer for the refinery. *[Reference: 40 CFR 63, Subpart UUU, §63.1575(c)]* B. Demonstrate compliance: As per the approved schedule. Demonstrate initial compliance by submitting your OMMP to your permitting authority as part of your Notification of Compliance Status. *[Reference: 40 CFR 63.1564(b)(6)].* C. Demonstrate continuous compliance by maintaining records to document conformance with the procedures in your OMMP *[Reference: 40 CFR 63.1564(c)(2)].* D. That required by Conditions (2)(a), 2(b)(9), 2(f)(3), and 3(c)(2) of this permit. *[Reference: 7 DE Admin. Code 1130 Sections 6.1.2.3 and 6.2.1 dated 12/11/00]* vi. Certification Requirement: A. 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]* B. Prepare an operation, maintenance, and monitoring plan (OMMP) according to the requirements in 40 DFR 63.1574(f) and operate at all times according to the procedures in the plan. *[Reference: 40 CFR 63.1564(a)(3)].*
10. Visible Emissions: i. Emission Standard: A. The Owner/Operator shall not cause or	ii. Compliance Method: A. Compliance with Emission Standard A shall be based on Monitoring/Testing requirements.	v. Reporting Requirement: That required by Conditions 2(a), 2(b)(9), 2(f)(3), 3(b)(1)(ii), and 3(c)(2) of this

Condition 3 - Table 1 (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
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)].* B. **[RESERVED]**	*[Reference APC-82/0981(A9)]* B. **[RESERVED]** iii. Monitoring/Testing: 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: 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 B. A minimum discharge pressure, evaluated on a one minute average basis, from the quench/pre-scrubber recirculation pumps satisfying the less stringent of: 1. 115 psig, or 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. C. Notwithstanding Monitoring/Testing	permit. *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* vi. Certification Requirement: 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 1 (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
	Conditions (A) and (B), 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 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(A11)]*. D. [**RESERVED**] E. [**RESERVED**] F. During periods of full burn operation with the COB bypassed or the COB operating at a reduced level, if visible emissions are observed to be greater than 20% opacity, the Company shall perform a visual emission test in accordance with EPA Reference Method 9 to establish that the visible emissions do not exceed the opacity standard specified in Emission Standard A.	

Condition 3 - Table 1 (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. Record keeping: The following records shall be maintained in accordance with Condition 3(b): 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)]*	
11. Ammonia (NH_3) i. Emission Standard: A. NH_3 emissions shall not exceed 8.5 lb/hour and 37 TPY. *[Reference **APC-82/0891(A12)**]*	ii. Compliance Method: Compliance with the Emission Standard A shall be based on stack testing conducted in accordance with Condition 3 – Table 1.e.11.ii Monitoring/Testing and Recordkeeping requirements. [Reference: **APC-82/0981(A12)**] iii. Monitoring/Testing: The Owner/Operator shall conduct annual performance tests, unless the Department approves less frequent testing, or other testing methodology approved by the Department. [Reference: **APC-82/0981(A12)**] iv. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 – Table 1.e.1.iv.	v. Reporting Requirement: 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 12/11/001] vi. Certification Requirement: 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 date 12/11/00]
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)		

Condition 3 - Table 1 (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
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 i. Operational Limitations *[Reference: APC-98/0264(A7)]* 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: 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. 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. 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. B. The combined heat input to SCOT I (28-S-203) and SCOT II (28-S-804) shall not exceed 865,000 mmBtu in	ii. Compliance Method *[Reference: APC-98/0264(A7)]* A. Compliance with Operational Limitations (A), (B), (D), (H) and (I) shall be based upon recordkeeping. B. Compliance with Operational Limitation (C) shall be based upon a continuous monitoring system ("CMS"). C. Compliance with Operational Limitation (F) is defined as maintaining a negative pressure at the sulfur pits as measured on a minute average basis. D. **[RESERVED]** iii. Monitoring/Testing: *[Reference: APC-98/0264(A7)]* 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]*	v. Reporting: 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 and 6.1.3.3 dated 12/11/00 and APC-90/0264 (A7)]* A. **[RESERVED]** 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). 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. 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. vii. Certification:

Condition 3 - Table 1 (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
any rolling twelve month period. 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 incinerators shall not exceed 0.10 grain/dscf on a 3 hour rolling average. D. Except as provided in Condition 3 - Table 1.j.3.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. E. [**RESERVED**] F. The steam eductor system shall be operating properly at all times when molten sulfur is stored in the sulfur pits. G. [**RESERVED**] H. The Owner/Operator shall carry out an annual tune up of each SCOT incinerator burner. 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.	B. The Owner/Operator shall continuously monitor the pressure at the sulfur pits. iv. Recordkeeping The following records shall be maintained in accordance with Condition 3(b): *[Reference: APC-98/0254(A7)]* A. Daily sulfur production from each Claus Unit B. Logs of annual tune up performed on the SCOT incinerator burners C. The type of fuel combusted in SCOT I and SCOT II and the fuel usage, and HHV D. All periods when the pressure at the sulfur pits is not below atmospheric pressure. 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.	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: i. Emission Standards: *[Reference: APC-98/0264(A7) and 7 **DE Admin. Code** 1104 dated 2/1/81]*	ii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-98/0264(A7)]* Compliance with the Emission Standard (A) shall	v. Reporting: 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

Condition 3 - Table 1 (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. 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}. B. [**RESERVED**]	be based on stack testing conducted in accordance with Condition 3 - Table 1.j.2.iii.A. iii. Monitoring/Testing: *[Reference: APC-98/0264(A7)]* 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. 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. iv. Recordkeeping: *[Reference: APC-98/0264(A7)]* Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.iv.	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]* vi. Certification: 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. Sulfur dioxide (SO_2): *[Reference: APC-98/0264 (A7)]* i. Emission Standard: A. 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	iii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-98/0264(A7)]* A. Compliance with the Emission Standard shall be determined by using continuous emissions rate monitoring systems (CERMS) to continuously monitor SO_2 emissions and	vi. Reporting: 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]* A. The Owner/Operator shall submit semiannual reports by January 31 and July

Condition 3 - Table 1 (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 rolling average basis; or operate the thermal oxidizer or incinerator at a minimum hourly average temperature of 1,200 degrees Fahrenheit in the firebox and a minimum hourly average outlet oxygen (O_2) concentration of 2 volume percent (dry 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. B. During periods of startup and shutdown, the facility shall comply with 63.1568(a)(4)(i) using the following: 1. Meeting emission limitations in 63.1568(a)(1)(i); or 2. Comply with 63.1568(4)(ii) by sending any startup or shutdown purge gases to the flare; or 3. Comply with 63.1568(4)(iii) by sending any startup or shutdown purge gases to the thermal oxidizer or incinerator at a minimum hourly average temperature of 1,200 degrees Fahrenheit in the firebox and a minimum hourly average outlet oxygen (O_2) concentration of 2 volume percent (dry basis).	O_2 from the stacks of both SCOT I and SCOT II. B. Compliance with the Operational Limitation shall be demonstrated by the Monitoring/Testing requirement (B). iv. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-98/0264(A7)]* 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. B. During start-up and shutdown periods of incineration, ambient air monitoring data for the affected period shall be collected daily. C. The Owner /Operator shall monitor the firebox temperature on a minute average basis. v. Recordkeeping: 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)]* A. CERMS data showing SO_2 emissions in lbs/hour from the stacks of SCOT I and SCOT II including, O_2 concentration, results of daily calibration, quarterly cylinder gas audits and annual relative accuracy test audits for the CERMS. B. Daily ambient air monitoring data during periods of start-up and shutdown periods of incineration. C. Firebox temperature on a minute average	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. *[Reference: 40 CFR 63, Subpart UUU, §63.1575(c)]* B. [RESERVED] vii. Certification: 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 1 (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: *[Reference: APC-98/0264(A7)]* **SULFUR RECOVERY AREA START UP AND SHUT DOWN SCENARIOS** The following short term emission limits listed below shall apply during start up and shut down scenarios: 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 to meet the shutdown provisions of Condition 3 Table 1 (j.3.i.B). The maximum amount of SO_2 that shall be emitted during this 2-hour period shall not exceed 4.2 tons. B. **SCENARIO 2: Melting and Burnout After Planned Shut Down of SRU I and SRU II:** 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 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 the shutdown provisions of Condition 3 Table 1 (j.3.i.B).	basis.	

Condition 3 - Table 1 (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. **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 meet the startup provisions of Condition 3 Table 1 (j.3.i.B). 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 meet the shutdown provisions of Condition 3 Table 1 (j.3.i.B), and shall not exceed a 6 day period. E. 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.		
4. Nitrogen Oxides (NOx): i. Emission Standard: A. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. B. NOx emissions shall not exceed those	iii. Compliance Method: 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	vi. Reporting: 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*

Condition 3 - Table 1 (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
achieved through an annual tune up performed by qualified personnel. *[Reference: 7 **DE Admin. Code** 1112 Section 3.3.2 dated 11/24/93]*	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. 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]* iv. Monitoring/Testing 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)]* 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]* v. Recordkeeping: A. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j.	*6.1.3.2.3 and 6.2.1 dated 12/11/00]* vii Certification: 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 1 (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. 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): i. Emission Standard: 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: 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)]* iii. Monitoring/Testing 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)]* iv. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.iv.	v. Reporting: 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]* vi Certification: 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 1 (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): i. Emission Standard: *[Reference: APC-98/0264(A6)]* VOC emissions (as methane) shall not exceed 0.34 lb/hr and 1.3 TPY combined from both SCOT units.	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)]* Compliance with Emission Standards (A) and (B) shall be based on stack testing conducted in accordance with Condition 3 - Table 1.j.6.iii. iii. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and APC-98/0264(A7)]* 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. iv. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.j.1.iv.	v. Reporting: 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]* vi Certification: 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: 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: 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 1 (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)] 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. 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)]* 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 approvec 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. iv. Recordkeeping: 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]* vi Certification: 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 1 (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): i. Emission Standard: H_2SO_4 emissions shall not exceed 3.2 lb/hr and 12.7 TPY combined from both SCOT units. *[Reference: APC-98/0264(A7)]*	ii. Compliance Method: 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)]* iii. Monitoring/Testing: 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)]* iv. Recordkeeping:	v. Reporting: 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]* vi Certification: 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 1 (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: 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: 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].* iii. Monitoring/Testing: A. The Owner/Operator shall conduct daily qualitative stack observations to determine the presence of any visible emissions when the unit is in operation. 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. 2 If no visible emissions are observed, no further action is required. 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: 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]* vi. Certification: 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 1 (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].* iv. Record keeping: *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00].* The following records shall be maintained in accordance with Condition 3(b): A. Observation records shall be maintained and made available to the Department upon request.	
k. Emission Unit No. 37: Steam Methane Reformer Hydrogen Plant, Heaters 37-H-1 A/B; (Emission points 37-1A and 37-1B)		
1. Conditions applicable to Multiple Pollutants: i. Operational Limitation: A. The heat input to 37-H-1 A/B shall not exceed 439 mmBtu/hr on a 365 day rolling average basis. *[Reference: APC-81/0965]* B. Only desulfurized refinery fuel gas (RFG) and/or natural gas may be fired in unit 37-H-1 A/B. C. The hydrogen sulfide (H_2S) content in the desulfurized RFG shall not exceed 162 ppmv(dry) (0.10 gr/dscf) on a three (3) hour rolling average basis.	ii. Compliance Method: 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]* iii. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* A. The Owner/Operator shall monitor the fuel usage by 37-H-1 A/B on an hourly basis. 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. 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: 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]* A. [**RESERVED**] 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 1 (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].* iv. Recordkeeping: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3. dated 12/11/00]* 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: i. Operational Limitations: *[Reference: APC-82/0073 and APC-82/0632]* A. The heat input to 42-H-1,2,3 shall not exceed 458 mmBtu/hr on a 365 day rolling average basis. B. The heat input to 42-H-7 shall not exceed 80 mmBtu/hr on a 365 day rolling average basis. C. Only desulfurized refinery fuel gas (RFG) and/or natural gas may be	ii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.3.1.2 dated 12/11/00]* Compliance with the operational limitations shall be based on monitoring/testing and recordkeeping requirements. iii. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* A. The Owner/Operator shall monitor the fuel usage by 42-H-1,2,3 and 42-H-7 on an hourly basis. B. The Owner/Operator shall obtain a daily sample of the fuel gas combusted in 42-H-	v. Reporting: 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]* A. [**RESERVED**] B. [**RESERVED**] 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 include a report listing all rolling 3-hour periods during which the average

Condition 3 - Table 1 (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
fired in 42-H-1,2,3 and 42-H-7. 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. 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).	1,2,3 and 42-H-7 and analyze it to determine the daily heat input rate to this unit. 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." D. **[RESERVED]** iv. Recordkeeping: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2 dated 12/11/00]* The following records shall be maintained in accordance with Condition 3(b): A. the type of fuel combusted in 42-H-1,2,3 and 42-H-7 and the fuel usage. B. All 3-hour rolling averages of H2S content in RFG. C. CEMS data calibration and audit results.	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. vi. Certification: 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: i. Emission Standards for 42-H-1,2,3 and 42-H-7: PM emissions shall not exceed 0.3 lb/mmBtu heat input, maximum 2-hour average. *[Reference: 7 **DE Admin. Code.** 110 4*	ii. Compliance Method: *[Reference 7 **DE Admin. Code** 1130 Sections 6.1.3.1.2 dated 12/11/00]* A. Compliance with the Emission Standard shall be based on the fuel type and quality. iii. Monitoring/Testing:	v. Reporting: 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 1 (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 2.1 dated 2/1/83].	Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.m.1.iii iv. Recordkeeping: Comply with "Conditions Applicable to multiple Pollutants" in Condition 3 - Table 1.m.iv.	vi. Certification Requirement: 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): i. Emission Standard: For Unit 42-H-1,2,3: 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].* 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]* 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: 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].* 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. 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 dated 12/11/00]*	v. Reporting: 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]* vi. Certification: 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 1 (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: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* 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". 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]* iv. Recordkeeping: 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]*	
4. Visible Emissions: 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]* iii. Monitoring/Testing: A. The Owner/Operator shall conduct daily qualitative stack observations to determine the presence of any visible emissions when the unit is in operation. 1. If visible emissions are observed, the Owner/Operator shall take corrective	v. Reporting: 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]* vi. Certification: 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 1 (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
	actions and/or conduct a visible observation in accordance with Paragraph (B) below. 2. If no visible emissions are observed, no further action is required. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3 dated 12/11/00]* 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].* iv. Record keeping: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* A. Observation records shall be maintained and made available to the Department upon request.	

Condition 3 - Table 1 (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, 40 CFR Part 63.1566(a)]* i. Emission standards: A. The wet gas scrubber shall reduce uncontrolled emissions of HCl by 97% by weight at all times. B. Total HCl emissions from the CCR Reformer unit shall not exceed 1.6 tons on a 12-month rolling basis. C. The wet gas scrubber shall reduce uncontrolled emissions of chlorine by 95% by weight at all times. D. Total chlorine emissions shall not exceed 0.80 tons on a 12-month rolling basis. E. Except for Emission Limitation (F), meet the emission limit during initial catalyst depressuring and catalyst purging operations. *[Reference: 40 CFR 63.1566(a)(3)]* F. The emission limits do not apply during passive depressuring when the reactor vent pressure is 5 psig or less. *[Reference: 40 CFR 63.1566(a)(4)* ii. Operational limitations: 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).	iii. Compliance method: *[Reference: APC-82/0073]* A. Compliance with the Emission Standards and Operational Limitations shall be based on Monitoring/Testing and Recordkeeping requirements. B. The owner or operator shall meet the following emission limits during initial catalyst depressuring and catalyst purging operations by complying with 40 CFR Part 63 Subpart UUU. *[Reference: 40 CFR Part 63.1566(a)]* 1. Option 1: On and after January 30, 2019, vent emission to a flare that meets the requirements of §63.670. Prior to January 30, 2019, vent emissions to a flare that meets the requirements for control devices in §63.11(b) and visible emission from a flare must not exceed a total of 5 minutes during any 2 hour operating period, or vent emissions to a flare that meets the requirements of §63.670. 2. Option 2: Reduce uncontrolled emission of total organic compounds (TOC) or nonmethance TOC from your process vent by 98 percent by weight using a control device or to a concentration of 20 ppmv (dry basis as hexane), corrected to 3 percent oxygen, whichever is less stringent. If you vent emissions to a boiler or process heater to comply with percent reduction or concentration emission	vi. Reporting: 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]* 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. vii. Certification: 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 1 (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. The minimum daily average pH of the scrubbing liquid exiting the scrubber shall be 6.56. C. The minimum daily average liquid-to-gas ratio shall be 0.12. D. RESERVED]	limitation, the vent stream must be introduced into the flame zone, or any other location that will achieve the percent reduction or concentration standard. iv. Monitoring/Testing: *[Reference: APC-82/0073]* 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. 1. The pH of the scrubbing liquid exiting the scrubber; 2. The gas flow rate to the scrubber; 3. The total scrubbing liquid flow rate; 4. The differential pressure across the scrubber. B. To demonstrate compliance with Operational Limitations (B) and (C) during coke burn-off and catalyst rejuvenation, the Owner/Operator shall: 1. Collect the hourly and daily average pH monitoring data according to §63.1572; 2. Maintain the daily average pH above the operating limit established during the performance test; 3. Collect the hourly average gas flow rate and scrubbing liquid flow rate monitoring data;	

Condition 3 - Table 1 (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. Determine and record the hourly and daily average liquid-to-gas ratio; 5. Maintain the daily average liquid-to-gas ratio above the limit established during the performance test; and 6. Comply with the OMM plan. v. Recordkeeping: *[Reference: APC-82/0073]* The following records shall be maintained in accordance with Condition 3(b): 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); and B. [RESERVED] 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 i. Emission Standard: A. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. B. Sulfur Dioxide: The owner/operator shall not burn in the flares any fuel gas that contains H_2S in excess of 162 ppmv determined on a 3 hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a	ii. Compliance Method A. 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 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. B. Compliance with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1,	v. Reporting: 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]* A. After November, 11, 2015, the Owner/Operator shall submit semi-annual excess emissions reports for all periods of excess emissions according to the requirements of 40 CFR 60.7(c) except that the report shall contain the information specified in 40 CFR

Condition 3 - Table 1 (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
result of relief valve leakage or other emergency malfunctions is exempt from this limit. *[Reference: 40 CFR 60.103a(h)]* ii. Operational Limitations: A. [**RESERVED**] B. The flare shall be operated at all times when emissions may be vented to it. *[Reference: 40 CFR 60, Subpart A, §60.18(e), dated 7/1/06]* 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). 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].* E. Except as provided in D above, operation of the flare shall be smokeless. *[Reference: Permit APC-81/0830]* F. The flare shall be operated with a flame present at all times. *[Reference: 40 CFR 60.18(c)(2), dated 7/1/06]* G. The flare flame detection device shall be in proper operation whenever the flare is in operation.	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. C. Compliance with Emissions Limitation B shall be demonstrated in accordance with the monitoring/testing and recordkeeping recuirements of this condition. D. 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]* iii. Monitoring/Testing: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* A. The Owner/Operator shall continuously monitor the gas flow to the flares (i.e., the gas not recovered by the recovery compressors). After November 11, 2015, the owner/operator shall install, operate, calibrate and maintain the monitoring device in accordance with 40 CFR 60.107a(f). *[Reference: 40 CFR 60.107a(f)]* B. Sulfur Dioxide emissions from the flare shall be monitored as follows: 1. Until Nov. 11, 2015, a gas sample shall be collected from the flare header weekly and analyzed by a gas chromatograph.	60.108a(d)(1) through (7). All reports shall be postmarked by the 30th day following the end of each six month period. *[Reference: 40 CFR 60.7(c) and 60.108a(d)]* B. Within 45 days following any flaring event which triggers the Root Cause and Corrective Action Analyses specified in Operational Limitation I, the owner/operator shall submit to the Department a report containing the information in 40 CFR 60.108a(c)(6)(i)-(iv) and (vii)-(xi) and containing the information required by Section 2.5 of DNREC Regulation 1203 (Reporting of a Discharge of a Pollutant or Air Contaminant). Timely reporting pursuant to this condition shall satisfy all requirements for reporting pursuant to DNREC Regulation 1203. vii. Certification: 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 1 (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 Section 6.1.3.1.2 dated 12/11/00] H. The owner/operator shall develop and implement a written Flare Management Plan in accordance with the provisions found in 40 CFR 60.103a(a) by no later than November 11, 2015. *[Reference: 40 CFR 60.103a(a)-(b)]* I. The owner/operator shall conduct a root cause analysis and corrective action analysis any time SO_2 emissions from the flares exceed 500 lbs in any 24 hour period or when a discharge to the flare in excess of 500,000 scf occurs in any 24 hour period. *[Reference: 40 CFR 60.103a(c)]* J. Each root cause analysis and corrective action analysis required by Operational I above must be completed as soon as possible, but no later than 45 days. Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in 40 CFR 60.103a(d)(1) through (5) *[Reference: 40 CFR 60.103(d)]* K. The owner/operator shall implement corrective action(s) identified in the corrective action analysis conducted pursuant to Operational Limitation I in	2. After November 11, 2015, the owner/operator shall install, operate, calibrate and maintain an instrument for continuously monitoring and recording the concentration by volume of H_2S or TRS in the process gases before being burned in any flare in accordance with the requirements of 40 CFR 60.107a. *[Reference: 40 CFR 60.107a(a)(2), (b) and (e)]* C. Pollutants in the flare emissions shall be calculated based on the methods specified in Monitoring/Testing condition B above unless more representative process operating data can be used to provide concentrations that are different from those obtained from the daily analyses. D. Visible emissions from the flare shall be monitored as follows: 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. 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.	

Condition 3 - Table 1 (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 the applicable requirements found in 40 CFR 60.103a(e)(1) through (3). *[Reference: 40 CFR 60.103a(e)]* L. The owner/operator shall comply with the requirements of Operational Limitations (I) through (L) by November 11, 2015.	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]* 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 7/1/06]* E. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. F. As an alternative to Monitoring/Testing Conditions A and B, the owner/operator may comply with the monitoring requirements of 40 CFR 60.107a(g). iv. Recordkeeping: In addition to the requirements of Conditions 3(b)(1)(i) 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]*	

Condition 3 - Table 1 (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. Date, time and duration of the flaring event. B. Quantity of material flared. C. Calculations showing the amount of reportable quantity releases. D. Results of weekly samples. E. Daily visible emission record. F. Method 22 observations. G. Records indicating the presence of a flame during flare operation. H. Periods of time when the camera monitoring equipment is not operational. I. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. J. A copy of the flare management plan.*[Reference: 40 CFR 60.108a(c)(1)]* K. Records of discharges of sulfur dioxide from the flares in accordance with 40 CFR 60.108a(c)(6)(i)-(iv) and (vii)-(xi). L. If the owner or operator elects to comply with 60.107a(e)(2), records of the H_2S and total sulfur analyses of each grab or integrated sample, the calculated daily total sulfur-to-H_2S ratios, the calculated 10-day average total sulfur-to-H2S ratios and the 95-percent confidence intervals for each 10-day average total sulfur-to-H_2S ratio. .*[Reference: 40 CFR 60.108a(c)(7)]*	
2. Spent Caustic Stripper: **State Enforceable Only** i. Emissions Standards: *[Reference: APC-95/0381]*	iii. Compliance Method: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* A. Compliance with Emission Standard (A) is based on routing the stripper overhead	vi. Reporting: 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 1 (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. There shall be no direct air contaminant emissions to the atmosphere from this unit. B. The sulfide concentration in the spent caustic shall not exceed 600 ppm (wt) 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. ii. Operational Limitation: 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]* 1. Fluid Catalytic Cracking Unit 2. Crude Unit 3. Alkylation Plant 4. Polymerization Plant 5. Ether Unit	gases as feed to the refinery SRA only. B. Compliance with Emission Standard (B) is based on the monitoring/testing requirements. C. Compliance with the Operational Limitation is based on the Recordkeeping requirements. iv. Monitoring/Testing: 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]* v. Recordkeeping: 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]* A. Log of daily sampling results B. Log indicating all periods when the spent caustic discharge to the WWTP exceeds Emission Standard (B).	vii. Certification: 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. Flare Management Plan: i. Operational Limitations A. For each flare that has the potential to operate above its smokeless capacity under any circumstance, develop a flare management plan to minimize flaring during periods of startup,	ii. Compliance Method: Compliance with the Operational Limitations shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements. *[Reference: 7 DE Admin. Code 1130 Section 6.1.3.1.2 dated 12/11/00]* iii. Monitoring A. Continuously monitor the presence of the	v. Reporting A. Develop, implement, and comply with the submitted flare management plan no later than January 30, 2019 or at startup for a new flare that commenced construction on or after February 1, 2016. B. Plan should be updated periodically to

Condition 3 - Table 1 (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
shutdown, or emergency releases. The flare management plan must include the information specified in §63.670(o)(1) as shown below. *[Reference: 40 CFR 63.670(o)]*. 1. A listing of all refinery process units, ancillary equipment, and fuel gas systems connected to the flare for each affected flare. 2. An assessment of whether discharges to affected flares from these process units, ancillary equipment and fuel gas systems can be minimized or prevented during periods of startup, shutdown, or emergency releases. The flare minimization assessment must (at a minimum) consider the items in paragraphs §63.670(o)(1)(ii)(A) through (C) as shown below. The assessment must provide clear rational in terms of costs (capital and annual operating), natural gas offset credits (if applicable), technical feasibility, secondary environmental impacts ac safety considerations for the selected minimization alterative(s) or a statement, with justifications, that flow reduction could not be	pilot flame(s) using a device (including, but not limited to, a thermocouple, ultraviolet beam sensor, or infrared sensor) capable of detecting that the pilot flame(s) is present. *[Reference: 40 CFR 63.670(g)]* B. Monitor visible emissions: An initial visible emissions demonstration must be conducted using an observation period of 2 hours using Method 22 at 40 CFR Part 60, Appendix A-7. Subsequent visible emission observations must be conducted using either of the methods below . *[Reference: 40 CFR 63.670(h)]* 1. At least once per day, conduct visible emissions observations using an observation period of 5 minutes using Method 22 at 40 CFR part 60, appendix A-7. If at any time the owner or operator sees visible emissions, even if the minimum required daily visible emissions monitoring as already been performed the owner or operator shall immediately begin an observation period of 5 minutes using Method 22. If visible emissions are observed for more than one continuous minute during any 5-minute observation period, the observation period using Method 22 must be extended to 2 hours or until 5-minutes of visible emissions are observed. 2. Use a video surveillance camera to continuously record (at least on frame	account for changes in the operation of the flare, such as new connections to the flare or the installation of a flare gas recovery system, but the plan need be re-submitted to the Administrator only if the owner or operator alters the design smokeless capacity of the flare. C. All versions of the plan submitted to the Administrator shall also be submitted to the following address: U.S. Environmental Protection Agency, Office of Air Quality, Planning and Standards, Sector Policies and Programs Division, U.S. EPA Mailroom (E143-01), Attention: Refinery Sector Lead, 109 T. W. Alexander Drive, Research Triangle park, NC 27711. Electronic copies in lieu of hard copies may also be submitted to refineryRTR@epa.gov. *[Reference: 40 CFR Part 63.670(o)(2)]* D. Submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the information specified at §63.670(g)(11) is collected. A Periodic Report is not required if none of the events identified at §63.70(g)(11) occurred during the 6-month period. *[Reference: §63.655(g)]* E. Periodic Reports must include the information specified in §63.655(g)(11)(i) – (iv) as shown below. 1. Records as specified in 40 CFR Part 63.655(i)(9)(i) and Condition 3-Table 1 (n.3.iv.B.1), for each 15-minunte

Condition 3 - Table 1 (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
achieved. Based upon the assessment, each owner or operator of an affected flare shall identify the minimization alternatives that it has implemented by the due date (January 30, 2019) of the flare management plan and shall include a schedule for the prompt implementation of any selected measures that cannot reasonably be completed as of that date. a. Modification in startup and shutdown procedures to reduce the quantity of process gas discharge to the flare. b. Implementation of prevention measures listed for pressure relief devices in §63.648(j)(5) for each pressure relief device that can discharge to the flare. c. Installation of a flare gas recovery system or, for facilities that are fuel gas rich, a flare gas recovery system and a co-generation unit or combined heat and power unit. 3. A description of each affected flare containing the information	every 15 seconds with time and date stamps) images of the flare flame and a reasonable distance above the flare flame at an angle suitable for visual emissions observations. The owner or operator must provide real-time video surveillance camera output to the control room or other continuously manned location where the camera images may be viewed at any time. C. Monitor Vtip using the procedures at §63.670(i) and §63.670(k). *[Reference: 40 CFR 63.670(d)(1) and (2)]* D. Install, operate, calibrate, and maintain a monitoring system capable of continuously measuring, calculating, and recording the volumetric flow rate in the flare header as well as any supplemental gas used. If assist air or assist steam is used, the monitoring system must be capable of continuously measuring, calculating, and recording the volumetric flow rate of assist air and/or assist steam. *[Reference: 40 CFR 63.670(i)(1) through (4)]* E. Determine Vtip on a 15-minute block average basis according to the requirements at §63.670(k)(1) through (k)(3). F. Monitor gas composition and determine NHVvg using the procedures at §63.670(j) and §63.670(l). *[Reference: 40 CFR 63.670(d)(2)]* G. Determine the concentration of individual components in the flare vent gas as specified at §63.670(j)(1). Alternatively, directly monitor the net heating value of the flare vent gas as	block during which there was at least one minute when regulated material is routed to a flare and no pilot flame is present. 2. Visible emissions records as specified in 40 CFR Part 63.655(i)(9)(ii)(C) and Condition 3-Table 1 (n.3.iv.B.2.c) for each period for 2 consecutive hours during which visible emissions exceeds a total of 5 minutes. 3. The 15-minute block periods for which the applicable operating limits specified in §63.670(d) through (f) are not met. Indicate the date and time for the period. The net heating value operating parameter(s) determined following the methods in §63.670(k) through (n) as applicable. 4. For flaring events meeting the criteria in §63.670(o)(3): a. The start and stop time and date of the flaring event. b. The length of time for which emissions were visible from the flare during the event. c. The periods of time that the flare tip velocity exceeds the maximum flare tip velocity determined using the methods in §63.70(d)(2) and the maximum 15-minute block average flare tip velocity recorded during the event. d. Results of the root cause and

Condition 3 - Table 1 (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
in §63.670(o)(1)(iii)(A) through (G) as shown below. a. A general description of the flare, including whether it is a ground flare or elevated (including height), the type of assist system (e.g., air, steam, pressure, non-assisted). Whether the flare is used on a routine basis or if it is only used during periods of startup, shutdown, or emergency release, and whether the flare is equipped with a flare gas recovery system. b. The smokeless capacity of the flare based on design conditions. Note: A single value must be provided for the smokeless capacity of the flare. c. The maximum net gas flow rate (hydraulic load capacity). d. The maximum supplemental gas flow rate. e. For flares that receive assist steam, the minimum total steam rate and the maximum total steam rate. f. For flares that receive assist air, an indication of whether the fan/blower is single	specified at §63.670(j)(3). H. Determine the net heating value of the flare vent gas (NHVvg) based on the composition monitoring data on a 15-minute block average basis following the requirements at §63.670(l). . Calculate NHVcz as specified at §63.670(m). *[Reference: 40 CFR 63.670(e)]* iv. Record-keeping A. Keep records of the flare management plan. B. For each flare keep all applicable records specified at §63.655(i)(9)(i) through (xii) up-to-date and readily accessible. *[Reference: 40 CFR 63.670(p) and 63.655(i)(9)]* 1. Retain records of the output of the monitoring device used to detect the presence of a pilot flame as required in 40 CFR Part 63.670(b) and Condition 3-Table 1 (n.3.i.B) of this permit for a minimum of 2 years. Retain records for each 15-minute block during which there was at least one minute that no pilot flame is present when regulated material is routed to a flare for a minimum of 5 years. 2. Retain records of daily visible emissions observations or video surveillance images required in 40 CFR Part 63.670(h) and Condition 3-Table 1 (n.3.iii.B) of this permit, as specified below, as applicable, for a minimum of 3 years. a. If visible emissions observations are performed using Method 22 at 40	corrective actions analysis completed during the reporting period and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period. F.

Condition 3 - Table 1 (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
speed, multi-fixed speed (e.g., high medium, and low speeds), or variable speeds. For fans/blowers with fixed speeds, provide the estimate assist air flow rate at each fixed speed. For variable speeds, provide the design fan curve (e.g., air flow rate as a function of power input). g. Simple process flow diagram showing the locations of the flare following components of the flare: Flare tip (date installed, manufacturer, nominal effective tip diameter, tip drawing); knockout or surge drums(s) or pot(s) (including dimensions and design capacities); flare header(s) and sub-headers(s); assist system; and ignition system. 4. Description and simple process flow diagram showing all gas lines (including flare waste gas, purge or sweep gas (as applicable), supplemental gas) that are associated with the flare. For purge, sweep, supplemental gas, identify the type of gas used. Designate which lines are exempt from	CFR part 60, appendix A-7, the record must identify whether the visible emission observation was performed, the results of each observation, total duration of observed visible emissions, and whether it was a 5-minute or 2-hour observation. If the owner or operator performs visible emission observations more than one time during a day, the record must also identify the date and time of day each visible emission observation was performed. b. If video surveillance camera is used, the record must include all video surveillance images recorded, with time and date stamps. c. For each 2 hour period for which visible emissions are observed for more than 5 minutes in 2 consecutive hours, the record must include the date and time of the 2 hour period and an estimate of the cumulative number of minutes in the 2 hour period for which emissions were visible. 3. The 15-minute block average cumulative flows for flare vent gas and, if applicable, total steam, perimeter assist air, and premix assist air specified to be monitored under 40 CFR Part 63.670(i) and Condition 3-Table 1	

Condition 3 - Table 1 (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
composition or net heating value monitoring and why. Designate which lines are monitored and identify on the process flow diagram the location and type of each monitor. Designate the pressure relief devices that are vented to the flare. 5. For each flow rate, gas composition, net heating value or hydrogen concentration monitor identified in paragraph (4) above, provide a detailed description of the manufacturer's specifications, including, but not limited to, make, model, type, range, precision, accuracy, calibration, maintenance and quality assurance procedures. 6. For each pressure relief device vented to the flare identified in paragraph (4) above, provide a detailed description of each pressure release device, including type of relief device (rupture disc, valve type) diameter of the relief device opening, set pressure of the relief device and listing of the prevention measure implemented. This information	(n.3.iii.C-D) of this permit, along with the date and time interval for the 15-minute block. If multiple monitoring locations are used to determine cumulative vent gas flow, total steam, perimeter assist air, and premix assist air, retain records of the 15-minute block average flows for each monitoring location for a minimum of 2 years, and retain 15-minute block average cumulative flows that are used in subsequent calculations for a minimum of 5 years. If pressure and temperature monitoring is used, retain records of the 15-minute block average temperature, pressure and molecular weight of the flare vent gas or assist gas stream for each measurement location used to determine the 15-minute block average cumulative flows for a minimum of 2 years, and retain the 14-minute block average cumulative flows that are used in subsequent calculations for a minimum of 5 years. 4. The flare vent gas compositions specified to be monitored under 40 CFR Part 63.670(j) and Condition 3-Table 1 (n.3.iii.F-G) of this permit. Retain records of individual component concentrations from each compositional analyses for a minimum of 2 years. If NHVvg analyzer is used, retain records of the 15-minute block average values	

Condition 3 - Table 1 (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
may be maintained in an electronic database on-site and does not need to be submitted as part of the flare management plan unless requested to do so by the Administrator. 7. Procedures to minimize or eliminate discharges to the flare during the planned startup and shutdown of the refinery process units and ancillary equipment that are connected to the affected flare, together with a schedule for the prompt implementation of any procedures that cannot reasonably be implemented as of the date of the submission of the flare management plan. B. Operate each flare with a pilot flame present at all times when regulated material is routed to the flare. Each 15-minute block during which there is a least one minute where no pilot flame is present when regulated material is routed to the flare is a deviation of the standard. Deviations in different 15-minute blocks from the same event are considered separate deviations. *[Reference: 40 CFR 63.670(b)]*	for a minimum of 5 years. 5. Each 15-minute block average operating parameter calculated following the methods specified in 40 CFR Part 63.670(k) through (n) and Condition 3-Table 1 (n.3.iii.C and E) of this permit, as applicable. 6. All periods during which operating values are outside of the applicable operating limits specified in 40 CFR Part 63.670(d) through (f) and Condition 3-Table 1 (n.3.i.D-F) of the permit when regulated material is being routed to the flare. 7. All periods during which the owner or operator does not perform flare monitoring according to the procedures in 40 CFR Part 63.670(g) through (j) and Condition 3-Table 1 (n.3.iii) of this permit. 8. Records of periods when there is flow of vent gas to the flare, but when there is no flow of regulated material to the flare, including the start and stop time and dates of periods of no regulated material flow. 9. Records when the flow of vent gas exceeds the smokeless capacity of the flare, including start and stop time and dates of the flaring event. 10. Records of the root cause analysis and corrective action analysis conducted as required in 40 CFR Part 63.670(o)(3)	

Condition 3 - Table 1 (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. Specify the smokeless design capacity of each flare and operate with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, when regulated material is routed to the flare and the flare vent gas flow rate is less than the smokeless design capacity of the flare. *[Reference: 40 CFR 63.670(c)]* D. The actual flare tip velocity (Vtip) must be less than 60 feet per second. *[Reference: 40 CFR 63.670(d)(1)]* E. Alternative Flare Tip Velocity: Vtip must be less than 400 feet per second and also less than the maximum allowed flare tip velocity (Vmax) as calculated using the equation in *40 CFR 63.670(d)(2).* *[Reference: 40 CFR 63.670(d)(2)]* F. Operate each flare to maintain the net heating value of flare combustion zone gas (NHVcz) at or above 270 British thermal units per standard cubic feet (Btu/scf) determined on a 15-minute block period basis when regulated material is routed to the flare for at least 15-minutes. *[Reference: 40 CFR63.670(e)]* G. Conduct a root cause analysis and a corrective action analysis for	and Condition 3-Table 1 (n.3.i.G and I) of this permit, including an identification of the affected facility, the date and duration of the event, a statement noting whether the event resulted from the same root causes(s) identified in a previous analysis and either a description of the recommended corrective actions(s) or an explanation of why corrective action is not necessary under §63.670(o)(5)(i). 11. For any corrective action analysis for which implementation of corrective actions are required in 40 CFR Part 63.670(o)(5) and Condition 3-Table 1 (n.3.i. H) of this permit, a description of the corrective actions(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates. C. Maintain the CPMS monitoring plan readily available on-site at all times. *[Reference 40 CFR 63.671(b).*	

Condition 3 - Table 1 (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
either of the following flow events: The vent gas flow rate exceeds the smokeless capacity of the flare and visible emissions are present from the flare for more than 5 minutes during any 2-consecutive hours during the release event. The vent gas flow rate exceeds the smokeless capacity of the flare and the 15-minute block average flare tip velocity exceeds the maximum flare tip velocity. *[Reference: 40 CFR Part 63.67(o)(3)(i) and 9(i)]* 1. Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided at §63.670(o)(3)(i) through §63.670(o)(4)(v). H. If required to conduct a root cause analysis and corrective action analysis as specified in paragraph G above (§63.670(o)(3) and (4)), implement the corrective action(s) identified in the corrective action analysis in accordance with the applicable requirements in 63.670(o)(5)(i) through (iii) as shown below: 1. All corrective action(s) must be implemented within 45 days of the event for which the root		

Condition 3 - Table 1 (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
cause and corrective action analyses were required or as soon thereafter as practicable. If the owner or operator concludes that no corrective action should be implemented, the owner or operator shall record and explain the basis for that conclusion no later than 45 days following the event. 2. For corrective actions that cannot be fully implemented within 45 days following the event for which the root cause and corrective action analyses were required, the owner or operator shall develop an implementation schedule to complete the corrective action(s) as soon as practicable. 3. No later than 45 days following the event for which a root cause and corrective action analyses were required, the owner or operator shall record the corrective action(s) completed to date, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates. I. Determine the total number of events for which a root cause and		

Condition 3 - Table 1 (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
corrective action analyses was required during the calendar year for each affected flare separately for events meeting the criteria at §63.670(o)(3)(i)-(ii) and §63.670(o)(6). Determine the total number of events for which a root cause and corrective action analyses was required and the analyses concluded that the root cause was a force majeure event. J. The events identified in §63.670(o)(7) would constitute a violation of this emergency flaring work practice standard. K. For each CPMS installed to comply with applicable provisions in 40 CFR 63.670, follow the requirements for flare monitoring systems specified at 40 CFR 63.671(a) through (d) as outlined below. *[Reference: 40 CFR 63.671]* 1. Install, operate, calibrate, and maintain the CPMS. *[Reference 63.671(a)]* 2. Develop and implement a CPMS quality control program documented in a CPMS monitoring plan that covers each flare subject to the provisions in §63.670. *[Reference 40 CFR 63.671(b)]* 3. For each CPMS installed to comply with applicable		

Condition 3 - Table 1 (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 in §63.670 except for CPMS installed for pilot flame monitoring, the owner or operator shall comply with the out-of-control procedures described in §63.671(c). *[Reference 40 CFR 63.671(c)]* 4. Reduce data from a CPMS installed to comply with applicable provisions in §63.670 as specified in §63.671(d). *[Reference 40 CFR 63.6741(d)]* L. For monitors used to determine compositional analysis for net heating value per §63.670(j)(1), the gas chromatograph must also meet the requirements at § 63.671(e)(1) through (3). M. General Provisions of Part 63 are applicable except as provided in Table 6 of 40 CFR Part 63 Subpart CC.		
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.** i. Operational Standards 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***	ii. Compliance Methods 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*	v. Reporting 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 1 (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
preparation, cleanup or coating removal. Containers for the storage of spent or fresh VOCs shall be kept closed, except when adding or removing material. 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. *[Reference: 7 **DE Admin. Code** 1124 Section 8 dated 11/29/93]*		
7. **Insignificant Emissions Units** 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: 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]* iii. Monitoring/Testing: None in addition to Condition 3(b) of this permit. iv. Recordkeeping: None in addition to Condition 3(b) of this permit.	v. Reporting: 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]* vi. Certification: 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]*
oc. Facility Wide Requirements for all emission units regulated under Subpart CC – National Emission Standard for Hazardous Air Pollutants (NESHAP) for Petroleum Refineries		
1. Benzene Fenceline Monitoring Program: i. Operational Limitation: A. The Owner/Operator shall conduct sampling for benzene along the facility property boundary and analyze the samples in accordance with Methods 325A and 325B of	ii. Compliance Method A. Compliance with the operational standards of this condition shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements.	v. Reporting: A. Within 45 calendar days after the end of each quarterly reporting period covered by the periodic report, each owner or operator shall submit the following information to EPAs CEDRI database:

Condition 3 - Table 1 (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
Appendix A. *[Reference: 40 CFR Part 63.658(a)-(b)]* B. Passive sampling locations shall be determined in accordance with Section 8.2 of Method 325A in Appendix A of Part 63. *[Reference: 40 CFR Part 63.658(c)]* C. Shall collect at least one co-located duplicate sample for every 10 field samples per sampling episode and at least two field blanks per sampling episode, as described in Section 9.3 in Method 325A of Appendix A of Part 63. The co-located duplicates may be collected at any one of the perimeter sampling locations. *[Reference: 40 CFR Part 63.658(a) and (c)(3)]* D. The owner or operator shall collect and record meteorological data according to the applicable requirements outlined below: *[Reference: 40 CFR Part 63.658(d)(1) through (d)(3)]* 1. If a near-field source correction is used as provided in §63.658(i)(1) or if an alternative test method is used that provides time-resolved measurements, the owner or operator shall use an on-site meteorological station in accordance with Section 8.3 of	iii. Monitoring Method: A. The frequency of sample collection shall be once each contiguous 14-day sampling period, such that the beginning of the next 14-day sampling period begins immediately upon completion of the previous 14-day sampling period. *[Reference: 40 CFR Part 63.658(e)]* B. A 14 day sampling period may be no shorter than 13 calendar days and no longer than 15 calendar days, but the routine sampling period shall be 14 calendar days. *[Reference: §63.658(e)(1)]* C. Reduced Burden Sampling Frequency: When a monitoring site consistently returns results <= 0.9 $\mu g/m^3$ for two years, the permittee may use the applicable minim sampling frequency specified at 40 CFR 63.658(e)(3)(i)-(iv). NOTE: If a sample from a monitoring site returns a result >0.9 $\mu g/m^3$, the monitoring frequency for that site must be adjusted as specified in §63.658(e)(3)(v). D. Calculate the annual average "Delta C" (ΔC) based on the average of the 26 most recent 14-day sampling periods. Update this annual average value upon receipt of each subsequent 14-day sampling periods. *[Reference: 40 CFR Part 63.658(f)(2)]* E. If an annual average ΔC value is >9	1. Individual sample results for each monitor for each sampling period during the quarterly reporting period; 2. The coordinates of all of the passive monitor locations; 3. Biweekly annual average concentration difference (ΔC) values for benzene for each sampling period; and 4. Notation of whether background correction was used or whether an outlier was removed.

Condition 3 - Table 1 (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 325A of Appendix A of Part 63; and collect and record hourly average meteorological data, including temperature, barometric pressure, wind speed and wind direction and calculate daily unit vector wind direction and daily sigma theta. 2. For cases other than those specified above, the owner or operator shall collect and record sampling period average temperature and barometric pressure using either an on-site meteorological station in accordance with Section 8.3 of Method 325A of Appendix A of Part 63, or alternatively, using data from a United States Weather service (USWS) meteorological station provided the USWS meteorological station is within 40 kilometers (25 miles) of the refinery. 3. If an on-site meteorological station is used, the owner or operator shall follow the calibration and standardization procedures for meteorological measurements in EPA-454/B-08-002 (incorporated by reference; §63.14).	µg/m³, the action level is exceeded and the procedures at §63.658(g) and (h) must be followed. *[Reference: §63.658(f)(3)]* 1. Within 5 days of determining that the action level has been exceeded for any annual average ΔC and no longer than 50 days after completion of the sampling periods, the owner or operator shall initiate a root cause analysis to determine the cause of such exceedance and to determine appropriate corrective action, such as those described in §63.658(g)(1-4). The root cause analysis and corrective action analysis shall be completed and initial corrective actions taken no later than 45 days after determining there is an exceedance. *[Reference: §63.658(g)]* 2. If, upon completion of the corrective action analysis and corrective actions such as those described in §63.658(g)(1-4), the ΔC value for the next 14-day sampling period for which the sampling start time begins after the completion of the corrective actions is greater than 9 µg/m³ or if all corrective action measures identified require more than 45 days to implement, the owner or operator shall develop a corrective action plan that describes the corrective action(s) completed to date, additional	

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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
	measures that the owner or operator proposes to employ to reduce fenceline concentrations below the action level, and a schedule for completion of these measures. The owner or operator shall submit the corrective action plan to the Administrator and the Department within 60 days after receiving the analytical results indicating that the ΔC value for the 14-day sampling period following the completion of the initial corrective action is greater than 9 μg/m^3 or, if no initial corrective actions were identified, no later than 60 days following the completion of the corrective action analysis required in Condition 3 Table 1.oc.1.ii.F.1. [Reference: 40 CFR Part 63.658(h)] iv. Recordkeeping A. The following records shall be maintained in accordance with Condition 3(b):Fenceline monitoring records required by 40 CFR Part 63.658 including: 1. Passive sampling results 2. Sampling period meteorological data: average temperature and barometric pressure, wind speed, and wind direction. 3. Annual average ΔCrecords.	
2. Miscellaneous Process Vent Provisions:	ii. Recordkeeping	iii. Reporting:

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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 Limitations: A. A permittee may designate a process vent as a maintenance vent if the vent is only used as a result of startup, shutdown, maintenance, or inspection of equipment where equipment is emptied, depressurized, degassed or place into service. In this event, the permittee must comply with the applicable requirements at §63.643(c)(1)-(3) as shown below, for each maintenance vent, by the compliance dates specified in Table 11 of 40 CFR Part 63 Subpart CC. 1. Prior to venting to the atmosphere, process liquids are removed from the equipment as much as practical and the equipment is depressured to a control device, fuel gas system, or back to the process until one of the conditions of §63.643(c)(1), as applicable, are met. a. The vapor in the equipment served by the maintenance vent has an LEL of less than 10%. b. If there is no ability to measure the LEL of the vapor in the equipment based on	For each maintenance vent opening subject to the requirements in §63.643(c), the owner or operator shall keep the applicable records specified in §63.655(i)(12)(i) through (v) as shown below. *[Reference: 40 CFR 63.655(i)(12)]* A. The owner or operator shall maintain standard site procedures used to de-inventory equipment for safety purposes (e.g. hot work or vessel entry procedures) to document the procedures used to meet the requirements in §63.643(c). The current copy of the procedures shall be retained and available on-site at all times. Previous versions of the standard site procedures, if applicable, shall be retained for five years. B. If complying with the requirements of §63.643(c)(1)(i) and the lower explosive limit at the time of the vessel opening exceeds 10 percent, identification on the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and the lower explosive limit at the time of the vessel opening. C. If complying with the requirements of §63.643(c)(1)(ii) and either the vessel pressure at the time of the vessel opening exceeds 5 psig or the lower explosive limit at the time of the active	A. For maintenance vents subject to the requirements in §63.643(c), Periodic Reports must include the information specified in paragraphs 40 CFR 63.655(g)(13)(i) through (iv) as shown below, for any release exceeding the applicable limits in §63.643(c)(1). For the purposes of this reporting requirement, owners or operators complying with Condition 3-Table 1(oc.2.i.A.1.d) (§63.643(c)(1)(iv)) must report each venting event for which the lower explosive limit is 20 percent or greater. 1. Identification of the maintenance vent and the equipment served by the maintenance vent. 2. The date and time the maintenance vent was opened to the atmosphere. 3. The lower explosive limit, vessel pressure, or mass of VOC in the equipment, as applicable, at the start of atmospheric venting. If the 5 psig vessel pressure option in Condition 3-Table 1(oc.2.i.a.1.b) (§63.643(c)(1)(ii)) was used and active purging was initiated while the lower explosive limit was 10 percent or greater, also include the lower explosive limit of the vapors at the time

Condition 3 - Table 1 (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 design of the equipment, the pressure in the equipment served by the maintenance vent is reduced to 5 psig or less. Upon opening the maintenance vent, active purging of the equipment cannot be used until the LEL of the vapors in the maintenance vent (or inside the equipment if the maintenance is a hatch or similar type of opening) equipment is less than 10% c. The equipment served by the maintenance vent contains less than 72 pounds of VOC. d. If the maintenance vent is associated with equipment containing pyrophoric catalyst (e.g., hydrotreaters and hydrocrackers) at refineries that do not have a pure hydrogen supply, the LEL of the vapor in the equipment must be less than 20%, except for one event per year not to exceed 35%. 2. Except for maintenance vents complying with the alternative in Condition 3-Table 1(oc.2.i.a.1.c) above (§63.643(c)(1)(iii)), the owner	purging was initiated exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, the pressure of the vessel or equipment at the time of discharge to the atmosphere and, if applicable, the lower explosive limit of the vapors in the equipment when active purging was initiated. D. If complying with the requirements of §63.643(c)(1)(iii), identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere for each applicable maintenance vent opening. E. If complying with the requirements of §63.643(c)(1)(iv), identification of the maintenance vent, the process units or equipment associated with the maintenance vent, records documenting the lack of a pure hydrogen supply, the date of maintenance vent opening, and the lower explosive limit of vapors in the equipment at the time of discharge to the atmosphere for each applicable maintenance vent opening.	active purging was initiated. 4. An estimate of the mass of organic HAP released during the entire atmospheric venting event.

Condition 3 - Table 1 (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
or operator must determine the lower explosive limit (LEL) or, if applicable, equipment pressure using process instrumentation or portable measurement devices and flow procedures for calibration and maintenance according to manufacturer's specifications. 3. For maintenance vents complying with the alternative in Condition 3-Table 1 (oc.2.i.a.1.c) above (§63.643(c)(1)(iii)), the owner or operator shall determine mass of VOC in the equipment served by the maintenance vent based on the equipment size and contents after considering any contents drained or purged from the equipment. Equipment size may be determined using process knowledge.		
3. Pressure Release Devices: i. Emission Limitations A. Shall operate each pressure relief valve in gas/vapor service with no detectable emissions, as indicated by an instrument reading of <500 ppm above background except during pressure releases. *[Reference: 40 CFR Part 63.648(i)(1)]*	iii. Compliance Method A. Compliance with the operational standards of this condition shall be demonstrated in accordance with the monitoring/testing and recordkeeping requirements of this section. iv. Monitoring A. Conduct instrument monitoring as	vi. Reporting A. If any affected pressure relief device releases to atmosphere as a result of a pressure release event, the owner or operator must perform root cause analysis and corrective action analysis and implement corrective actions. The owner or operator must also calculate the quantity of organic

Condition 3 - Table 1 (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 A. If any affected pressure relief device releases to atmosphere as a result of a pressure release event, the owner or operator must perform root cause analysis and corrective action analysis and implement corrective actions. *[Reference: 40 CFR 63.648(j)(3)(ii)]* 1. A root cause analysis must be completed as soon as possible, but no later than 45 days after a release event. *[Reference: 40 CFR 63.648(j)(6)]* 2. All corrective action(s) must be implemented within 45 days of the event for which the root cause and corrective action analyses were required or as soon thereafter as practicable. If no corrective action should be implemented, the owner or operator shall record and explain the basis for that conclusion no later than 45 days following the event. For corrective actions that cannot be fully implemented within 45 days following the event, the owner or operator shall develop an implementation schedule to complete the corrective actions as soon as practicable.	applicable, no later than 5 calendar days after the pressure relief device returns to organic HAP gas or vapor service following a pressure release to verify that the pressure relief device is operating with an instrument reading of less than 500 ppm. *[Reference: 40 CFR 63.648(j)(2)(i)]* B. Must equip each affected pressure relief device with a device(s) or use a monitoring system that is capable of: *[Reference: 40 CFR 63.648(j)(3)(i)]* 1. Identifying the pressure release; 2. Recording the time and duration of each pressure release; and 3. Notifying operators immediately that a pressure release is occurring. The device or monitoring system may be either specific to the pressure relief device itself or may be associated with the process system or piping, sufficient to indicate a pressure release to the atmosphere. C. Must apply at least three redundant prevention measures to each affected pressure relief device and document these measures. Examples of prevention measures include: *[Reference 40 CFR 63.648(j)(3)(ii)]* 1. Flow, temperature, level and pressure indicators with deadman switches, monitors, or automatic actuators. 2. Documented routine inspection and maintenance programs and/or	HAPs released during each pressure release event and report this quantity as required in §63.655(g)(10)(iii) and shown below. Calculations may be based on data from the pressure relief device monitoring alone or in combination with process parameter monitoring data and process knowledge. *[Reference: 40 CFR 63.648(j)(3)(iii)]* 1. Report each pressure release to the atmosphere, including duration of the pressure release and estimate of the mass quantity of each organic HAP release, and the results of any root cause analysis and corrective action analysis completed during the reporting period, including the corrective actions implemented during the reporting period and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period. B. Determine the total number of release events occurred during the calendar year for each affected pressure relief device separately and also determine the total number of release events for each pressure relief device for which the root cause analysis concluded that the root

Condition 3 - Table 1 (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 63.648(j)(7)] B. Determine the total number of release events occurred during the calendar year for each affected pressure relief device separately and also determine the total number of release events for each pressure relief device for which the root cause analysis concluded that the root cause was a force majeure event. *[Reference 40 CFR 63.648(j)(3)(iv)]*	operator training (maintenance programs and operator training may count as only one redundant prevention measure). 3. Inherently safer designs or safety instrumentation systems. 4. Deluge systems. 5. Staged relief system where initial pressure relief valve (with lower set release pressure) discharges to a flare or other closed vent system and control device v. Recordkeeping A. No later than 45 days following a release event for which a root cause and corrective action analyses were required, the owner or operator shall record the corrective action(s) completed to date, and, for actions(s) not completed to date, a schedule for implementation, including proposed commencement and completion dates. *[Reference: 40 CFR 63.648(j)(7)(iii)]*	cause was a force majeure event. *[Reference: 40 CFR 63.648(j)(3)(iv)]*

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Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
equipment or process equipment or of a process to operate in a normal or usual manner, and that causes the source to exceed a technology based emission limitation under the permit, due to unavoidable increases in emissions attributable to the malfunction. An emergency or ma function shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.	J. The Owner/Operator shall maintain: 1. A log of all operating hours of each boiler clearly showing the hours of operation with different fuel types and the amount of each fuel consumed. 2. Rolling 24-hour heating values of the fuels combusted. iv. Recordkeeping: 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]* A. The Owner/Operator shall maintain all records necessary for determining compliance with this permit in accordance with Condition 3(b). *[Reference: APC-90/0288(A5), APC-90/0289(A6), APC-90/0290(A10)and APC-90/0291(A3)]* B. Comply with "Combined Limits" in Condition 3 - Table 1.f.	
3. Particulate Emissions:		
i. Emission Standards: *[Reference APC-90/0289(A6), 90/0290(A10) and APC-90/0291(A3)]* A. **[RESERVED]** B. PM_{10} emissions including H_2SO_4 shall not exceed the following limits: 1. 0.0104 lb/mmBtu heat input when firing natural gas or refinery fuel gas in Boilers 80-2 and 80-3.	iii. Compliance Method: *[Reference APC-90/0289(A6), APC-90/0290(A10) and APC-90/0291(A3)]* A. Compliance with PM_{10} Emission Standards shall be demonstrated using stack test based emissions factors and fuel flow rates for the boilers. B. Compliance with TSP Emission	vi. Reporting: 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]* vii. Certification Requirement: That required by Condition 3(c)(3) of this

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
2. RESERVED. 3. RESERVED. 4. 27.8 TPY from Boiler 80-2. 5. 92 TPY from Boiler 80-3. 6. RESERVED. C. **[RESERVED]** D. TSP emissions shall not exceed the following limits: 1. 0.0062 lb/mmBtu heat input when firing natural gas or refinery fuel gas in Boilers 80-2 and 80-3. 2. RESERVED. 3. RESERVED. 4. 15.7 TPY from Boiler 80-2. 5. 13.5 TPY from Boiler 80-3. E. **[RESERVED]** F. **[RESERVED]** G. PM_{10} emissions from the CCUs, and Boilers 1, 2, and 3 combined shall not exceed 311.0 TPY (inclusive of 235.4 TPY H_2SO_4 mist from Boilers 1,2 & 3 and the CCUs). H. **[RESERVED]** ii. Operational Limitations: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2. (EU-80).	Standards shall be demonstrated using stack test based emissions factors and fuel flow rates for the boilers. C. **[RESERVED]** iv. Monitoring/Testing: In addition to the requirements of Conditions 3(b)(1)(ii) of this permit, the Company shall: A. The Owner/Operator shall conduct the following stack tests annually, in accordance with Condition 3(b): 1. EPA Reference Method 5 for TSP. 2. EPA Reference Method 5B/202 for PM_{10}, including H_2SO_4. 3. The Owner/Operator may petition the Department to decrease the frequency of TSP or PM_{10} performance tests based on the results of any performance testing. B. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iii (EU-80). v. Recordkeeping: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iv (EU-80).	permit. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
4. Sulfur Dioxide (SO_2):		
i. Emission Standards: A. **[RESERVED]** B. The Owner/Operator shall not cause or allow the emission of SO_2 in excess of the following limits: 1. RESERVED 2. Boiler 80-2: 71.2 TPY 3. Boiler 80-3: 61.4 TPY *[Reference: APC-90/0289(A6), APC-90/0290(A5)]* ii. Operational Limitations: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2 (EU-80).	iii. Compliance Method: *[Reference: APC-90/0289(A6), APC-90/0290(A5)]* A. **[RESERVED]** B. Compliance with the SO_2 Emission Standards for Boilers 80-2 and 80-3 shall be demonstrated by complying with the fuel gas monitored H_2S content limitations as measured by the H_2S Continuous Monitoring System (CMS) for Boilers 80-2 and 80-3. iv. Monitoring/Testing: In addition to the requirements of Conditions 3(b)(1)(ii) of this permit, the Company shall: A. The Owner/Operator shall operate and maintain SO_2 CEMS for 80-3. *[Reference APC-90/0289(A6), APC-90/0290(A10)]* B. The SO_2 CEMS shall conform to Performance Specification 2 of 40 CFR 60, Appendix "B." The Quality Assurance/Quality Control (QA/QC) procedures for SO_2 CEMS for this boiler shall be established in accordance with 40 CFR 60, Appendix "F". *[Reference: APC-90/0289(A6), APC-90/0290(A10)]* C. **[RESERVED]** D. **[RESERVED]** E. **[RESERVED]** v. Recordkeeping: In addition to the requirements of	vi. Reporting: None 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. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* A. **[RESERVED]** viii. Certification Requirement: In addition to the requirements of Condition 3(c)(3) 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 – Table 1.a.2.v (EU-80).

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
	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]* A. The Owner/Operator shall maintain SO_2 CEMS data, calibration and audit results in accordance with Condition 3(b). *[Reference APC-90/0289(A6), APC-90/0290(A10) and APC-90/0291(A3)]*	
5. Nitrogen Oxides (NO_x):		
i. Emission Standards: A. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NO_x)" in Part 1, Condition 3 - Table 1.j. B. 1. **[RESERVED]** 2. **[RESERVED]** 3. **[RESERVED]** C. The NO_x emissions shall not exceed the following levels based on a 24-hour rolling average basis: 1. 0.20 lb/mmBtu for Boilers 80-3 and 80-4. 2. 0.04 lb/mmBtu for Boiler 80-2. 3. 0.13 lb/mmBTU for Boilers 3 & 4. The lb/mmBTU emissions standards for Boilers 3 & 4 shall not apply during periods not to exceed 6 hours during each planned startup and shutdown. (The startup and shut down exemption is State	iii. Compliance Method: *[Reference: APC-90/0289(A6), APC-90/0290(A10)and APC-90/0291(A3)]* A. Compliance with the NO_x Emission Standards for Boiler 80-2, 3, 4 and the CCUs and the "Facility-wide Emission Limit for Nitrogen Oxides (NO_x)" shall be based on Continuous Emissions Monitoring System (CEMS) for NO_x and O_2. E. **[RESERVED]** iv. Monitoring/Testing: In addition to the requirements of Conditions 3(b)(1)(ii) of this permit, the Company shall: A. The CEMS for Boilers 2, 3 and the CCUs shall conform to the applicable Performance Specifications in 40 CFR, Part 60, Appendix "B" and the QA/QC procedures for NO_x CEMS shall be established in accordance with	vi. Reporting: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 – Table 1.a.2.v (EU-80). vii. Certification Requirement: 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 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
Enforceable Only) D. **[RESERVED]** E. **[RESERVED]** F. **[RESERVED]** ii. Operational Limitation: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2 (EU-80).	40 CFR 60, Appendix "F". The CEMS for Boiler 4 shall conform to the applicable Performance Specifications in 40 CFR, Part 75, Appendix "A" and the QA/QC procedures for NO_x CEMS in accordance with 40 CFR 75, Appendix "B". *[Reference: APC-90/0289(A6), APC-90/0290(A10 and APC-90/0291(A3)]]]* B. **[RESERVED]** 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 6.1.3.1.2 dated 12/11/2000]* v. Recordkeeping: 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]* 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 6.1.3.1.2 dated 12/11/00]* B. The Owner/Operator shall maintain NO_x CEMS data, calibration and audit results in accordance with Condition 3(b). *[Reference: APC-90/0288(A5), APC-90/0289(A6), APC-90/0290(A5)]*	
6. Carbon Monoxide (CO):		
i. Emission Standards: *[Reference: APC-90/0289(A6), APC-90/0290(A10 and APC-*	iii. Compliance Method: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-*	vi. Reporting: That required by Conditions 2(a), 2(b)(9),

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
90/0291(A3)]]] A. **[RESERVED]** B. The Owner/Operator shall not cause or allow the emissions of CO in excess of 0.034 lb/mmBtu from Boilers 80-2 and 80-3 on a 24 hour rolling average basis. C. The Owner/Operator shall not cause or allow the emission of CO in excess of the following limits: 1. **[RESERVED]** 2. 106.6 TPY for Boiler 80-2. 3. 92 TPY for Boiler 80-3. ii. Operational Limitations: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2 (EU-80).	*90/0291(A3)]* Compliance with the CO Emission Standards shall be demonstrated by the following methods: A. **[RESERVED]** B. Stack test based emissions factor and fuel flow rates for Boiler 80-3. C. CEMS for Boiler 80-2. iv. Monitoring/Testing: In addition to the requirements of Conditions 3(b)(1)(ii) of this permit, the Company shall: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-90/0291(A3)]* A. The Owner/Operator shall conduct an annual stack test for CO using EPA Reference Method 10 and in accordance with Condition 3(b) unless the Department approves less frequent testing. B. The Owner/Operator shall operate and maintain CO CEMS for Boiler 80-2. C. The CO CEMS shall conform to the applicable Performance Specifications in 40 CFR Part 60, Appendix "B." The QA/QC procedures for the CO CEMS shall be established in accordance with the procedures in 40 CFR Part 60, Appendix "F." v. Recordkeeping: In addition to the requirements of Conditions 3(b)(1)(ii) and 3(b)(2) of this	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]* vii. Certification: 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 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
	permit, the Company shall: *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 and 6.2.1 dated 12/11/00]* A. For Boiler 80-2, the Owner/Operator shall maintain CO CEMS data, calibration and audit results in accordance with Condition 3(b). B. For Boilers 80-3 and 80-4, the Owner/Operator shall comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iv (EU-80).	
7. Volatile Organic Compounds (VOC):		
i. Emission Standards: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-90/0291(A3)]* A. **[RESERVED]** B. VOC emissions shall not exceed the following limits: 1. 0.0014 lb/mmBtu when firing natural gas or refinery fuel gas in Boilers 80-2 and 80-3. 2. **[RESERVED]** C. The Owner/Operator shall not cause or allow the emission of VOC in excess of the following limits: 1. RESERVED. 2. 4.4 TPY from Boiler 80-2. 3. 3.8 TPY from Boiler 80-3. ii. Operational Limitations: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 -	iii. Compliance Method: Compliance with the VOC Emission Standards shall be demonstrated by firing only natural gas or by using stack test based emissions factors obtained while firing refinery fuel gas and refinery fuel gas flow rates for the boilers. *[Reference: APC-90/0289(A6), APC-90/0290(A10) and and APC-90/0291(A3)]* iv. Monitoring/Testing: In addition to the requirements of Conditions 3(b)(1)(ii) of this permit, the Company shall: A. The Owner/Operator shall conduct annually an EPA Reference Method 25 A stack test for VOC, in accordance with Condition 3(b). The Owner/Operator may petition the Department to decrease the frequency	vi. Reporting: 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]* vii. Certification: 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 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
Table 1.a.2 (EU-80).	of VOC performance tests based on the results of any performance testing. B. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iii (EU-80). v. Recordkeeping: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iv (EU-80).	
8. Sulfuric Acid Mist (H_2SO_4):		
i. Emission Standards: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-90/0291(A3)]* A. **[RESERVED]** B. The Owner/Operator shall not cause or allow the emission of H_2SO_4 in excess of the following limits: 1. **[RESERVED]** 2. 10.9 TPY for Boiler 80-2. 3. 71.6 TPY for Boiler 80-3. C. **[RESERVED]** ii. Operational Limitations: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2 (EU-80).	iii. Compliance Method: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-90/0291(A3)]* A. Compliance shall be demonstrated using stack test based emissions factors and fuel flow rates for the boilers. B. **[RESERVED]** C. Compliance for the Boiler 80-3 shall be demonstrated by applying the stack test based SO_2 to H_2SO_4 conversion factor to the CEMS-monitored SO_2 emissions. D. Compliance for Boiler 80-2 shall be demonstrated by applying the fuel gas monitored H_2S content to the H_2SO_4	vi. Reporting: 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]* vii. Certification: 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 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
	conversion factor. iv. Monitoring/Testing: In addition to the requirements of Conditions 3(b)(1)(ii) of this permit, the Company shall: A. The Owner/Operator shall conduct annually an EPA Reference Method 8 stack test for H_2SO_4, in accordance with Condition 3(b). The Owner/Operator may petition the Department to decrease the frequency of H_2SO_4 performance tests based on the results of any performance testing. B. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iii (EU-80). v. Recordkeeping: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iv (EU-80).	
9. **[RESERVED]**		
10. Visible Emissions:		
i. Emission Standard: The Owner/Operator shall not cause or allow the emission of visible air	iii. Compliance Method: Compliance with the Visible Emission Standard shall be demonstrated by a	vi. Compliance Method: A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 -

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
contaminants from this unit in excess of 20% opacity for an aggregate of more than 3 minutes in any 1 hour period, or more than 15 minutes in any 24 hour period. *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-90/0291(A3)]* ii. Operational Limitations: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2 (EU-80).	Continuous Opacity Monitoring System (COMS) for Boilers 80-2, 80-3 and 80-4 in the common stack. *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-90/0291(A3)]* iv. Monitoring/Testing: In addition to the requirements of Conditions 3(b)(1)(ii) of this permit, the Company shall: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-90/0291(A3)]* A. The Owner/Operator shall operate and maintain a COMS for Boilers 80-2, 80-3 and 80-4 in the common stack. B. The COMS shall be maintained in accordance with Performance Specification 1 in 40 CFR 60, Appendix "B." v. Recordkeeping: 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]* A. The Owner/Operator shall maintain COMS data, calibration and audit results. *[Reference: APC-90/0288(A5), APC-90/0289(A6), APC-90/0290(A5)]*	Table 1.a.2.v (EU-80). vii. Certification: 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. Acid Rain Requirements for Boiler 80-4: *[Reference AQM-003/00016-CAIR]* The following are the requirements the Owner/Operator must follow for purposes of the Acid Rain Program:		

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
i. **[RESERVED]** A. **[RESERVED]** B. **[RESERVED]** ii. SO_2 Requirements: A. The Owner/Operator shall: 1. Hold allowances for Boiler 4, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of SO_2 for the previous calendar year from the unit, and the requirement to hold each ton of allowances constitutes a separate requirement. 2. **[RESERVED]** B. **[RESERVED]** C. **[RESERVED]** D. The Owner/Operator's allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. E. The Owner/Operator shall not deduct allowances in order to comply with the requirements under paragraph (A) above prior to the calendar year for which the allowance was allocated. F. **[RESERVED]** G. **[RESERVED]**	v. Compliance Method: Compliance with the SO_2 requirements shall be based on Monitoring, Recordkeeping and Reporting Requirements. vi. Monitoring Requirements: A. The Owner/Operator and, to the extent applicable, designated representative shall comply with the monitoring requirements as provided in 40 CFR Part 75. B. The emissions measurements recorded and reported in accordance with 40 CFR Part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for SO_2 under the Acid Rain Program. C. **[RESERVED]** D. The Owner/Operator shall continuously monitor and record the concentration (dry basis) of TRS in RFG before it is combusted in Boiler 4. The TRS monitor shall be located downstream of all process steps which impact the composition of RFG prior to its being combusted in Boiler 4. 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.	viii. Reporting: 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]* A. The Owner/Operator's designated representative shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR Part 72 Subpart I and 40 CFR Part 75. ix. **[RESERVED]** x. **[RESERVED]** xi. Certification: In addition to the requirements of Condition 3(c)(3) 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]* A. Each document required to be submitted to the Department and the Administrator pursuant to the Acid Rain provisions of this permit shall be signed and certified by the Designated Representative and shall contain the following language: "*I am authorized to make this submission on behalf of the owners and*

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
iii. **[RESERVED]** iv. Excess Emissions Requirements: A. The Owner/Operator's designated representative shall submit a proposed offset plan, as required under 40 CFR Part 77 if Boiler 4 has excess emissions in any calendar year. B. If Boiler 4 has excess emissions in any calendar year, the Owner/Operator shall: 1. Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR Part 77; and 2. Comply with the terms of an approved offset plan, as required by 40 CFR Part 77.	The TRS monitor shall conform to Performance Specification 5 of 40 CFR Part 75, Appendix "B." Relative accuracy evaluations shall be conducted using Method 15 of 40 CFR Part 75, Appendix "A." E. [**RESERVED**] vii. Recordkeeping: Unless otherwise provided, the Owner/Operator shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Department or the Administrator. A. The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the	*operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."*

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
	designated representative. B. All emissions monitoring information, in accordance with 40 CFR Part 75. C. Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program. D. Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.	
b. Emission Unit 82 Texaco Gasifiers 82-1a & 82-2a, Gas Coolers 82-1b & 82-2b (Fugitive Emissions, No Emission Points) These units have been permanently shut down.		
1. **[RESERVED]**		
i. Operational Limitations A. **[RESERVED]** B. **[RESERVED]**	ii. Compliance Method A. **[RESERVED]** B. **[RESERVED]** iii. Monitoring/Testing: **[RESERVED]** iv. Recordkeeping A. **[RESERVED]** B. **[RESERVED]** C. **[RESERVED]**	v. Reporting: **[RESERVED]** vi. Certification Requirement: **[RESERVED]**
2. **[RESERVED]**		

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
[**RESERVED**] ii. Operational Limitations: [**RESERVED**]	[**RESERVED**] iv. Monitoring/Testing: [**RESERVED**] v. Recordkeeping: A. [**RESERVED**]	A. [**RESERVED**] vii. Certification: [**RESERVED**]
d. Emission Unit 84: Combined Cycle Units 84-1 and 84-2 (Emission Points 84-1 and 84-2)		
1. Conditions Applicable to Multiple Pollutants:		
i. Emission Standards: *[Reference APC-97/0503(A10)]* A. The Owner/Operator shall not cause or allow emissions from the CCUs that exceed the Standards of Performance for New Stationary Gas Turbines specified in 40 CFR 60 Subpart GG. *[Reference 40 CFR 60 Subpart GG dated 09/10/1979 for SO_2 and dated 10/17/2000 for NO_x, and 7 **DE Admin. Code** 1120 Section 10 dated 11/27/1985]* B. The Owner/Operator shall not cause or allow emissions from the duct burners that exceed the Standards of Performance for Electric Utility Steam Generating Units specified in 40 CFR 60 Subpart Db. *[Reference 40 CFR 60 Subpart Db dated 10/17/2000 for SO_2 and particulate matter and dated 08/14/2001 for NO_x, and 7 **DE Admin. Code** 1120 Section 26 dated 12/07/1988]* C. The Department reserves the right to establish emission limitations and/or	iii. Compliance Method: *[Reference APC-97/0503(A10)]* A. Compliance with the Emission Standards (A) and (B) (NSPS limits) shall be based on the type of fuel combusted and/or compliance with the more stringent emission limits specified for individual pollutants for these units. B. Compliance with the Operational Limitations (A) and (C) (pertaining to type and amount of fuel burned) shall be based on record keeping requirements. C. **[RESERVED]** D. **[RESERVED]** E. **[RESERVED]** F. Comply with "Combined Limits" in Condition 3 - Table 1.f. G. Compliance with Operational Limitation I shall be based on compliance with Table 1.d.4.i.C.	i. Reporting: 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]* A. **[RESERVED]** B. The Owner/Operator shall notify the Department in writing prior to making any material changes which cause these units to fall under the Authority of Title IV of the Clean Air Act. *[Reference APC-97/0503 (A3)]* C. Comply with "Combined Limits" in Condition 3 - Table 1.f. D. The owner/operator shall notify the Department within thirty (30) days of determination that an SCR system governed by this permit will be unavailable for a period exceeding 2 consecutive days. Such notifications

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
additional controls for specific compounds based on the results of the stack tests required under the Monitoring/Testing requirements. D. Comply with 'Combined Limits" in Condition 3 - Table 1.f. ii. Operational Limitations: *[Reference APC-97/0503(A10)]* A. **[RESERVED]** B. **[RESERVED]** C. **[RESERVED]** D. **[RESERVED]** E. **[RESERVED]** F. **[RESERVED]** G. **[RESERVED]** H. Only NG may be fired in the combustion chambers of the CCUs. Only NG or desulfurized RFG with a hydrogen sulfide content less than 0.1 grain/dscf on a 3-hour rolling average may be fired in the DBs. I. The CCUs shall not be operated unless the LNBs and SCR systems (when SCR is available) are operating properly. Compliance with the emissions limitation in d.3.i.C shall constitute proper operation. 1. The owner or operator shall operate the LNBs and SCR system for each CCU in accordance with manufacturer's recommendations.	H. Compliance with Operational Limitation H with respect to the H2S concentration in RFG shall be based on a continuous monitoring device. I. Compliance with Operational Limitations I and H shall be based on record keeping requirements and on information available to the Department , which may include, but is not limited to, monitoring results, opacity and process operating data. iv. Monitoring/Testing: *[Reference 97/0503(A10)]* A. **[RESERVED]** B. **[RESERVED]** C. Comply with "Combined Limits" in Condition 3 - Table 1.f. D. Department representatives shall be given the opportunity to witness all stack test emission testing and monitor certification testing including any test audits conducted on the monitors as part of the Quality Assurance Program. E. The CEMS required by Compliance Method H shall be installed for continuously monitoring and recording the concentration (dry basis) of H2S in RFG before it is combusted in any fuel burning device. This instrument shall be located downstream of all process steps which impact the composition of RFG prior to its being combusted in	shall include: 1. Reason for unavailability 2. Anticipated duration 3. Steps being taken to minimize duration of unavailability and magnitude of emissions during this period. 4. Alternatives considered 5. Anticipated effect of unavailability on compliance with NO_x cap. ii. Certification Requirement: 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 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
Each SCR system shall be operated at all times that it is available, excluding periods of startup, shutdown, or malfunction. 2. The SCR system is considered available except during periods of planned maintenance or malfunction. 3. "Malfunction" means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner, and that causes the source to exceed a technology based emission limitation under the permit, due to unavoidable increases in emissions attributable to the malfunction. An emergency or malfunction shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. J. At all times, including periods of startup, shutdown and malfunction, the owner or operator shall, to the extent practicable, maintain and operate the facility including associated air pollution control equipment in a manner consistent with good air	any fuel burning device. The instruments shall conform to the QA/QC requirements of Appendix "F" in 40 CFR Part 60 v. Recordkeeping: 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]* A. **[RESERVED]** B. The following records shall be maintained in accordance with Condition 3(b): *[Reference APC-97/0503(A10)]* 1. Record of all operating hours of each CCU and DB. 2. **[RESERVED]** 3. **[RESERVED]** 4. **[RESERVED]** 5. **[RESERVED]** 6. **[RESERVED]** 7. **[RESERVED]** 8 Rolling 24-hour heating value of the RFG combusted. 9. All 3-hour averages of the H2S content in RFG as measured by the H2S analyzer. 10. CEMS data including calibration log and results of all Cylinder Gas Audits and all Relative Accuracy Test Audits.	

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
pollution control practice for minimizing emissions. K. All structural and mechanical components shall be maintained in proper operating condition. L. **[RESERVED]**	C. Comply with "Combined Limits" in Condition 3 - Table 1.f.	
2. Particulate Emissions:		
i. Emission Standards: *[Reference APC-97/0503(A10)]* A. **[RESERVED]** B. PM_{10} emissions including H_2SO_4 shall not exceed the following limits: 1. 0.0074 lb/mmBtu when firing natural gas in CCUs. 2. 0.0099 lb/mmBtu when firing natural gas in the CCUs and refinery fuel gas in the duct burners. 3. **[RESERVED]** 4. **[RESERVED]** 5. 67 tons per year. C. **[RESERVED]** D. TSP emissions shall not exceed the following limits: 1. 0.0115 lb/mmBtu when firing natural gas in CCUs. 2. 0.0112 lb/mmBtu when firing natural gas in the CCUs and refinery fuel gas in the duct burners. 3. **[RESERVED]**	iii. Compliance Method: *[Reference APC-97/0503(A10)]* A. Compliance with PM_{10} Emission Standards shall be demonstrated using stack test based emissions factors and fuel flow rates for the CCUs and duct burners. B. Compliance with TSP Emission Standards shall be demonstrated using stack test based emissions factors and fuel flow rates for the CCUs and duct burners. C. The Owner/Operator may use stack test results obtained while the CCUs are operating with duct burners to demonstrate compliance with the respective non-duct burner emission standards for PM_{10} and TSP by subtracting the heat input of the duct burners. iv. Monitoring/Testing: A. The Owner/Operator shall conduct the following stack tests annually, in	vi. Reporting: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.d.1.vi. (EU-84). vii. Certification Requirement: 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 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
4. **[RESERVED]** 5. 47.8 tons per year. E. **[RESERVED]** ii. Operational Limitation: Comply with "Conditions Applicable to Multiple Pollutants" in Part 3, Condition 3 - Table 1.d.1. (EU-84).	accordance with Condition 3(b): 1. EPA Reference Method 5 for TSP. 2. EPA Reference Method 5B/202 for PM_{10}, including H_2SO_4. 3. If the Owner/Operator conducts stack testing with the duct burners in operation, the Owner/Operator shall calculate the emission rate for operation without duct burner operation by subtracting the heat input contributed by the duct burners. 4. The Owner/Operator may petition the Department to decrease the frequency of TSP or PM_{10} performance tests based on the results of any performance testing. B. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.d.1.iv (EU-84). v. Recordkeeping: 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* A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.d.1.v (EU-84).	
3. **[RESERVED]**		
4. Nitrogen Oxides (NO_x):		

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
i. Emission Stancards *[Reference APC-97/0503(A10)]* A. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Part 1, Condition 3 - Table 1.j. B. **[RESERVED]** C. D. The NO_x emissions from each CCU shall not exceed the following levels on an hourly basis: 1. With the SCR in Operation: (a) 3 ppmvd @ 15% O_2 when CCU burns NG without duct firing. (b) 3.6 ppmvd @ 15% O_2 when CCU burns NG with duct firing. 2. Without the SCR in Operation: (a) 15 ppmvd @ 15% O_2 when CCU burns NG without duct firing. (b) 18 ppmvd @ 15% O_2 when CCU burns NG with duct firing. 3. **[RESERVED]** 4. **[RESERVED]** E. The NO_x emission rates from the CCUs shall not exceed 390 ppmvd @ 15% O_2 for a period of 24 hours after cold startup of the CCU.	iii. Compliance Method: *[Reference APC-97/0503(A10)]* A. Compliance with the "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" and with the NO_x Emission Standards shall be based on Continuous Emissions Monitoring System (CEMS) for NO_x and O_2. B. Compliance with the Operational Limitations shall be based on Recordkeeping requirements. iv. Monitoring/Testing: *[Reference APC-97/0503(A10)]* A. The Owner/Operator shall operate and maintain NO_x and O_2 CEMS for the CCUs. B. The Quality Assurance/Quality Control (QA/QC) procedures for NO_x CEMS shall be established in accordance with 40 CFR Part 60, Appendix "F". C. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" Part 1, in Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.1 dated 12/11/00]* v. Recordkeeping: 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]*	vi. Reporting: 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]* A. **[RESERVED]** vii. Certification Requirement: In addition to the requirements of Condition 3(c)(3) 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 – Table 1.a.2.v (EU-80).

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
F. **[RESERVED]** G. **[RESERVED]** ii. Operational Limitations: A. **[RESERVED]** B. **[RESERVED]**	A. The Owner/Operator shall keep NO_x CEMS data calibration and audit results in accordance with Condition 3(b). *[Reference APC-97/0503 (A10)]* B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NO_x)" in Part 1, Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.2 dated 12/11/00]*	
5. Carbon Monoxide (CO):		
i. Emission Limitations: *[Reference APC-97/0503(A10)]* A. **[RESERVED]** B. CO emissions on an hourly basis shall not exceed the following limits: 1. 0.0202 lb/mmBtu when firing natural gas in CCUs. 2. 0.0261 lb/mmBtu when firing NG in the CCUs and refinery fuel gas in the duct burners. 3. **[RESERVED]** 4. **[RESERVED]** 5. 110.9 tons per year C. The above limits shall not apply during periods of startup and shutdown of the combustion turnbines and/or duct burners. Such periods shall not exceed 2 hours in duration. The Owner/Operator shall follow good air pollution control practices to minimize CO emissions during these periods.	iii. Compliance Method: *[Reference APC-97/0503(A10)]* Compliance with the CO Emission Standards shall be based on the following methods: A. CEMs for the CCUs. B. **[RESERVED]** C. **[RESERVED]** iv. Monitoring/Testing: *[Reference APC-97/0503(A10)]* A. The Owner/Operator shall operate and maintain CO CEMS for the CCUs. B. **[RESERVED]** C. The CO CEMS shall satisfy the applicable Performance Specifications in 40 CFR part 60, Appendix "B." The QA/QC procedures for the CO CEMS shall be established in accordance with the procedures in 40 CFR Part 60 Appendix "F."	vi. Reporting: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.d.1.vi (EU-84). vii. Certification Requirement: 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 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
ii. Operational Limitations: *[Reference APC-97/0503 (A10)]* Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.d.1 (EU-84).	v. Recordkeeping: The Owner/Operator shall maintain CO CEMS data, calibration and audit results in accordance with Condition 3(b).	
6. Volatile Organic Compounds (VOC):		
i. Emission Standards: *[Reference APC-97/0503(A10]* A. **[RESERVED]** B. VOC as measured by the average of the three stack test runs pursuant to the stack tests: 1. 0.0021 lb/mmBtu when firing natural gas in CCUs. 2. 0.0046 lb/mmBtu when firing natural gas in the CCUs and refinery fuel gas in the duct burners. 3. **[RESERVED]** 4. **[RESERVED]** 5. 19.8 tons per year. ii. Operational Limitations: Comply with 'Conditions Applicable to Multiple Pollutants" in Part 3, Condition 3 - Table 1.d.1 (EU-84).	iii. Compliance Method: *[Reference APC-97/0503(A10)]* A. Compliance with the VOC Emission Standards shall be demonstrated using stack test based emissions factors and fuel flow rates for the CCUs and duct burners. B. The Owner/Operator may use stack test results obtained while the CCUs are operating with duct burners to demonstrate compliance with the respective non-duct burner emission standards for VOC by subtracting the heat input of the duct burners. iv. Monitoring/Testing: A. The Owner/Operator shall conduct annually an EPA Reference Method 25A stack test for VOC, in accordance with Condition 3(b). The Owner/Operator may petition the Department to decrease the frequency of VOC performance tests based on the results of any performance testing. B. If the Owner/Operator conducts stack testing with the duct burners in	vi. Reporting: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Part 3, Condition 3 - Table 1.d.1.vi (EU-84). vii. Certification: 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 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
	operation, the Owner/Operator shall calculate the emission rate for operation without duct burner operation by subtracting the heat input contributed by the duct burners. C. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.d.1.iv (EU-84). v. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.d.1.v (EU-84).	
7. **[RESERVED]**		
8. **[RESERVED]**		
9. Visible Emissions:		
i. Emission Standard: The Owner/Operator shall not cause or allow the emission of visible air contaminants from the CCUs in excess of 20% opacity for an aggregate of more than 3 minutes in any 1 hour period, or more than 15 minutes in any 24 hour period. *[Reference APC-97/0503(A10)]* ii. Operational Limitations: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.d.1 (EU-84).	iii. Compliance Method: *[Reference APC-97/0503 (A10)]* Compliance with the visible Emission Standard shall be based on Monitoring/Testing requirements and on information available to the Department which may include, but is not limited to, monitoring results, opacity and process operating data. iv. Monitoring/Testing: A. The Owner/Operator shall conduct daily qualitative stack observations to determine the presence of any visible emissions when the units are in	vi. Reporting: None 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. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]* A. [**RESERVED**] vii. Certification: 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 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
	operation. B. If visible emissions are observed, the Company shall take corrective actions and/or conduct a visible observation in accordance with paragraph D below. C. If no visible emissions are observed, no further action is required. D. If required by paragraph B above, the Company shall, in accordance with subsection 1.5(c) of 7 DE Admin. Code 1120, conduct visible 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, qualifications 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 of 40 CFR Part 60, revised July 1, 1982. v. Recordkeeping: In addition to complying with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.d.1.v (EU-84), the Owner/Operator shall keep a log of daily qualitative stack observations for each CCU.	

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
10. Sulfuric Acid Mist (H_2SO_4)		
i. Emission Limitation: H_2SO_4 as measured by the average of the three stack test runs shall not exceed 3.1 tons per year. *[Reference APC-97/0503(A10)]*	ii. Compliance Method: *[Reference APC-97/0503 (A10)]* A. Compliance with the H_2SO_4 Emission Standards shall be demonstrated using stack test based emissions factors and fuel flow rates for the CCUs and duct burners. B. The Owner/Operator may use stack test results obtained while the CCUs are operating with duct burners to demonstrate compliance with the respective non-duct burner emission standards for H_2SO_4 by subtracting the heat input of the duct burners. iii. Monitoring/Testing: A. The Owner/Operator shall conduct annually an EPA Reference Method 8 stack test for H_2SO_4, in accordance with Condition 3(b). The Owner/Operator may petition the Department to decrease the frequency of H_2SO_4 performance tests based on the results of any performance testing. B. If the Owner/Operator conducts stack testing with the duct burners in operation, the Owner/Operator shall calculate the emission rate for operation without duct burner operation by subtracting the heat input contributed by the duct burners.	v. Reporting: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Part 3, Condition 3 - Table 1.d.1.vi (EU-84). vi. Certification: 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 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
	iv. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.d.1.v (EU-84).	
11. Lead (Pb)		
i. Emission Limitation: Lead emissions shall not exceed 0.004 tons per year. *[Reference APC-97/0503(A10)]*	ii. Compliance Method: *[Reference APC-97/0503 (A10)]* Compliance with the Pb Emission Standards shall be based on firing only natural gas in the CCUs and either natural gas or desulfurized refinery fuel gas in the duct burners. iii. Monitoring/Testing None in addition to Condition 3.b of this permit. iv. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.d.1.v. (EU-84).	v. Reporting: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Part 3, Condition 3 - Table 1.d.1.vi. (EU-84). vi. Certification: 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]*
12. Sulfur Dioxide (SO_2)		
i. Emission Limitation: SO_2 emissions shall not exceed 36.5 tons per year. *[Reference APC-97/0503(A10)]*	ii. Compliance Method: *[Reference APC-97/0503(A10)]* Compliance shall be based on firing only NG in the CCUs and either NG or desulfurized RFG in the DBs. iii. Monitoring/Testing None in addition to Condition 3.b of this permit.	v. Reporting: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Part 3, Condition 3

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
	iv. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.d.1.v (EU-84).	- Table 1.d.1.vi (EU-84). vi. Certification: 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]
13. Ammonia (NH_3):		
i. Emission Limitation: *[Reference APC-97/0503(A10)]* A. The NH_3 emissions from each CCU shall not exceed the following levels: 1. With the SCR in Operation: (a) 5 ppmvd @ 15% O_2 2. Without the SCR in Operation: (b) 0 ppmvd @ 15% O_2 B. NH_3 emissions shall not exceed 34.3 tons per year. *[Reference APC-97/0503(A10)]*	ii.Compliance Method: *[Reference APC-97/0503(A10)]* Compliance shall be based on monitoring the stack gas by obtaining weekly grab samples from a location downstream of the SCR system using a department approved method. The company may request Department approval of less frequent monitoring if 24 consecutive sampling events indicate ammonia slip to be less than 2 ppmvd @ 15% O_2. iii.Monitoring/Testing None in addition to Condition 3.b of this permit. iv. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.d.1.v (EU-84).	vi. Reporting: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Part 3, Condition 3 - Table 1.d.1.vi (EU-84). vi. Certification: 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]
e. Facility-Wide: See Part 2, Condition 3 – Table 1.ob.		
1. Conditions applicable to Multiple Pollutants: **[RESERVED]**		
i. Operational Limitations:	ii. Compliance Method:	v. Reporting Requirement:

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
A. **[RESERVED]** B. **[RESERVED]**	**[RESERVED]** iii. Monitoring & Testing: **[RESERVED]** iv. Recordkeeping: **[RESERVED]**	**[RESERVED]** vi. Certification Requirement: **[RESERVED]**
2. Odor: **[RESERVED]**		
i. Emission Standard: **[RESERVED]** ii. Operational Limitations: **[RESERVED]**	iii. Compliance Method: **[RESERVED]** iv. Monitoring & Testing: **[RESERVED]** v. Recordkeeping: **[RESERVED]**	vi. Reporting Requirement: **[RESERVED]** vii. Certification Requirement: **[RESERVED]**
3. Visible Emissions: **[RESERVED]**		
i. Emission Standard: **[RESERVED]** ii. Operational Limitations: **[RESERVED]**	iii. Compliance Method: **[RESERVED]** iv. Monitoring/Testing: A. **[RESERVED]** B. **[RESERVED]** 1. **[RESERVED]** 2. **[RESERVED]** 3. **[RESERVED]** v. Recordkeeping: **[RESERVED]**	vi. Reporting: **[RESERVED]** vii. Certification: **[RESERVED]**

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
f. Combined Limits: The following permit conditions are applicable to multiple emission units as noted below:		
1. Conditions Applicable to Multiple Pollutants:		
i. Operational Limitations: A. **[RESERVED]** B. **[RESERVED]** C. The Owner/Operator shall not cause or allow the use of any fuel having a sulfur content greater than 1.0 % by weight and any distillate fuel oil having a sulfur content greater than 0.3 % by weight in any fuel burning equipment. *[Reference 7 **DE Admin Code** 1108 Sections 2.1 and 2.2, dated 05/09/1985]*	ii. Compliance Method: *[Reference APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* A. **[RESERVED]** B. Compliance with Operational Limitation (C) shall be based on recordkeeping. iii. Monitoring/Testing: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* A. The Owner/Operator shall continuously monitor and record the concentration (dry basis) of TRS in syngas before it is combusted in any fuel burning device. The TRS monitor shall be located downstream of all process steps which impact the composition of syngas prior to its being combusted in any fuel burning device. 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-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* B. **[RESERVED]**	v. Reporting: 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]* A. **[RESERVED]** B. **[RESERVED]** C. The Owner/Operator shall submit the following quarterly CEMS reports by January 30, April 30, July 30 and October 30 of each calendar year: 1. **[RESERVED]** 2. The NO_x and CO CEMS and COMS reports for CEMS required for the Boilers and CCUs shall include the following: a. 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. b. The date and time identifying each period during which the

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
	iv. Recordkeeping: 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]* A. Records shall be maintained of all 24-hour rolling and 12-month rolling averages of sulfur content in clean syngas as measured by the TRS analyzer. *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]*	continuous monitoring system was inoperative, except for zero and span checks, and the nature of system repairs or adjustments. c. When no excess emissions have occurred and the CEMS have not been inoperative, repaired, or adjusted, such information shall be included in the report. *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]*
2. Particulate Emissions:		
i. Emission Standards: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* A. The Owner/Operator shall not cause or allow the emission of particulate matter (PM10) in excess of 311 TPY from the CCUs (Emission Units 84-1 and 84-2), and Boilers 80-2 and 80-3, (inclusive of H_2SO_4 mist) on a rolling twelve (12) month basis. B. The Owner/Operator shall not cause or allow the emission of total suspended particulate (TSP) in excess of 78.7 TPY from the CCUs (Emission Units 84-1 and 84-2), and Boilers 80-2 and 80-3, combined. C. The Owner/Operator shall not cause or allow the emission of particulate	iii. Compliance Method *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* A. Compliance with PM10 Emission Standards shall be demonstrated by firing only natural gas or by using stack test based emissions factors and fuel flow rates for the CCUs, duct burners and boilers. B. Compliance with TSP Emission Standards shall be demonstrated by firing only natural gas or by using stack test based emissions factors and fuel flow rates for the CCUs, duct burners and boilers. iv. Monitoring/Testing: A. The Owner/Operator shall conduct the	vi. Reporting: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.v. vii. Certification Requirement: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.v.

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
matter in excess of 0.3 lb/mmBtu, maximum two (2) hour average, from any fuel burning equipment. *[Reference 7 **DE Admin Code** 1104 Section 2.1, dated 2/1/1981]* ii. Operational Limitation: Comply with "Conditions Applicable to Multiple Pollutants" in Part 3, Condition 3 - Table 1.a.2.	following stack tests annually, in accordance with Condition 3(b): 1. EPA Reference Method 5 for TSP. 2. EPA Reference Method 5B/202 for PM10, including H_2SO_4. 3. The Owner/Operator may petition the Department to decrease the frequency of TSP or PM10 performance tests based on the results of any performance testing. 4. RESERVED B. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iii. v. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iv.	
3. Sulfur Dioxide (SO_2):		
i. Emission Standards: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* A. The Owner/Operator shall not cause or allow the emission of SO_2 in excess of 306.4 TPY from the CCUs (Emission Units 84-1 and 84-2), and Boilers 80-2 and 80-3, combined. ii. Operational Limitations: Comply with "Conditions Applicable to	iii. Compliance Method: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* Compliance with the SO_2 Emission Standards shall be based on the H_2S Continuous Monitoring System (CMS) for Boilers 80-2, 80-3 and the duct burners of the CCUs. The CEMS shall conform to Performance Specification 2 in 40 CFR Part 60, Appendix "B" and the QA/QC procedures in accordance with 40 CFR Part	vi. Reporting: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.v.

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
Multiple Pollutants" in Part 3, Condition 3 - Table 1.a.2.	60, Appendix "F". iv. Monitoring/Testing: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* A. The Owner/Operator shall operate and maintain H_2S CMS for Boilers 80-2 and 80-3. B. **[RESERVED]** v. Recordkeeping: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* A. The Owner/Operator shall maintain SO2 CEMS data, calibration and audit results in accordance with Condition 3(b).	vii. Certification Requirement: 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): **RESERVED**		
5. Carbon Monoxide (CO):		
i. Emission Standards: *[Reference: APC-90/0289(A6), APC-90/0290(A10-5) and APC-97/0503(A10)]* A. The Owner/Operator shall not cause or allow the emission of CO in excess of 470.2 TPY from the CCUs (Emission Units 84-1 and 84-2), and 80-2 and 80-3, combined on a rolling twelve (12) month basis. ii. Operational Limitations: Comply with "Conditions Applicable to Multiple Pollutants" in Part 1, Condition 3 - Table 1.a.2.	iii. Compliance Method: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* Compliance with the CO Emission Standards shall be demonstrated by the following methods: A. Stack test based emissions factor and fuel flow rates for Boiler 80-3 B. CEMS for Boiler 80-2 and the CCUs. iv. Monitoring/Testing: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* A. The Owner/Operator shall operate and maintain CO CEMS for Boiler 80-2 and	vi. Reporting: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.v. vii. Certification Requirement: 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 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
	the CCUs. B. The QA/QC procedures for the CO CEMS shall be established in accordance with the procedures in 40 CFR Part 60, Appendix "F." C. For Boiler 80-3, the Owner/Operator shall conduct annually an EPA Reference Method 10 stack test for CO. The Owner/Operator may petition the Department to decrease the frequency of CO performance tests based on the results of any performance testing. v. Recordkeeping: A. For Boiler 80-2 and the CCUs, the Owner/Operator shall maintain CO CEMS data, calibration and audit results in accordance with Condition 3(b). B. For Boilers and 80-3 the Owner/Operator shall comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iv.	
6. Volatile Organic Compounds (VOC):		
i. Emission Standard: A. The Owner/Operator shall not cause or allow the emission of VOC in excess of 22.7 TPY from the CCUs (Emission Units 84-1 and 84-2), and Boilers 80-2 and 80-3, combined on a rolling twelve (12) month basis. *[Reference:APC-*	iii. Compliance Method: Compliance with the VOC Emission Standards shall be demonstrated by firing only natural gas or by using stack test based emissions factors and fuel flow rates for the boilers and CCUs. *[Reference : APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]*	vi. Reporting: 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]* A. Comply with "Conditions Applicable to

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8;] ii. Operational Limitations: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.	iv. Monitoring/Testing: A. The Owner/Operator shall conduct annually an EPA Reference Method 25A stack test for VOC, in accordance with Condition 3(b). The Owner/Operator may petition the Department to decrease the frequency of VOC performance tests based on the results of any performance testing. *[Reference: APC-90/0289 (A7), APC-90/0290 (A10), APC-97/0503 (A8) and APC-2009/0089 (A1)]* B. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iii. v. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iv.	Multiple Pollutants" in Condition 3 - Table 1.a.2.v. vii. Certification: 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. Sulfuric Acid Mist (H_2SO_4):		
i. Emission Standards: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* A. The Owner/Operator shall not cause or allow the emission of H_2SO_4 in excess of 235.4 TPY from the CCUs (Emission Units 84-1 and 84-2), and Boilers 80-2 and 80-3, combined on a rolling twelve (12) month basis. ii. Operational Limitations: Comply with "Conditions Applicable to	iii. Compliance Method: *[Reference: APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* A. Compliance with the H_2SO_4 Emission Standards shall be demonstrated using stack test based emissions factors and fuel flow rates for the boilers and CCUs. B. Compliance for the boiler 80-3 and the CCUs shall be demonstrated by applying the stack test based SO_2 to H_2SO_4 conversion factor to the CEMS-	vi. Reporting: 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]* A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.v. vii. Certification: That required by Condition 3(c)(3) of this

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
Multiple Pollutants" in Condition 3 - Table 1.a.2.	monitored SO_2 emissions. C. Compliance for the Boiler80-2 shall be demonstrated by applying the fuel gas monitored H_2S content to the H_2SO_4 conversion factor. iv. Monitoring/Testing: A. The Owner/Operator shall conduct annually an EPA Reference Method 8 stack test for H_2SO_4, in accordance with Condition 3(b). The Owner/Operator may petition the Department to decrease the frequency of H_2SO_4 performance tests based on the results of any performance testing. *[Reference: APC-90/0289 (A7), APC-90/0290 (A10), APC-97/0503 (A8) and APC-2009/0089 (A1)]* B. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iii. v. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iv.	permit. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*
8. Lead (Pb):		
i. Emission Standard: A. The Owner/Operator shall not cause or allow the emission of Pb in excess of 0.02 TPY from the CCUs (Emission Units 84-1 and 84-2) and Boilers 80-2 and 80-3 combined on a rolling twelve	iii. Compliance Method: Compliance with the Pb Emission Standard shall be demonstrated by firing desulfurized fuel gas or clean syngas in the boilers and either clean syngas or LSDF in the CCUs and natural gas in the duct	vi. Reporting: 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]*

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
(12) month basis. *[Reference : APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* ii. Operational Limitations: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.	burners. *[Reference : APC-90/0289(A6), APC-90/0290(A10) and APC-97/0503(A8)]* iv. Monitoring/Testing: A. **[RESERVED]** B. None in addition to Condition 3.b of this permit. v. Recordkeeping: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.iv.	A. Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.a.2.v. vii. Certification: 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. Carbon Dioxide (CO_2): State Enforceable Only		
i. Operational Limitation: A. The owners and operators of each CO2 budget source and each CO2 budget unit, at the source shall hold CO2 allowances available for compliance deductions under 7 DE Admin. Code 1147, Section 6.5, as of the CO2 allowance transfer deadline, in the source's compliance account in an amount not less than the total CO2 emissions associated with gross generation output to the grid for the control period from all CO2 budget units at the source, as determined in accordance with 7 DE Admin. Code 1147, Section 6.0 and 8.0 B. Each ton of CO2 emitted in excess of the CO2 budget emissions limitation shall constitute a separate violation of 7 DE Admin. Code 1147 and applicable state	iii. Compliance Methodology: : *[Reference APC-90/0289 (A10), APC-90/0290 (A11), APC-90/0291 (A4) and APC-97/0503 (A9)]* A. Compliance with Operational Limitation A shall be based on the calculation methodology described in Section 3 of DCRC's application and Attachment "H" of this permit which shall be used to determine CO2 emissions from DCRC's affected units using the natural gas consumption, electrical generation, and steam production from each CCU to calculate the rolling daily average heat input for the allocation year. During periods of power balance when the CCUs are exporting power, the rolling daily heat rate shall be used to determine the amount of CO2 allowances required for each CO2 budget unit (CCU 1 and CCU 2) for each	vi. Reporting: 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] *[Reference: APC-90/0289 (A10), APC-90/0290 (A11), APC-90/0291 (A4) and APC-97/0503 (A9)]* vii. Certification: 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 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
law. C. The requirements of 7 DE Admin. Code 1147, Section 1.2.3.1 shall become effective as of January 1, 2013. D. CO2 allowances shall be held in, deducted from, or transferred among CO2 Allowance Tracking System accounts in accordance with 7 DE Admin. Code 1147, Sections 5.0, 6.0, 7.0 and 10.7. E. A CO2 allowance shall not be deducted, in order to comply with the requirements under 7 DE Admin. Code 1147, Section 1.5.3.1 of, for a control period that ends prior to the year for which the CO2 allowance was allocated. A CO2 offset allowance shall not be deducted, in order to comply with the requirements under 7 DE Admin. Code 1147, Section 1.5.3.1, beyond the applicable percent limitations set out in V, Section 6.5.1.3. F. A CO2 allowance under the CO2 Budget Trading Program is a limited authorization by the Department or a participating state to emit one ton of CO2 in accordance with the CO2 Budget Trading Program. No provision of the CO2 Budget Trading Program, the CO2 budget permit application, or the CO2 budget permit or any provision of law shall be construed to limit the authority of the Department or a participating state to terminate or limit such authorization.	allocation year. During periods of power imbalance, when some generation from the TGs may be exported, the conservative default heat rate of 10,000 Btu/kWh shall be used to determine the amount of CO2 allowances required for power exported during that period. B. Compliance with Operational Limitations B through H shall be based on the monitoring and recordkeeping requirements of this permit. iv. Monitoring/Testing: *[Reference , APC-90/0289 (A10), APC-90/0290 (A11), APC-90/0291 (A4) and APC-97/0503 (A9)]* v. The Company shall monitor the following parameters as described in Attachment "H" of this permit: A. Daily overall power flow through the 13825 Power Line and Transformers AT1 and T6A in kWh, measured and reconciled daily. vi. B. Calculated daily average heat rate in BTU/kWh. The Company shall monitor the following The Company shall monitor the following parameters as described in Attachment "H" of this permit: A. Daily overall power flow through the 13825 Power Line and Transformers	

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
G. A CO2 allowance under the CO2 Budget Trading Program does not constitute a property right. H. Excess emissions requirements: The owners and operators of a CO2 budget source that has excess emissions in any control period shall: 1. Forfeit the CO2 allowances required for deduction under 6.5.4.1 of this regulation, provided CO2 offset allowances may not be used to cover any part of such excess emissions; and 2. Pay any fine, penalty, or assessment or comply with any other remedy imposed under 7 DE Admin. Code 1147, Section 6.5.4.2. For purposes of the above condition, A CO2 Budget Source/affected unit shall mean Boiler 1, Boiler 2, Boiler 3, Boiler 4, CCU 1 or CCU 2. *[Reference:APC-90/0289 (A10), APC-90/0290 (A11), APC-90/0291 (A4) and APC-97/0503 (A9)]* ii. Administrative Requirements: *[Reference APC-90/0288 (A10), APC-90/0289 (A10), APC-90/0290 (A11), APC-90/0291 (A4) and APC-97/0503 (A9)]* The Company shall comply with the following administrative requirements: A. These permits shall be made available on the premises. B. Liability 1. No permit revision shall excuse any	AT1 and T6A in kWh, measured and reconciled daily. B. Calculated daily average heat rate in BTU/kWh. vii. Recordkeeping: The company shall maintain following records Unless otherwise provided, the owners and operators of the CO2 budget source and each CO2 budget unit at the source shall keep on site at the source each of the following documents for a period of 10 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 10 years, in writing by the Department. 1. The account certificate of representation for the CO2 authorized account representative for the source and each CO2 budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with 2.4 of this regulation, provided that the certificate and documents shall be retained on site at the source beyond such 10-year period until such documents are superseded because of	

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
violation of the requirements of the CO2 Budget Trading Program that occurs prior to the date that the revision takes effect. 2. Any provision of the CO2 Budget Trading Program that applies to a CO2 budget source (including a provision applicable to the CO2 authorized account representative of a CO2 budget source) shall also apply to the owners and operators of such source and of the CO2 budget units at the source. 3. Any provision of the CO2 Budget Trading Program that applies to a CO2 budget unit (including a provision applicable to the CO2 authorized account representative of a CO2 budget unit) shall also apply to the owners and operators of such unit. C. Effect on other authorities: 1. No provision of the CO2 Budget Trading Program, a CO2 budget permit application, or a CO2 budget permit, shall be construed as exempting or excluding the owners and operators and, to the extent applicable, the CO2 authorized account representative of a CO2 budget source or CO2 budget unit from compliance with any other provisions of applicable State and federal law and regulations. D. Failure to comply with the provisions of	the submission of a new account certificate of representation changing the CO2 authorized account representative. 2. All emissions monitoring information, in accordance with 7 DE Admin. Code 1147, Section 8.0 and 40 CFR 75.57. 3. Copies of all reports, compliance certifications, and other submissions and all records made or required under the CO2 Budget Trading Program. 4. Copies of all documents used to complete a CO2 budget permit application and any other submission under the CO2 Budget Trading Program or to demonstrate compliance with the requirements of the CO2 Budget Trading Program. B. The CO2 authorized account representative of a CO2 budget source and each CO2 budget unit at the source shall submit the reports and compliance certifications required under the CO2 Budget Trading Program, including those under 4.0 of this regulation. *[Reference APC-90/0289 (A10), APC-90/0290(A11), APC-90/0291(A4) and APC-97/0503(A9)]*	

Condition 3 – Table 1 (Specific Requirements)

Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards	Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping)	Reporting and Compliance Certification
these permits may be grounds for suspension or revocation. C.		
g. [RESERVED] Permanently Removed : Package Boilers: 3 Package Boilers 45-B-150, 45-B-350 and 45-B-450 (99.99 mmBTU/hr input each, natural gas and desulfurized refinery fuel gas fired) (Emission Points 45-150, 45-350 and 45-450)		

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Emission Unit	Applicable Requirement
6. Facility-wide	i. 7 **DE Admin. Code** 1114 Section 2.1 ii. 7 **DE Admin. Code** 1117 Section 4 iii. 7 **DE Admin. Code** 1119 Section 2.1

Attachment "A"- Revision History

Part 1 Permit

Date	Number	Revision Type	Description	Pages Revised
10/3/2019	Revision 4	Significant Permit Modification	Updated to reflect operating conditions and limitations and regulations	Pg. 1 & 5, Sections a, bb, fc, and Atch. E
4/12/2018	Revision 3	Significant Permit Modification	Updated to reflect operating conditions and limitations and regulations	1-12, Section fc, ATCH. E
10/16/2017	Revision 2	Administrative Permit Amendment	Incorporate change of Responsible Official	1, 363-365
4/11/2017	Revision 1	Significant Permit Modification	Updated to reflect operating conditions and limitations and regulations	Various
5/28/2015	Renewal 2	Permit Renewal	Renewal of permit; updated to reflect operating conditions and limitations and regulations	Various
2/12/2014	Revision 6	Administrative Permit Amendment	Incorporate change of Responsible Official	1, 349, 350
4/5/2011	Revision 5	Significant	Consolidation of all 3 parts and incorporation of NOx PAL	Various
7/22/2010	Revision 4	Administrative Permit Amendment	Incorporate change of Responsible Official	1
4/1/2010	Revision 3	Administrative Permit Amendment	Incorporate change of Responsible Official	1
3/4/2010	Revision 2	Significant Permit Modification	Incorporate new requirements and remove non-existing units.	All pages
5/27/2008	Renewal 1	Permit Renewal	Renewal of permit; updated to reflect operating conditions and limitations and regulations.	--
11/10/2005	Revision 1	Administrative Permit Amendment	Incorporates change of Responsible Official	1
4/30/2002	Revision 2	Administrative Permit Amendment	Added two fuel sources for Train 29-H-2	17

3/20/2002	Revision 1	Significant Permit Modification	Incorporates Alternate Monitoring Plans for fuel combustion units per 40 CFR 60 Subpart J	17, 17a, 18, 70, 70a, 71, 102a, 103
11/14/2001			Original issuance	

Part 2 Permit

Date	Number	Revision Type	Description	Pages Revised
10/3/2019	Revision 4	Significant Permit Modification	Updated to reflect operating conditions and limitations and regulations	Sections b, e, j, m, n, and oc
4/12/2018	Revision 3	Significant Permit Modification	Updated to reflect operating conditions and limitations and regulations	Section e
10/16/2017	Revision 2	Administrative Permit Amendment	Incorporate change of Responsible Official	1, 363-365
4/11/2017	Revision 1	Significant Permit Modification	Updated to reflect operating conditions and limitations and regulations	Various
5/28/2015	Renewal 1	Permit Renewal	Renewal of permit; updated to reflect operating conditions and limitations and regulations	Various
2/12/2014	Revision 6	Administrative Permit Amendment	Incorporate change of Responsible Official	1, 349, 350
4/5/2011	Revision 5	Significant	Consolidation of all 3 parts and incorporation of NOx PAL	Various
7/22/2010	Revision 4	Administrative Permit Amendment	Incorporate change of Responsible Official	1
4/1/2010	Revision 3	Administrative Permit Amendment	Incorporate change of Responsible Official	1
03.04.2010	Revision 2	Significant		all pages
08.06.2008	Revision 1	Administrative	Change Responsible Official	1 and 160
05.27.2008			Original issuance	

Part 3 Permit

Date	Number	Revision Type	Description	Pages Revised
10/3/2019	Revision 4	Significant Permit Modification	Updated to reflect operating conditions and limitations and regulations	Sections a, f, and g
4/12/2018	Revision 3	Significant Permit Modification	Updated to reflect operating conditions and limitations and regulations	Section a

10/16/2017	Revision 2	Administrative Permit Amendment	Incorporate change of Responsible Official	1, 363-365
4/11/2017	Revision 1	Significant Permit Modification	Updated to reflect operating conditions and limitations and regulations	Various
5/28/2015	Renewal 2	Permit Renewal	Renewal of permit; updated to reflect operating conditions and limitations and regulations	Various
2/12/2014	Revision 6	Administrative Permit Amendment	Incorporate change of Responsible Official	1, 349, 350
4/5/2011	Revision 5	Significant	Consolidation of all 3 parts and incorporation of NOx PAL	Various
7/22/2010	Revision 4	Administrative Permit Amendment	Incorporate change of Responsible Official	1
4/1/2010	Revision 3	Administrative Permit Amendment	Incorporate change of Responsible Official	1
3/4/2010	Revision 2	Significant Permit Modification	Significant modifications	all
8/6/2008	Revision 1	Administrative Permit Amendment	Incorporates change of Responsible Official	1, 59
5/27/2008	Renewal 1	Permit Renewal	Renewal permit issued	all
11/10/2005	Revision 1	Administrative Permit Amendment	Incorporates change of Responsible Official	1
4/11/2005			Original issuance	

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