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: Month XX, 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.

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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

Emission Unit	Emission Point	Emission Unit Description
		sumps and equipment
GDF	N/A	Gasoline dispensing facility
MVR	15-1 15-2	Marine piers 2 and 3 loading area
CU	21-1	Crude Unit, Atmospheric heater 21-H-701, and vacuum heater 21-H-2
		Crude coker gasoline Merox treater
	21-1 or 28-1 or 28-2	SWS hydrogen sulfide stripping vessel, 21-C-302
FCU	22-1	Petroleum Coke Storage and Handling Complex
	22-2	Fluid Coking Unit (FCU), FCU start up heater 22-H-1, CO Boiler (22-H-3), wet gas scrubber and SNCR
FCU	22-3	Back up incinerator 22-H-4
	22-4	FCU Selas Steam Superheater
FCCU	23-1	FCCU start up heaters 23-H-1A and 1B, FCCU, CO Boiler (22-H-3), Selective Non-Catalytic Reduction (SNCR) System, wet gas scrubber, alky merox spent air, and poly merox spent air
GP	Fugitives	Refinery gas plant
REFORMER	25-4 and 25-5	CNHT reactor charge heater 25-H-401, CNHT reboiler heater 25-H-402, CHNT unit, reformer, butamer unit
ALKY	Fugitives	Alkylation Unit
POLY	Fugitives	Polymerization unit
SRA	28-1 and 28-2	Sulfur recovery area inclusive of 2 Claus sulfur recovery units (SRU I and SRU II), Shell Claus Offgas Treatment Units I (SCOT I and II)
HP	37-1A and 37-1B	Hydrogen plant and reformer heater 37-H-1 A/B
MP	41-1 and 41-2	This unit has been shut down with no foreseeable plan to restart
CCR	42-1 and 42-1	CCR reformer unit, platform heater 42-H-1,2,3 and CCR reboiler 42-H-7
Utilities	45-1 and 45-2	Refinery flare system, spent caustic stripper and RFG2K cooling tower
DCPP		
	80-2	Boiler #2 (716 mmBTU/hr input, natural gas and desulfurized refinery fuel gas fired)
	80-3	Boiler #3 (618 mmbTU/hr input, syngas, natural gas, and desulfurized refinery fuel gas fired)

Emission Unit	Emission Point	Emission Unit Description
	80-4	Boiler #4 (737 mmBTU/hr input, desulfurized refinery fuel gas fired)
Cooling Tower	50	Three-Cell Linear Mechanical Draft Evaporative Cooler (gas flow of 3,000,000 ACFM, cooling water flow of 30,000 gallons per minute)
CCU	84	CCU1 & CCU2 – Each, one Gas Turbine (HHV input of 780 mmBTU/hr, natural gas fired)
	84	Duct burner (192 mmBTU/hr, HHV , natural gas or desulfurized refinery fuel gas fired, one each, CCU1 & CCU2)
CCU	84	Heat Recovery Steam Generator (one each, CCU1 & CCU2)
	84	Electric Generator (90 MW nominal, one each, CCU1 & CCU2)
Package Boilers	45	3Package Boilers (99.99 mmBTU/hr input each, natural gas or desulfurized refinery fuel gas fired)

b. Regulation No. 1102 Permit Identification.

This table identifies the underlying permits whose provisions have been incorporated into this Title V permit and specifies the reference number that will be used to identify the source of the underlying permit condition throughout this Title V permit.

Reference Number	Full Regulation No. 1102 Permit Designation
APC-82/0633	**APC-82/0633-OPERATION** issued February 8, 1985. Heater Unit 29-H-101
APC-81/0790	**APC-81/0790-OPERATION** issued June 17, 1981. Heater Unit 29-H-2.
APC-81/0791	**APC-81/0791-OPERATION** issued June 17, 1981. Heater Unit 29-H-3.
APC-81/0792	**APC-81/0792-OPERATION** issued June 17, 1981. Heater Unit 29-H-4.
APC-81/0793	**APC-81/0793-OPERATION** issued June 17, 1981. Heater Unit 29-H-5.
APC-81/0794	**APC-81/0794-OPERATION** issued June 17, 1981. Heater Unit 29-H-6.
APC-81/0795	**APC-81/0795-OPERATION** issued June 17, 1981. Heater Unit 29-H-7.
APC-81/0796	**APC-81/0796-OPERATION** issued June 17, 1981. Heater Unit 29-H-8.
APC-81/0797	**APC-81/0797-OPERATION** issued June 17, 1981. Heater Unit 29-H-9.
APC-81/0873	**APC-81/0873-OPERATION** issued August 21, 1981. Hydrodesulfurizer Train I.
APC-81/0873(A1)	**APC-81/0873-OPERATION (Amendment 1)** issued October 13, 2015 for the HDS Train 1 as part of the Tier 3 Project.
APC-81/0874	**APC-81/0874-OPERATION** issued August 21, 1981. Hydrodesulfurizer Train II.
APC-81/0875	**APC-81/0875-OPERATION** issued August 21, 1981. Hydrodesulfurizer Train III.
APC-81/0876	**APC-81/0876-OPERATION** issued August 21, 1981. Hydrodesulfurizer Train IV.
APC-81/0877	**APC-81/0877-OPERATION** issued August 21, 1981. Hydrodesulfurizer Train V.
APC-81/0832	**APC-81/0832-OPERATION (Amendment 1)(HON)** issued October 23, 1997.

Reference Number	Full Regulation No. 1102 Permit Designation
	Benzene Loading Facility.
APC-81/0833	**APC-81/0833-OPERATION** issued February 24, 1982. Aromatics Fractionation and Storage Facility.
APC-81/0833(A1)	**APC-81/0833-OPERATION (Amendment 1)** issued October 13, 2015 for the AFSF as part of the Tier 3 Project.
APC-82/0979	**APC-82/0979-OPERATION** issued September 16, 1982. Nitrogen Grade Toluene Facility.
APC-81/0802	**APC-81/0802-OPERATION** issued June 17, 1981. Heater Unit 32-H-101.
APC-81/0805	**APC-81/0805-OPERATION** issued June 17, 1981. Heater Unit 33-H-1.
APC-81/0806	**APC-81/0806-OPERATION** issued June 17, 1981. Heater Unit 33-H-2.
APC-81/0822	**APC-81/0822-OPERATION (Amendment 2)** issued March 8, 2013. Olefins Plant.
APC-81/0808	**APC-81/0808-OPERATION (Amendment 1)** issued March 8, 2013. Heater Unit 134-H-101.
APC-81/0966	**APC-81/0966-OPERATION** issued September 9, 1981. Hydrocracker Unit and Process Heaters 36-H-1, 36-H-2, and 36-H-3.
APC-80/0869(A5)	**APC-80/0869-OPERATION (Amendment 5)(VOC RACT)(NSPS)** issued November 4, 1999. Intermediate Product Tank Farm.
APC-80/0869(A6)	**APC-80-0869-OPERATION (Amendment 6)(MACT)(VOC RACT)(NSPS)** issued June 22, 2012 for Tanks 47, 166, 205 and 261
APC-80/0870(A3)	**APC-80/0870-OPERATION (Amendment 3)(VOC RACT)(NSPS)** issued March 29, 2000. Crude Oil Tank Farm.
APC-80/0870(A2)	**APC-80/0870-OPERATION (Amendment 2)(VOC RACT)(NSPS)** issued October 12, 1994. Crude Oil Tank Farm.
APC-81/0120	**APC-81/0120-OPERATION (Amendment 2)(RACT)** issued November 6, 1996. Sour Water Treatment Crude Unit.
APC-80/0868	**APC-80/0868-OPERATION** issued April 30, 1980. Product Tank Farm.
APC-80/0868-C/O	**APC-80/0868-CONSTRUCTION/OPERATION (NSPS)(RACT)(MACT)** dated March 29, 2006 for the Ethanol Blending Project
APC-80/0868(A3)	**APC-80-0868-OPERATION (Amendment 3)(MACT)(VOC RACT)(NSPS)** issued June 22, 2012 for Tanks 47, 166, 205 and 261
APC-80/0868(A4)	**APC-80/0868-CONSTRUCTION/OPERATION (Amendment 4)** issued October 13, 2015 for the RPTF as part of the Tier 3 Project.
APC-91/0553	**APC-91/0553-OPERATION (Amendment 1)(LAER)** issued April 23, 2013. Ether Plant.
APC-81/0283	**APC-81/283 OPERATION** issued January 14, 1981 for the Oil Recovery System
APC-81/1008(A3)	**APC-81/1008 OPERATION (Amendment 3)(NESHAP)** issued October 31, 2000 for the API/CPI Separators
APC-81/1008(A4)	**APC-81/1008-CONSTRUCTION/OPERATION (Amendment 4)(NESHAP)** issued February 22, 2001 for the API/CPI Separators
APC-81/1009(A2)	**APC-81/1009 OPERATION (Amendment 2)(NESHAP)** issued November 8, 1999 for the Equalization Tanks and Spill Diversion Tank
APC-81/1009	**APC-81/1009 OPERATION** dated June 17, 1981 for 2 second stage clarifiers and 2 second stage aeration tanks[3]

Reference Number	Full Regulation No. 1102 Permit Designation
APC-93/0350(A1)	**APC-93/0350 CONSTRUCTION/OPERATION (Amendment 1)(NESHAP)** issued on June 25, 2001 for the Oily Water Sewer System
APC-94/0710(A1)	**APC-94/0710-CONSTRUCTION/OPERATION (Amendment 1)(NESHAP)(NOx RACT)** issued October 22, 2012 for the WWTP VCU Fuel Switch Project
APC-95/0862-OI	**APC-95/0862-OPERATION (Stage I)** issued April 28, 1995 for the Dual point Stage I Vapor Recovery System
APC-95/0863-OII	**APC-95/0863-OPERATION (Stage II)** issued April 28, 1995 for the Healy Stage II Vapor Recovery System
APC-95/0471(A3)	**APC-95/0471-OPERATION (Amendment 3)(LAER)(MACT)(RACT)** issued May 31, 2013 for the Marine Vapor Recovery System
APC-95/0471(A4)	**APC-95/0471-CONSTRUCTION/OPERATION (Amendment 4)** issued October 13, 2015 for the MVRS as part of the Tier 3 Project.
APC-81/0828(A2)	**APC-81/0828-OPERATION (Amendment 2)(PSD-NSR)** issued September 7, 2011 for the Crude Unit
APC-95/0570(A3)	**APC-95/0570-OPERATION (Amendment 2)(LAER)(NSPS**) issued February 20, 2009, for the Crude Unit Atmospheric heater 21-H-701
APC-81/0784(A2)	**APC-81/0784-CONSTRUCTION (Amendment 1)(NOx RACT)** issued February 20, 2009 for the Vacuum Tower Heater
APC-81/0784	**APC-81/0784-OPERATION** issued June 17, 1981 for the Vacuum Tower Heater
APC-81/0963	**APC-81/0963-OPERATION** issued August 12, 1981 for the Coker Merox Plant
APC-81/0785	**APC-81/0785-OPERATION** issued June 17, 1981 for various heaters
APC-81/0829(A8) **APC-81/0829(A9)**	**APC-81/0829-OPERATION (Amendment 8)(PSD-NSR)** issued September 7, 2011 for the Fluid Coker Unit, FCU Carbon Monoxide Boiler, Wet Gas Scrubber, and Selective Non-Catalytic Reduction System & **APC-81/0829-OPERATION (Amendment 9)(PSD-NSR)** for the FCU's Optimized NOx Limits issued September 16, 2014
APC-82/1209(A7)	**APC-82/1209-OPERATION (Amendment 7)** issued June 14, 2012 for the Petroleum Coke Storage and Handling System
APC-82/0981(A10)	**APC-82/0981-OPERATION (Amendment 10) (NSPS)** for the FCCU's Optimized NOx Limits issued September 16, 2014
APC-82/0981(A12)	**APC-82/0981 – OPERATION (Amendment 12)(NSPS)** issued March 23, 2017 for the Fluid Catalytic Cracking Unit (FCCU), FCCU Carbon Monoxide Boiler (COB), FCCU COB Selective Non-Catalytic Reduction (SNCR) System and Wet Gas Scrubber System
APC-81/0827(A1)	**APC-81/0827-OPERATION (Amendment 1)(RACT)(NSPS)** issued January 30, 1995 for the Alkylation Merox unit-Merox Treater
APC-98/0522(A1)	**APC-98/0522-OPERATION (Amendment 1)(NSPS)** issued August 15, 2012 for the CHNT Heaters 25-H-401 and 25-H-402
APC-98/0523(A1)	**APC-98/0523-OPERATION (Amendment 1)(NSPS)(RACT)(NESHAP)** issued August 15, 2012 for the Cracked Naphtha Hydrotreater Unit
APC-98/0523(A2)	**APC-98/0523-OPERATION (Amendment 2)(NSPS)** issued October 13, 2015 for the CNHT as part to the Tier 3 Project.
APC-81/0825	**APC-81/0825-OPERATION** issued June 17, 1981 for the Catalytic Reformer Unit
APC-82/0593	**APC-82/0593-OPERATION** issued March 31, 1982 for the Polymerization Merox plant

Reference Number	Full Regulation No. 1102 Permit Designation
APC-81/0826(A2)	**APC-81/0826-OPERATION (Amendment 2**) issued August 22, 1991 for the Alkylation and Polymerization Units
APC-98/0264(A7)	**APC-98/0264-CONSTRUCTION/OPERATION (Amendment 7)(NSPS)** issued June 18, 2008 for the Sulfur recovery Area
APC-81/0965	**APC-81/0965-OPERATION** issued September 9, 1981 for the Hydrogen Plant
APC-81/0965(A1)	**APC-81/0965-OPERATION (Amendment 1)(VOC RACT)** issued April 7, 2003 for the Hydrogen plant Replacement of Low Temperature Shift Reactor Catalyst
APC-82/0073	**APC-82/0073-OPERATION** issued February 8, 1985 for the CCR Reformer and Heater 42-H-1,2,3;
APC-82/0073(A1)	**APC-82/0073-OPERATION (Amendment 1)(MACT)** issued August 16, 2005 for the CCR Reformer and Hydrochloric Acid Wet Gas Scrubber
APC-82/0632	**APC-82/0632-OPERATION** issued February 8, 1985 for the CCR Reformer Reboiler Heater 42-H-7
APC-81/0830	**APC-81/0830-OPERATION** issued July 30, 1981 for the Flare System
APC-95/0381	**APC-95/0381-**OPERATION issued May 13, 1996 for the Spent Caustic Stripper
APC-2005/0197	**APC-2005/0197-OPERATION (RACT)(MACT)(NSPS)** issued June 27, 2008 for the Tier 2 Gasoline Project
APC-90/0289(A7)	**APC-90/0289-OPERATION (Amendment 7) – Boiler 2** issued May 26, 2009. Emission Unit 80-2
APC-90/0290(A10)	**APC-90/0290-OPERATION (Amendment 10) – Boiler 3** issued May 19, 2014. Emission Unit 80-3
APC-90/0289(A10)	**APC-90/0289-OPERATION (Amendment 10)** issued December 23, 2013. Boiler 2, Emission Unit 80-2.
APC-90/0290(A11)	**APC-90/0290-OPERATION (Amendment 11)** issued December 23, 2013. Boiler 3, Emission Unit 80-3.
APC-90/0290(A12)	**APC-90/0290 – CONSTRUCTION/OPERATION (Amendment 12)**issued January 15, 2015 for Boiler 3 as part of the Induced Flue Gas Recirculation Project
APC-90/0291(A3)	**APC-90/0291-OPERATION (Amendment 3) – Boiler #4** issued May 19, 2014 as part of the Steam Injection Project. Boiler No. 4, Emission Unit 80-4.
APC-90/0291(A5)	**APC-90/0291 – CONSTRUCTION/OPERATION (Amendment 5)**issued January 15, 2015 for Boiler 4 as part of the Induced Flue Gas Recirculation Project
APC-90/0291(A4)	**APC-90/0291-OPERATION (Amendment 4)** issued December 23, 2013 for RGGI exemption. Boiler 4, Emission Unit 80-4.
APC-97/0503(A9)	**APC-97/0503-OPERATION (Amendment 9)(NSPS)** issued December 23, 2013. Two combined cycle units, two duct burners, two heat recovery steam generators, two electric generators, Emission Unit 84.
APC-97/0503(A10)	**APC-97/-0504-CONSTRUCTION (Amendment 10)(NSPS)** dated July 2, 2014. CCU Selective Catalytic Reduction (SCR) System Project.
APC-97/0504	**APC-97/0504-OPERATION** issued August 6, 2003. Gasifiers #1 & #2, two gas coolers, amine acid gas removal system, syngas flare – Unit 82, One 3-cell linear mechanical draft evaporative cooler – Emission Unit 50.
APC-97/0503(A8)	**APC-97/0503-OPERATION (Amendment 8)(NSPS)** issued July 3, 2012for the CCU Modification Project
AQM-003/00016-CAIR	**AQM-003/00016-CAIR** issued May 27, 2008. DCPP4 (Boiler No. 4)

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

permit termination, revocation, and reissuance or modification; or for denial of a permit renewal. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 6.1.7.1 dated 12/11/00]*

2.
   i. For applicable requirements with which the source is in compliance, the Owner and/or Operator shall continue to comply with such requirements. *[Reference:* 7 ***DE Admin. Code*** *1130 Sections 5.4.8.3.1 dated 11/15/93 and 6.3.3 dated 12/11/00]*

   ii. For applicable requirements that will become effective during the term of this permit, the Owner and/or Operator shall meet such requirements on a timely basis unless a more detailed schedule is expressly required by the applicable requirement. *[Reference:* 7 ***DE Admin. Code*** *1130 Sections 5.4.8.3.2 dated 11/15/93 and 6.3.3 dated 12/11/00]*

3. Nothing in Condition 2(b)(1) of this permit shall be construed to preclude the Owner and/or Operator from making changes consistent with Condition 2(m)(3) [Minor Permit Modifications] or Condition 4(a) [Operational Flexibility]. *[Reference:* 7 ***DE Admin. Code*** *1130 Sections 6.8 dated 12/11/00 and 7.5.1.5 dated 12/11/00]*

4. The fact that it would have been necessary to halt or reduce an activity in order to maintain compliance with the terms and conditions of this permit shall not constitute a defense for the Owner and/or Operator in any enforcement action. Nothing in this permit shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious that the impacts of continuing operations. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 6.1.7.2 dated 12/11/00]*

5. The Owner and/or Operator may seek to establish that noncompliance with a technology-based emission limitation under this permit was due to an emergency or malfunction if both the record keeping requirements in Condition 3(b)(2)(iii) and the reporting requirements in Condition 3(c)(2)(ii)(A) are satisfied. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 6.7.2 dated 12/11/00]*

6.
   i. In any enforcement proceeding, the Owner and/or Operator seeking to establish the occurrence of an emergency or malfunction has the burden of proof. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 6.7.4 dated 12/11/00]*

   ii. The provisions of 7 **DE Admin. Code** 1130 pertaining to Emergency/Malfunctions as defined in Conditions Nos. 2(b)(5); 2(b)(6); 3(b)(2)(iii); and 3(c)(2)(ii)(A) of this permit are in addition to any emergency or malfunction provision contained in any applicable requirement. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 6.7.5 dated 12/11/00]*

7. Reserved.

8. If required, the schedule of compliance in Condition 5 of this permit is supplemental to and shall not sanction noncompliance with the applicable requirements upon which it is based. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 5.4.8.3.3 dated 11/15/93]*

9. Nothing in this permit shall be interpreted to preclude the use of any credible evidence to demonstrate noncompliance with any term of this permit. *[Reference: 62 FR 8314 dated 2/24/97]*

10. All terms and conditions of this permit are enforceable by the Department and by the U.S. Environmental Protection Agency ("EPA") unless specifically designated as "State Enforceable Only" *[Reference:* 7 ***DE Admin. Code*** *1130 Section 6.2.1 dated 12/11/00]*

c. **Confidentiality**. The Owner and/or Operator may make a claim of confidentiality for any information or records submitted to the Department. However, by submitting a permit application, the Owner and/or Operator waives any right to confidentiality as to the contents of its permit, and the permit contents will

not be entitled to protection under 7 **Del. C.**, Ch 60, § 6014. *[Reference: 7 **DE Admin. Code** 1130 Sections 5.1.4 dated 11/15/93, 6.1.3.3.5 dated 12/11/00, and 6.1.7.5 dated 12/11/00]*

1. Confidential information shall meet the requirements of 7 **Del. C.**, Ch 60, § 6014, and 29 **Del. C.**, Ch 100. *[Reference: 7 **DE Admin. Code** 1130 Section 5.1.4 dated 11/15/93]*

2. If the Owner and/or Operator submits information to the Department under a claim of confidentiality, the Owner and/or Operator shall also submit a copy of such information directly to the EPA, if the Department requests that the Owner and/or Operator do so. *[Reference: 7 **DE Admin. Code** 1130 Section 5.1.4 dated 11/15/93]*

d. **Construction, Installation, or Alteration**. The Owner/Operator shall not initiate construction, installation, or alteration of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to submitting an application to the Department under Regulation No. 1102, and, when applicable, Regulation No. 1125, and receiving approval of such application from the Department; except as exempted in the State of Delaware Regulation No. 1102 Section 2.2. *[Reference: 7 **DE Admin. Code** 1102 Section 2.1 dated 6/1/97 and 7 **DE Admin. Code** 1130 Section 7.2.3 dated 12/11/00]*

e. **Definitions/Abbreviations**. Except as specifically provided for below, for the purposes of this permit, terms used herein shall have the same meaning accorded to them under the applicable requirements of the Clean Air Act and 7 **DE Admin. Code** 1100.

1. "Act" means the Clean Air Act, as amended by the Clean Air Act Amendments of November 15, 1990, 42 U.S.C. 7401 et seq. *[Reference: 7 **DE Admin. Code** 1130 Section 2 dated 11/15/93]*

2. "AP-42" means the Compilation Of Air Pollutant Emission Factors, Fifth Edition, AP-42, dated January 15, 1995, as amended with Supplements "A" dated February 1996, "B" dated November 1996, "C" dated November 1997, "D" dated August 1998, "E" dated September 1999, and "F" dated September 2000 and the December 2001 update, the December 2002 update and the December 2003 update.

3. "CFR" means Code of Federal Regulations.

4. "Emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the sources, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. *[Reference: 7 **DE Admin. Code** 1130 Section 6.7.1 dated 12/11/00]*

5. "Malfunction" means any sudden and unavoidable failure of air pollution control 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 this permit, due to unavoidable increases in emissions attributable to the malfunction. A malfunction shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. *[Reference: 7 **DE Admin. Code** 1130 Section 6.7.1 dated 12/11/00]*

6. "Number 2 fuel oil" and "No. 2 fuel oil" means distillate oil.

7. "Reg." and "Regulation" mean the regulations covered under 7 **DE Admin. Code** 1100.

8. "Regulations Governing the Control of Air Pollution" means the codification of those regulations enacted by the Delaware Department of Natural Resources and Environmental Control, in accordance with 7 **Del. C.,** Ch 60, § 6010.

f. Duty to Supplement.

1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the Owner and/or Operator shall promptly submit to the Department such supplementary facts or corrected information. *[Reference: 7 **DE Admin. Code** 1130 Section 5.2 dated 11/15/93]*

2. The Owner and/or Operator shall promptly submit to the Department information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to the release of a corresponding draft permit. *[Reference: 7 **DE Admin. Code** 1130 Section 5.2 dated 11/15/93]*

3. The Owner and/or Operator shall furnish to the Department, upon receipt of a written request and within a reasonable time specified by the Department:

   i. Any information that the Department determines is reasonably necessary to evaluate or take final action on any permit application submitted in accordance with Condition 2(l) or 2(m) of this permit. The Owner and/or Operator may request an extension to the deadline the Department may impose on the response for such information. *[Reference: 7 **DE Admin. Code** 1130 Section 5.1.2.3 dated 11/15/93]*

   ii. Any information that the Department requests to determine whether cause exists to modify, terminate, or revoke this permit, or to determine compliance with the terms and conditions of this permit. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.7.5 dated 12/11/00]*

   iii. Copies of any records required to be kept by this permit. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.7.5.7 dated 12/11/00]*

g. Emission Trading. No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.9 dated 12/11/00]*

h. Fees. The Owner/Operator shall pay fees to the Department consistent with the fee schedule established by the Delaware General Assembly. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.8 dated 12/11/00 and Section 9.0 dated 11/15/93]*

i. Inspection and Entry Requirements. Upon presentation of identification, the Owner/Operator shall allow authorized officials of the Department to perform the following:

1. Enter upon the Owner/Operator's premises where a source is located or an emissions-related activity is conducted, or where records that must be kept under the terms and conditions of this permit are located. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.2.1 dated 12/11/00]*

2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.2.2 dated 12/11/00]*

3. Inspect, at reasonable times and using reasonable safety practices, any facility, equipment (including monitoring and air pollution control equipment), practice, or operation regulated or required under this permit. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.2.3 dated 12/11/00]*

4. Sample or monitor, at reasonable times, any substance or parameter for the purpose of assuring compliance with this permit or any applicable requirement. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.2.4 dated 12/11/00]*

j. Permit and Application Consultation. The Owner/Operator is encouraged to consult with Department personnel before submitting an application or, at any other time, concerning the operation, construction, expansion, or modification of any installation, or concerning the required pollution control devices or

system, the efficiency of such devices or system, or the pollution problem related to the installation. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 5.1.1.7 dated 11/15/93]*

k. **Permit Availability**. The Owner/Operator shall have available at the facility at all times a copy of this permit and shall provide a copy of this permit to the Department upon request. *[Reference:* 7 ***DE Admin. Code*** *1102 Section 8.1 dated 6/1/97]*

l. **Permit Renewal**. This permit expires 5 years from the date of issuance except as provided in Condition 2(l)(3) below. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 6.1.2 dated 12/11/00]*

1. Applications for permit renewal shall be subject to the same procedural requirements, including those for public participation, affected state comment, and EPA review, that apply to initial permit issuance under 7 **DE Admin. Code** 1130 Section 7.1, except that an application for permit renewal may address only those portions of the permit that the Department determines require revision, supplementing, or deletion, incorporating the remaining permit terms by Reference: from the previous permit. The Department may similarly, in issuing a draft renewal permit or proposed renewal permit, specify only those portions that will be revised, supplemented, or deleted, incorporating the remaining permit terms by Reference. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 7.3.1 dated 12/11/00]*

2. The Owner and/or Operator's right to operate shall cease upon the expiration date unless a timely and complete renewal application has been submitted to the Department *no later than 12 months prior to the expiration date of the permit*. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 7.3.2 dated 12/11/00]*

3. The Department shall review each application for completeness and shall inform the applicant within 60 days of receipt if the application is incomplete. Unless the Department requests additional information or otherwise notifies the applicant of incompleteness within 60 days of an application, an application will be deemed complete if it contains the information required by the application form and 7 **DE Admin. Code** 1130 Section 5.4. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 5.1.2.1 dated 11/15/93*

4. If a timely and complete application for a permit renewal is submitted to the Department pursuant to 7 **DE Admin. Code** 1130, Section 5.1.2.4 (dated 11/15/93) and Section 7.3.1 (dated 12/11/00) and the Department, through no fault of the Owner and/or Operator, fails to take final action to issue or deny the renewal permit before the end of the term of this permit, then this permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 7.3.3 dated 12/11/00]*

m. **Permit Revision and Termination**.

1.
   i. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 6.1.7.3 dated 12/11/00]*

   ii. Except as provided under Condition 2(m)(3) ["Minor Permit Modification"], the filing of a request by the Owner and/or Operator for a permit modification, revocation and reissuance, or termination, or of a modification of planned changes or anticipated noncompliance does not stay any term or condition of this permit. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 6.1.7.3 dated 12/11/00 and 7.5.1.5 dated 12/11/00]*

2. "Administrative Permit Amendment." When required, the Owner and/or Operator shall submit to the Department a request for an administrative permit amendment in accordance with 7 **DE Admin. Code** 1130 Section 7.4. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 7.4 dated 12/11/00]*

3. "Minor Permit Modification." When required, the Owner and/or Operator shall submit to the Department an application for a minor permit modification in accordance with 7 **DE Admin. Code**

1130 Section 7.5.1 and 7.5.2. *[Reference: 7 **DE Admin. Code** 1130 Section 7.5.1 dated 12/11/00 and 7.5.2 dated 12/11/00]*

i. For a minor permit modification, during the period of time between the time the Owner and/or Operator makes the change or changes proposed in the minor permit modification application and the time that the Department takes action on the application, the Owner and/or Operator shall comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this period the Owner and/or Operator, at its own risk, need not comply with the existing terms and conditions of this permit that it seeks to modify. *[Reference: 7 **DE Admin. Code** 1130 Section 7.5.1.5 dated 12/11/00 and 7.5.2.5 dated 12/11/00]*

ii. If the Owner and/or Operator fail to comply with its proposed permit terms and conditions during this time period, the existing terms and conditions of this permit may be enforced against the Owner and/or Operator. *[Reference: 7 **DE Admin. Code** 1130 Section 7.5.1.5 dated 12/11/00 and 7.5.2.5 dated 12/11/00]*

4. "Significant Permit Modification." When required, the Owner and/or Operator shall submit to the Department an application for a significant permit modification in accordance with 7 **DE Admin. Code** 1130 Section 7.5.3. *[Reference: 7 **DE Admin. Code** 1130 Section 7.5.3 dated 12/11/00]*

5.

i. When the Owner and/or Operator is required to meet the requirements under Section 112(g) of the Act or to obtain a preconstruction permit under 7 **DE Admin. Code** 1100, the Owner and/or Operator shall file a complete application to revise this permit within 12 months of commencing operation of the construction or modification. *[Reference: 7 **DE Admin. Code** 1130 Section 5.1.1.4 dated 11/15/93]*

ii. When the Owner and/or Operator is required to obtain a preconstruction permit, the Owner and/or Operator may submit an application to revise this permit for concurrent processing. The revision request for this permit when submitted for concurrent processing shall be submitted to the Department with the Owner and/or Operator's preconstruction review application or at such later time as the Department may allow. Where this permit would prohibit such construction or change in operation, the Owner and/or Operator shall obtain a permit revision before commencing operation. *[Reference: 7 **DE Admin. Code** 1102 Sections 11.2.10, 11.5 and 12.4, dated 6/11/06, and 7 **DE Admin. Code** 1130 Section 5.1.1.4 dated 11/15/93]*

iii. Where an application is not submitted for concurrent processing, the Owner and/or Operator shall obtain an operating permit under 7 **DE Admin. Code** 1100 prior to commencing operation of the construction or modification to cover the period between the date operation is commenced and until such time as operation is approved under 7 **DE Admin. Code** 1130. *[Reference: 7 **DE Admin. Code** 1102 Section 2.1 dated 6/11/06]*

6. "Permit Termination." The Owner and/or Operator may at any time apply for termination of this permit in accordance with 7 **DE Admin. Code** 1130 Section 7.8.4 or Section 7.8.5. *[Reference: 7 **DE Admin. Code** 1130 Sections 7.8.4 dated 12/11/00 and 7.8.5 dated 12/11/00]*

n. <u>Permit Transfer</u>.

1. A change in ownership or operational control of this facility shall be treated as an administrative permit amendment where the Department has determined that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new owner has been submitted to the Department. *[Reference: 7 **DE Admin. Code** 1130 Section 7.4.1.4 dated 12/11/00]*

2. In addition to any written agreement submitted by the Owner and/or Operator in accordance with Condition 2(n)(1), the Owner and/or Operator shall have on file at the Department a statement

meeting the requirements of 7 **Del. C.,** Ch 79, Section 7902. *This permit condition is state enforceable only*. *[Reference: 7 **Del. C.,** Ch 79 Section 7902 dated 8/28/2007]*

3. The written agreement required in Condition 2(n)(1) of this permit shall be provided to the Department within a minimum of 30 calendar days prior to the specific date for transfer and shall indicate that the transfer is agreeable to both the current and new owner. *[Reference: 7 **DE Admin. Code** 1102 Section 7.1 dated 6/1/97]*

o. Property Rights. This permit does not convey any property rights of any sort, or any exclusive privilege. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.7.4 dated 12/11/00]*

p. Risk Management Plan Submissions.

1. In the event this stationary source, as defined in the State of Delaware 7 **DE Admin. Code** 1201 "Accidental Release Prevention Regulation" Section 4.0, is subject to or becomes subject to Section 5.0 of 7 **DE Admin. Cod**e 1201 (as amended March 11, 2006), the owner or operator shall submit a risk management plan (RMP) to the Environmental Protection Agency's RMP Reporting Center by the date specified in Section 5.10 and required revisions as specified in Section 5.190. A certification statement shall also be submitted as mandated by Section 5.185. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.4 dated 12/11/00, 7 **DE Admin. Code** 1201 as amended March 11, 2006 and Delaware; Approval of Accidental Release Prevention Program, Federal Register Vol. 6, No. 11 pages 30818-22 dated June 8, 2001]*

2. If this stationary source, as defined in 7 **DE Admin. Code** 1201 Section 4.0, is not subject to Section 5.0 but is subject or becomes subject to Section 6.0 (as amended March 11, 2006), the owner or operator shall submit a Delaware RMP to the State of Delaware's Accidental Release Prevention group by the date as specified in Section 6.6.10 and required revisions as specified by Section 6.6.1. *Note: State enforceable only.* *[Reference: 7 **DE Admin. Code** 1201 as amended March 11, 2006]*

q. Protection of Stratospheric Ozone.

When applicable, this Facility shall comply with the following requirements: *[Reference: 40 CFR Part 82 "**Protection of Stratospheric Ozone**" revised as of 7/1/97 and 7 **DE Admin. Code** 1130 Section 2.0 dated 11/15/93]*

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:

   i. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a process that uses a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.

   ii. The placement of the required warning statement must comply with the requirements pursuant to §82.108.

   iii. The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.

   iv. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

2. Any person servicing, maintaining, or repairing appliances, except for motor vehicles, shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B. In addition, Subpart F applies to refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment.

   i. Persons owning appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to §82.154 and §82.156.

ii. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.

iii. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.

iv. Persons performing maintenance, service, repair, or disposal of appliances must certify with the Administrator pursuant to §82.158 and §82.162.

v. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like appliance" as defined at §82.152)

vi. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.

3. Owners/Operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR Part 82, Subpart F §82.166.

4. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A, "Production and Consumption Controls".

5. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, "Servicing of Motor Vehicle Air Conditioners".

   i. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant. These systems are regulated under 40 CFR Part 82, Subpart F.

6. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed as acceptable in the Significant new New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, Significant New Alternatives Policy Program.

r. **Severability**. The provisions of this permit are severable. If any part of this permit is held invalid, the application of such part to other persons or circumstances and the remainder of this permit shall not be affected thereby and shall remain valid and in effect. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 6.1.6 dated 12/11/00]*

Condition 3- Specific Requirements

a. **Emission Limitations, Emission Standards, Operational Limitations, and Operational Standards**. The Owner/Operator shall comply with the limitations and standards detailed in Condition 3 – Table 1 of this permit. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 6.1.1dated 12/11/00]*

b. **Compliance Determination Methodology (Monitoring, Testing, QA/QC Procedures, and Record Keeping).** The Owner/Operator shall maintain all of the information required under Conditions 3(b)(1) and 3(b)(2) of this permit for a minimum of 5 years from such information's date of record. *[Reference:* 7 ***DE Admin. Code*** *1130 Section 6.1.3.2.2 dated 12/11/00]*

1.

   i. Specific Requirements. The Owner/Operator shall comply with the operational limitations, monitoring, testing, and record keeping requirements detailed in Condition 3 – Table 1 which are

in addition to those in Condition 3(b)(2) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Sections 6.1.1 dated 12/11/00, 6.1.3.1 dated 12/11/00, and 6.1.10 dated 12/11/00]*

ii. General Testing Requirements. Upon written request of the Department, the Owner/Operator shall, at the Owner/Operator's expense, sample the emissions of, or fuel used by, an air contaminant emission source, maintain records, and submit reports to the Department on the results of such sampling. *[Reference: 7 **DE Admin. Code** 1117 Section 2.2 dated 7/17/84]*

iii. The Department must observe all stack emission testing and monitor certification testing including any test audits conducted on the monitors as part of the Quality Assurance Program for the results to be considered for acceptance unless the Department determines in advance, in writing, that the test need not be observed. Further, the Department may in its discretion determine based on its observation of the test that it need not observe the entire test. *[Reference 7 **DE Admin. Code** 1117 Section 2.2, dated 7/17/84]*

iv. All monitor performance specification testing and stack emissions testing shall require the submission of a "Source Sampling Guidelines and Preliminary Survey Form" which must be found acceptable to the Department at least 30 days prior to the testing. *[Reference 7 **DE Admin. Code** 1120, Section 1.4, dated 12/7/88]*

v. The results of all monitor performance specification testing and stack emission testing shall be submitted to the Department, in triplicate, within 60 days after completion of the testing. *[Reference 7 **DE Admin. Code** 1120, Section 1.4, dated 12/7/88]*

vi. Required continuous emissions monitors (CEMs) for criteria pollutants shall meet at least one of the following minimum data availability requirements. For purposes of calculating data availability, "process down" time shall be considered valid time.

A. In each calendar month, at least 90% of the time periods for which an emission standard or an operational parameter applies shall be valid.

B. In each calendar quarter, at least 95% of the hours shall be valid.
*[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*

2. General Record Keeping Requirements. The Owner/Operator shall record, at a minimum, all of the following information:

i. If required, for each operating scenario identified in Condition 3 – Table 1 of this permit, a log that indicates the operating scenario under which each particular emission unit is operating. The Owner and/or Operator shall, contemporaneously with changing from one operating scenario to another, record in this log the time at which the operating scenario under which it is operating is changed. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.10 dated 12/11/00]*

ii. The following information to the extent specified in Condition 3 – Table 1 of this permit. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2.1 dated 12/11/00]*

A. The date, place, and time of the sampling or measurements. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2.1.1 dated 12/11/00]*

B. The dates analyses were performed. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2.1.2 dated 12/11/00]*

C. The Owner and/or Operator or entity that performed the analyses. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2.1.3 dated 12/11/00]*

D. The analytical techniques or methods used. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.2.1.4 dated 12/11/00]*

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. <u>Reporting and Compliance Certification Requirements</u>.

1. <u>Specific Reporting/Certification Requirements</u>. 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. <u>General Reporting Requirements</u>.

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]*

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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
	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:

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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
displaced from storage vessels and during loading operations. The waste vent stream shall be introduced into the flame zone of unit 32-H-101 and the minimum firebox temperature for each three (3) hour loading cycle shall not be less than 50°F below 845°F (i.e., 795°F) which was the average firebox temperature recorded during the performance test following completion of construction. *[Reference: APC-81/0832 Condition No. 11]* B. As an alternative to Operational Limitation A, the benzene vent stream may be introduced with the fuel into process heater 32-H-101 or the alternate control device 29-H-101. [*Reference: Reg. No. 30, Section 6(a)(3)(i)(B) dated 12/11/00*] C. The benzene product flow in each rail car loading arm shall be restricted to 155 gallons per minute. The flow rate for simultaneous loading of tank trucks or rail cars shall not exceed a maximum of 620 gallons per minute. *[Reference: APC-81/0832 Condition 8]* D. Benzene loading operations shall not be carried out simultaneously in railcars and tanker trucks. *[Reference: APC-81/0832 Condition 5]* E. Benzene loading operations may be carried out only in accordance with all of the following scenarios: 1. When Process Heater 32-H-101 or 29-H-101 are operating properly. *[Reference: APC-81/0832 Condition 6]* 2. When the tanker trucks or railcars have been connected to the transfer rack's vapor collection system. *[Reference: APC-81/0832 Condition 14 and 40 CFR 63.126(e) dated 7/1/05]*	32-H-101 or 29-H-101 with the fuel will achieve compliance with the 98% destruction efficiency or exit concentration of 20 ppmvd corrected to 3% O_2. The stack test shall be conducted with each heater used as a control device. D. Compliance with Operational Limitation (C) for rail cars shall be based on flow restrictors sealed by the Division of Weights and Measures. Compliance for tank trucks shall be based on the quantity loaded and the loading time. E. Compliance with Operational Limitation (D) shall be determined by maintaining a log of all periods of loading tanker trucks and railcars. F. Compliance with Operational Limitation (E)(1) shall be based on compliance with Compliance Method (A) above. G. Compliance with Operational Limitation (E)(2) shall be based on record keeping of a log indicating that a DOT test label is present and valid. *[Reference: 40 CFR Part 63.130(e), 7/1/05 ed.]* H. Compliance with Operational Limitation (E)(3) shall be based on operation of the system according to manufacturer's specifications. I. Compliance with Operational Limitation (E)(4) shall be based upon record keeping. J. Compliance with Operational Limitation (E)(5) shall be based on record keeping. K. Compliance with Operational Limitation (E)(6) shall be based on the LDAR requirement of Table 1.fb.3.ii and record keeping. L. Compliance with Operational Limitation (E)(7) shall be based on compliance with 40 CFR 63.127(d)(2). iv. Monitoring/Testing Requirement: A. The Owner/Operator shall continuously monitor	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
3. Each vapor collection system shall be designed and operated such that the organic vapors collected at one loading arm will not pass through another loading arm in the rack to the atmosphere. *[Reference: **APC-81/0832** Condition No.15]* 4. For each Group 1 transfer rack the owner or operator shall load organic HAPs into only tank trucks and railcars which: a. Have a current certification in accordance with the U.S. Department of Transportation pressure test requirements of 49 CFR part 180 for tank trucks and 49 CFR 173.31 for railcars; or b. Have been demonstrated to be vapor-tight within the preceding 12 months, as determined by the procedures in Sec. 63.128(f) of this subpart. Vapor-tight means that the truck or railcar tank will sustain a pressure change of not more than 750 Pa within 5 minutes after it is pressurized to a minimum of 4,500 Pa. *[Reference 40 CFR 63.126(e) dated 7/1/05]* 5. The owner or operator of a transfer rack subject to the provisions of this subpart shall load organic HAPs to only tank trucks or railcars equipped with vapor collection equipment that is compatible with the transfer rack's vapor collection system. *[Reference: 40 CFR 63.126(f) dated 7/1/05]* 6. The owner or operator of a transfer rack subject to the provisions of this	the firebox temperature in Unit 32-H-101 during all benzene loading cycles. *[Reference: **APC-81/0832** Condition 11]* B. For the vapor collection system and storage tanks 331-TC-1, 332-TC-1 and 570-TC-10 the Owner and operator shall: *[Reference: 40 CFR Part 63.148, 7/1/05 ed.]* 1. Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. 2. For each fixed roof, cover, and enclosure, the owner or operator shall conduct initial visual inspections and semi-annual visual inspections for visible, audible, or olfactory indications of leaks as specified in 40 CFR Part 63 subpart G §63.133 through 63.137. 3. Leaks, as indicated by visual inspections, shall be repaired as soon as practicable, except as provided in paragraph (iv)(B)(4) below. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. Repair shall be completed no later than 15 calendar days after the leak is detected. 4. Delay of repair for which leaks have been detected is allowed if the repair is technically infeasible without a shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next shutdown. 5. For each vapor collection system or closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the owner or operator shall: a. Install, calibrate, maintain, and operate	

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
subpart shall ensure that no pressure-relief device in the transfer rack's vapor collection system or in the organic hazardous air pollutants loading equipment of each tank truck or railcar shall begin to open during loading. Pressure relief devices needed for safety purposes are not subject to this paragraph. *[Reference: 40 CFR 63.126(h) dated 7/1/05]* 7. Each valve in the vent system that would divert the vent stream to the atmosphere, either directly or indirectly, shall be secured in a non-diverting position using a carseal or a lock-and-key type configuration, or shall be equipped with a flow indicator. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief devices needed for safety purposes is not subject to this paragraph. *[Reference 40 CFR 63.126(i) dated 7/1/05]*	a flow indicator that determines whether vent stream flow is present at least once every 15 minutes. Records shall be generated as specified in §63.118(a)(3). The flow indicator shall be installed at the entrance to any bypass line; or b. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure the valve is maintained in the closed position and the vent stream is not diverted through the bypass line. c. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph. 6. Any parts of the vapor collection system, closed vent system, fixed roof, cover, or enclosure that are designated as unsafe to inspect are exempt from the inspection requirements of this section if: a. The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger; and b. The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times. *[Reference 7 **DE Admin Code** 1130 Section 6.1.3.1.1 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
	C. Conduct compliance stack testing of 32-H-101 and 29-H-101 in accordance with a Department approved protocol. *[Reference 7 **DE Admin Code** 1130 Section 6.1.3.1.1dated 12/11/00]* v. 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 Section 6.1.3.1.2 and 6.2.1 dated 12/11/00]* A. Continuous records of the firebox temperature monitored during all benzene loading cycles. *[Reference: **APC-81/0832** Condition No.12]* B. A log identifying the process heater operating as the control device. *[Reference: **APC-81/0832** Condition No.12]* C. Storage vessel records in accordance with Section 63.123 for all storage tanks at the Tetra unit. *[Reference: **APC-81/0832** Condition No.12]* D. Log showing periods of tanker truck and railcar loading. *[Reference: **APC-81/0832** Condition No.12]* E. The Company shall record the information specified as follows: 1. Identification of all parts of the vapor collection system, closed vent system, fixed roof cover, or enclosure that are designated as unsafe to inspect and therefore exempt from (iv)(B)(1) and (iv)(B)(2) above. 2. Identification of all parts of the vapor collection system, closed vent system, fixed roof cover, or enclosure that are designated as difficult to inspect, and therefore exempt from (iv)(B)(1) and (iv)(B)(2) above, with an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.	

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

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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
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]*

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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
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)	

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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 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	

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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
	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]*

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
	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
	time of the weekly inspection, the pump shall be monitored as specified in 40 CFR 63, Subpart H, §63.180(b) dated 7/1/00 to determine if there is a leak of organic HAP in the barrier fluid. b. If an instrument reading of 1,000 parts per million or greater is measured, a leak is detected. 5. Each sensor as described in paragraph (D)(3) of this section is observed daily or is equipped with an alarm. 6. Other leak determinations: a. The Owner/Operator determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both. b. If indications of liquids dripping from the pump seal exceed the criteria established in paragraph (D)(6)(a) of this section, or if, based on the criteria established in paragraph (D)(6)(a) of this section, the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected. c. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 9 of this unit. d. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. *[Reference: 40 CFR 63, Subpart H, §63.163(e) dated 7/1/00]*	

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
	E. Any pump that is designed with no externally actuated shaft penetrating the pump housing is exempt from the requirements of paragraphs (A) and (B) of this section. *[Reference: 40 CFR 63, Subpart H, §63.163(f) dated 7/1/00]* F. Any pump equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of Section 10 of this unit is exempt from the requirements of paragraphs (A) through (D) of this section. *[Reference: 40 CFR 63, Subpart H, §63.163(g) dated 7/1/00]* G. If more than 90 percent of the pumps at a process unit meet the criteria in either paragraph (D) or (E) of this section, the process unit is exempt from the requirements of paragraph (C) of this section. *[Reference: 40 CFR 63, Subpart H, §63.163(i) dated 7/1/00]* H. Any pump that is designated, as described as an unsafe-to-monitor pump is exempt from the requirements of paragraphs (A) through (D) of this section if: 1. The Owner/Operator of the pump determines that the pump is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (A) through (C) of this section; and 2. The Owner/Operator of the pump has a written plan that requires monitoring of the pump as frequently as practical during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. *[Reference: 40 CFR 63, Subpart H, §63.163(j) dated*	

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
	7/1/00] I. When each leak is detected the following requirements apply: 1. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. 2. The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and no leak has been detected during the follow-up monitoring. If the Owner/Operator elects to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in and no leak is detected during that monitoring. 3. The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to the provisions of Section 11(iii)(C)(1)(a), may be removed after it is repaired. *[Reference: 40 CFR 63, Subpart H, §63.162(f) dated 7/1/00]* 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. All records and information required by this section shall be maintained in a manner that can be readily accessed at the plant site. *[Reference: 40 CFR 63, Subpart H, §63.181(a) dated 7/1/00]* B. The following information pertaining to all equipment in each process unit subject to this	

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
	section shall be recorded: 1. A list of identification numbers for equipment that the Owner/Operator elects to equip with a closed-vent system and control device, under the provisions of paragraph (iii)(F) of this section. 2. The following information shall be recorded for each dual mechanical seal system: a. Design criteria required in paragraph (iii)(D)(6)(a) of this section and an explanation of the design criteria; and b. Any changes to these criteria and the reasons for the changes. 3. The following information pertaining to all pumps subject to the provisions of paragraph (iii)(H) of this section shall be recorded: a. Identification of equipment designated as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment. b. A list of identification numbers for the equipment that is designated as difficult to monitor, an explanation of why the equipment is difficult to monitor, and the planned schedule for monitoring this equipment. c. A list of identification numbers for connectors that are designated as unsafe to repair and an explanation why the connector is unsafe to repair. *[Reference: 40 CFR 63, Subpart H, §63.181(b) dated 7/1/00]* C. For visual inspections of equipment subject to the provisions of this section, the Owner/Operator shall document that the inspection was conducted and the date of the inspection. The Owner/Operator shall maintain	

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
	records as specified in paragraph (D) of this section for leaking equipment identified in this inspection. *[Reference: 40 CFR 63, Subpart H, §63.181(c) dated 7/1/00]* D. When a leak is detected, information shall be recorded and kept for 5 years as required by Section 12(iv)(C) of this unit. *[Reference: 40 CFR Part 63, Subpart 63.181(d), dated 7/1/2000]*	
3. **Compressors:** i. Operational Limitations: A. Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in paragraphs (iii)(E) and (iii)(F) of this section. *[Reference: 40 CFR 63, Subpart H, §63.164(a) dated 7/1/00]* B. Each compressor seal system as required in paragraph (A) of this section shall be: 1. Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or 2. Equipped with a barrier fluid system 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 3. Equipped with a closed-loop system that purges the barrier fluid directly into a process stream. *[Reference: 40 CFR 63, Subpart H, §63.164(b) dated 7/1/00]* C. The barrier fluid shall not be in light liquid service. *[Reference: 40 CFR 63, Subpart H, §63.164(c) dated 7/1/00]*	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. Each barrier fluid system as described in paragraphs (i)(A) through (i)(C) of this section shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. *[Reference: 40 CFR 63, Subpart H, §63.164(d) dated 7/1/00]* B. Leak Observations: 1. Each sensor as required in paragraph (A) of this section shall be observed daily or shall be equipped with an alarm. 2. The Owner/Operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. *[Reference: 40 CFR 63, Subpart H, §63.164(e) dated 7/1/00]* C. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under paragraph (B)(2) of this section, a leak is detected. *[Reference: 40 CFR 63, Subpart H, §63.164(f) dated 7/1/00]*	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]*

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
	D. 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 Section 9 of this unit. 2. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. *[Reference: 40 CFR 63, Subpart H, §63.164(g) dated 7/1/00]* E. A compressor is exempt from the requirements of this section if it is equipped with a closed-vent system to capture and transport leakage from the compressor drive shaft seal back to a process or a fuel gas system or to a control device that complies with the requirements of Section 10 of this unit. *[Reference: 40 CFR 63, Subpart H, §63.164(h) dated 7/1/00]* F. Any compressor that is designated, as described in paragraph (iv)(B)(2) of this unit, to operate with an instrument reading of less than 500 parts per million above background, is exempt from the requirements of this section if the compressor: 1. Is demonstrated to be operating with an instrument reading of less than 500 parts per million above background, as measured by the method specified in 40 CFR 63, Subpart H, §63.180(c) dated 7/1/00; and 2. Is tested for compliance with paragraph (F)(1) of this section initially upon designation, annually, and at other times requested by the Department. *[Reference: 40 CFR 63, Subpart H, §63.164(i) dated 7/1/00]* G. When each leak is detected the following requirements apply:	

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
	1. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. 2. The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and no leak has been detected during the follow-up monitoring. If the Owner/Operator elects to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in and no leak is detected during that monitoring. 3. The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to the provisions of Section 11(iii)(C)(1)(a), may be removed after it is repaired. *[Reference: 40 CFR 63, Subpart H, §63.162(f) dated 7/1/00]* 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. All records and information required by this section shall be maintained in a manner that can be readily accessed at the plant site. *[Reference: 40 CFR 63, Subpart H, §63.181(a) dated 7/1/00]* B. The following information pertaining to all equipment in each process unit subject to this section shall be recorded: 1. A list of identification numbers for equipment that the Owner/Operator elects	

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
	to equip with a closed-vent system and control device, under the provisions of paragraph (iii)(E) of this section. 2. A list of identification numbers for compressors that the Owner/Operator elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of paragraph (iii)(F) of this section. 3. The following information shall be recorded for each dual mechanical seal system: a. Design criteria required in paragraph (iii)(B)(2) of this section and an explanation of the design criteria; and b. Any changes to these criteria and the reasons for the changes. *[Reference: 40 CFR 63, Subpart H, §63.181(b) dated 7/1/00]* C. When a leak is detected, information shall be recorded and kept for 5 years as required by Section 12(iv)(C) of this unit. *[Reference: 40 CFR Part 63, Subpart 63.181(d), dated 7/1/2000]* D. The dates and results of each compliance test required for compressors subject to the provisions in paragraph (iii)(F) of this section. The results shall include: 1. The background level measured during each compliance test. 2. The maximum instrument reading measured at each piece of equipment during each compliance test. *[Reference: 40 CFR 63, Subpart H, §63.181(f) dated 7/1/00]*	
4. **Pressure Relief Devices in Gas/Vapor Service.** i. Emission Standard: Except during pressure releases, each	ii. Compliance Method: Compliance with this emission standard and these operation limitations will be demonstrated by adherence to the appropriate monitoring, testing,	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***

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
pressure relief device in gas/vapor service shall be operated with an instrument reading of less than 500 parts per million above background except as provided in paragraph (iii)(B) of this section, as measured by the method specified in 40 CFR 63, Subpart H, §63.180(c) dated 7/1/00. *[Reference: 40 CFR 63, Subpart H, §63.165(a) dated 7/1/00]*	QA/QC, and recordkeeping requirements. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.7.3 dated 12/11/00]* iii. Monitoring/Testing: A. Reseating Valves: 1. After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in Section 9 of this unit. 2. No later than 5 calendar days after the pressure release and being returned to organic HAP service, the pressure relief device shall be monitored to confirm the condition indicated by an instrument reading of less than 500 parts per million above background, as measured by the method specified in 40 CFR 63, Subpart H, §63.180(c) dated 7/1/00. *[Reference: 40 CFR 63, Subpart H, §63.165(b) dated 7/1/00]* B. Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in Section 10 of this unit is exempt from the requirements of paragraphs (i) and (iii)(A) of this section. *[Reference: 40 CFR 63, Subpart H, §63.165(c) dated 7/1/00]* C. Rupture Disks: 1. Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (i) and (iii)(A), provided the Owner/Operator complies	***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]*

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
	with the requirements in paragraph (C)(2). 2. After each pressure release, a rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in Section 9 of this unit. *[Reference: 40 CFR 63, Subpart H, §63.165(d) dated 7/1/00]* 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. All records and information required by this section shall be maintained in a manner that can be readily accessed at the plant site. *[Reference: 40 CFR 63, Subpart H, §63.181(a) dated 7/1/00]* B. The following information pertaining to all equipment in each process unit subject to this section shall be recorded: 1. A list of identification numbers for equipment that the Owner/Operator elects to equip with a closed-vent system and control device, under the provisions of paragraph (iii)(B) of this section. 2. A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of paragraph (iii)(A) of this section. *[Reference: 40 CFR 63, Subpart H, §63.181(b) dated 7/1/00]* C. When a leak is detected, information shall be recorded and kept for 5 years as required by section 12(v)(C) of this unit. *[Reference: 40 CFR 63, Subpart H, §63.181(d) dated 7/1/00]*	

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
5. **Sampling Connection Systems.** i. Operational Standards: A. Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system. Gases displaced during filling of the sample container are not required to be collected or captured. *[Reference: 40 CFR 63, Subpart H, §63.166(a) dated 7/1/00]* B. Each closed-purge, closed-loop, or closed-vent system as required in paragraph (A) of this section shall: 1. Return the purged process fluid directly to the process line; or 2. Collect and recycle the purged process fluid to a process; or 3. Be designed and operated to capture and transport the purged process fluid to a control device that complies with the requirements of Section 10 of this unit; or 4. Collect, store, and transport the purged process fluid to a system or facility identified in paragraph (B)(4)(a), (b), or (c) of this section. a. A waste management unit, as defined in 40 CFR 63, Subpart G, §63.111 dated 7/1/00, if the waste management unit is subject to, and operated in compliance with the provisions of subpart G applicable to group 1 wastewater streams. If the purged process fluid does not contain any organic HAP listed in Table 9 of subpart G, the waste management unit need not be subject to, and operated in compliance with the requirements of 40 CFR part 63, subpart G applicable to group 1 wastewater streams provided the facility has an NPDES	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: None. 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. All records and information required by this section shall be maintained in a manner that can be readily accessed at the plant site. *[Reference: 40 CFR 63, Subpart H, §63.181(a) dated 7/1/00]* B. When a leak is detected, information shall be recorded and kept for 5 years as required by section 12(C) of this unit. *[Reference: 40 CFR 63, Subpart H, §63.181(d) dated 7/1/00]*	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]*

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
permit or sends the wastewater to an NPDES permitted facility. b. A treatment, storage, or disposal facility subject to regulation under 40 CFR parts 262, 264, 265, or 266, all dated 7/1/00; or c. A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261 dated 7/1/00. *[Reference: 40 CFR 63, Subpart H, §63.166(b) dated 7/1/00]* C. In-situ sampling systems and sampling systems without purges are exempt from the requirements of Operational Standards (A) and (B). *[Reference: 40 CFR 63, Subpart H, §63.166(c) dated 7/1/00]*		

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. **Open-ended Valves or Lines.** i. Operational Standard: A. Equipment Requirements: 1. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in Operational Standards (D) and (E). 2. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. *[Reference: 40 CFR 63, Subpart H, §63.167(a) dated 7/1/00]* B. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. *[Reference: 40 CFR 63, Subpart H, §63.167(b) dated 7/1/00]* C. When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with Operational Standard (A) at all other times. *[Reference: 40 CFR 63, Subpart H, §63.167(c) dated 7/1/00]* D. Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of Operational Standards (A), (B) and (C). *[Reference: 40 CFR 63, Subpart H, §63.167(d) dated 7/1/00]* E. Open-ended valves or lines containing materials which would autocatalytically polymerize or, would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed	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: None. iv. Recordkeeping: In addition to the requirements of Conditions 3(b)(1)(ii) of this permit, the Company shall: 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: 40 CFR 63, Subpart H, §63.181(a) dated 7/1/00]*	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]*

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
system as specified in Operational Standards (A) through (C) are exempt from the requirements of Operational Standards (A) through (C). *[Reference: 40 CFR 63, Subpart H, §63.167(e) dated 7/1/00]*		
7. **Valves in Gas/Vapor Service and in Light Liquid Service.** i. Emission Standard: The Owner/Operator shall monitor and repair valves that are either in gas service or in light liquid service according to the provisions of this section. *[Reference: 40 CFR 63, Subpart H, §63.168(a) dated 7/1/00]*	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 source subject to this subpart shall monitor all valves, except as provided in paragraphs (F) and (G) of this section, at the intervals specified in paragraph (B) of this section and shall comply with all other provisions of this section, except as provided in Section 9 of this unit. 1. The valves shall be monitored to detect leaks by the method specified in 40 CFR 63, Subpart H, §63.180(b) dated 7/1/00. 2. The instrument reading that defines a leak in each phase of the standard is 500 parts per million or greater. *[Reference: 40 CFR 63, Subpart H, §63.168(b) dated 7/1/00]* B. The Owner/Operator shall monitor valves for leaks at the intervals specified below: 1. At process units with 2 percent or greater leaking valves, calculated according to paragraph (C) of this section, the Owner/Operator shall monitor each valve once per month or implement a Quality Improvement program for valves that comply with the requirements of §63.175(d) and (e) and monitor on a quarterly basis.	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]*

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
	2. At process units with less than 2 percent leaking valves, the Owner/Operator shall monitor each valve once each quarter, except as provided in paragraphs (B)(3) and (B)(4) of this section. 3. At process units with less than 1 percent leaking valves, the Owner/Operator may elect to monitor each valve once every 2 quarters. 4. At process units with less than 0.5 percent leaking valves, the Owner/Operator may elect to monitor each valve once every 4 quarters. *[Reference: 40 CFR 63, Subpart H, §63.168(d) dated 7/1/00]* C. Calculating Leaking Valves: 1. Percent leaking valves at a process unit shall be determined by the following equation: $\%V_L=(V_L/(V_T+V_C)) \times 100$ where: $\%V_L$= Percent leaking valves as determined through periodic monitoring. V_L= Number of valves found leaking excluding non-repairables as provided in paragraph (C)(3)(a) of this section. V_T= Total valves monitored, in a monitoring period excluding valves monitored as required by (D)(3) of this section. V_C= Optional credit for removed valves=0.67 x net number (i.e., total removed-total added) of valves in organic HAP service removed from process unit after	

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
	October 24, 1994 or after the date of initial startup for new sources. If credits are not taken, then V_C=0. 2. For use in determining monitoring frequency, as specified in paragraph (B) of this section, the percent leaking valves shall be calculated as a rolling average of two consecutive monitoring periods for monthly, quarterly, or semiannual monitoring programs; and as an average of any three out of four consecutive monitoring periods for annual monitoring programs. 3. Non-repairable valves: a. Non-repairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and non-repairable and as required to comply with paragraph (C)(3)(b) of this section. Otherwise, a number of non-repairable valves (identified and included in the percent leaking calculation in a previous period) up to a maximum of 1 percent of the total number of valves in organic HAP service at a process unit may be excluded from calculation of percent leaking valves for subsequent monitoring periods. b. If the number of non-repairable valves exceeds 1 percent of the total number of valves in organic HAP service at a process unit, the number of non-repairable valves exceeding 1 percent of the total number of valves in organic HAP service shall be included	

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
	in the calculation of percent leaking valves. *[Reference: 40 CFR 63, Subpart H, §63.168(e) dated 7/1/00]* D. Leak repair: 1. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in Condition 3 – Table 1.bb.9 (Delay of Repair). 2. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. 3. When a leak has been repaired, the valve shall be monitored at least once within the first 3 months after its repair. a. The monitoring shall be conducted as specified in 40 CFR 63, Subpart H, §63.180 (b) and (c) dated 7/1/00, as appropriate, to determine whether the valve has resumed leaking. b. Periodic monitoring required by paragraphs (A) and (B) of this section may be used to satisfy the requirements of this paragraph (D)(3) if the timing of the monitoring period coincides with the time specified in this paragraph (D)(3). Alternatively, other monitoring may be performed to satisfy the requirements of this paragraph (D)(3), regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in this paragraph (D)(3). c. If a leak is detected by monitoring that is conducted pursuant to paragraph (D)(3) of this section, 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
	Owner/Operator shall follow the following provisions to determine whether that valve must be counted as a leaking valve for purposes of paragraph (C) of this subpart. i. If the Owner/Operator elected to use periodic monitoring required by paragraphs (A) and (B) of this section to satisfy the requirements of paragraph (D)(3) of this section, then the valve shall be counted as a leaking valve. ii. If the Owner/Operator elected to use other monitoring, prior to the periodic monitoring required by paragraphs (A) and (B), to satisfy the requirements of paragraph (D)(3), then the valve shall be counted as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking. *[Reference: 40 CFR 63, Subpart H, §63.168(f) dated 7/1/00]* E. First attempts at repair include, but are not limited to, the following practices where practicable: 1. Tightening of bonnet bolts, 2. Replacement of bonnet bolts, 3. Tightening of packing gland nuts, and 4. Injection of lubricant into lubricated packing. *[Reference: 40 CFR 63, Subpart H, §63.168(g) dated 7/1/00]* F. Any valve that is designated as unsafe-to-monitor is exempt from the requirements of paragraphs (A) through (D) of this section if: 1. The Owner/Operator determines that 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
	valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (A) and (B) of this section; and 2. The Owner/Operator has a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. *[Reference: 40 CFR 63, Subpart H, §63.168(h) dated 7/1/00]* G. Any valve that is designated as a difficult-to-monitor valve is exempt from the requirements of paragraphs (A) and (B) of this section if: 1. The Owner/Operator determines that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at any time in a safe manner; 2. The process unit within which the valve is located is an existing source or the Owner/Operator designates less than 3 percent of the total number of valves in a new source as difficult-to-monitor; and 3. The Owner/Operator follows a written plan that requires monitoring of the valve at least once per calendar year. *[Reference: 40 CFR 63, Subpart H, §63.168(i) dated 7/1/00]* H. When each leak is detected the following requirements apply: 1. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. 2. The identification on a valve may be	

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
	removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and no leak has been detected during the follow-up monitoring. If the Owner/Operator elects to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in and no leak is detected during that monitoring. 3. The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to the provisions of Section 11(iii)(C)(1)(a), may be removed after it is repaired. *[Reference: 40 CFR 63, Subpart H, §63.162(f) dated 7/1/00]* iv. Recordkeeping: In addition to the requirements of Conditions 3(b)(1)(ii) and 3(b)(2) of this permit, the Company shall: 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: 40 CFR 63, Subpart H, §63.181(a) dated 7/1/00]* B. The following information pertaining to all equipment in each process unit subject to this section shall be recorded: 1. A schedule for monitoring valves subject to the provisions of paragraph (iii)(B) of this section. 2. The following information pertaining to all valves subject to the provisions of paragraphs (iii)(F) and (G) of this section shall be recorded: a. Identification of equipment designated	

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
	as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment. b. A list of identification numbers for the equipment that is designated as difficult to monitor, an explanation of why the equipment is difficult to monitor, and the planned schedule for monitoring this equipment. 3. A list of valves removed from and added to the process unit, as described in paragraph (iii)(C)(1) of this section, if the net credits for removed valves is expected to be used. *[Reference: 40 CFR 63, Subpart H, §63.181(b) dated 7/1/00]* C. When a leak is detected, information shall be recorded and kept for 5 years as required by section 12(iv)(C) of this unit. *[Reference: 40 CFR 63, Subpart H, §63.181(d) dated 7/1/00]*	
8. **Pumps, Valves, Connectors, and Agitators in Heavy Liquid Service; Instrumentation Systems; and Pressure Relief Devices in Liquid Service.** i. Emission Standard: The Owner/Operator shall monitor and repair pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service according to the provisions of this section. *[Reference: 40 CFR 63, Subpart H, §63.169(a) dated 7/1/00]*	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. Pumps, valves, connectors, and agitators in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and instrumentation systems shall be monitored within 5 calendar days by the method specified in 40 CFR 63, Subpart H, §63.180(b) dated 7/1/00, if evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method. If such a potential leak is repaired as required in paragraphs (C) and (D) of this section, it is not	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]*

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
	necessary to monitor the system for leaks by the method specified in 40 CFR 63, Subpart H, §63.180(b) dated 7/1/00. *[Reference: 40 CFR 63, Subpart H, §63.169(a) dated 7/1/00]* B. If an instrument reading of 10,000 parts per million or greater for agitators, 2,000 parts per million or greater for pumps, or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected. *[Reference: 40 CFR 63, Subpart H, §63.169(b) dated 7/1/00]* C. 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 Section 9 of this unit. 2. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. 3. For equipment identified in paragraph (A) of this section that is not monitored by the method specified in 40 CFR 63, Subpart H, §63.180(b) dated 7/1/00, repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure. *[Reference: 40 CFR 63, Subpart H, §63.169(c) dated 7/1/00]* D. First attempts at repair include, but are not limited to, the practices described under paragraphs 2(iii)(B)(2) and 7(iii)(E) of this unit, for pumps and valves, respectively. *[Reference: 40 CFR 63, Subpart H, §63.169(d) dated 7/1/00]* E. When each leak is detected the following	

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
	requirements apply: 1. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. 2. The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and no leak has been detected during the follow-up monitoring. If the Owner/Operator elects to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in and no leak is detected during that monitoring. 3. The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to the provisions of Section 11(iii)(C)(1)(a), may be removed after it is repaired. *[Reference: 40 CFR 63, Subpart H, §63.162(f) dated 7/1/00]* 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. All records and information required by this section shall be maintained in a manner that can be readily accessed at the plant site. *[Reference: 40 CFR 63, Subpart H, §63.181(a) dated 7/1/00]* B. The following information pertaining to all equipment in each process unit subject to this section shall be recorded: 1. Identification of instrumentation systems subject to the provisions of this subpart.	

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
	2. Individual components in an instrumentation system need not be identified. *[Reference: 40 CFR 63, Subpart H, §63.181(b) dated 7/1/00]* C. The dates and results of the monitoring following a pressure release for each pressure relief device subject to the provisions in paragraphs (i)(A) and (iii)(A) of this section. The results shall include: 1. The background level measured during each compliance test. 2. The maximum instrument reading measured at each piece of equipment during each compliance test. *[Reference: 40 CFR 63, Subpart H, §63.181(f) dated 7/1/00]* D. Owner/Operator of equipment in heavy liquid service shall comply with the requirements of either paragraph (C)(1) or (C)(2) of this section, as provided in paragraph (C)(3) of this section. 1. Retain information, data, and analyses used to determine that a piece of equipment is in heavy liquid service. 2. When requested by the Department, demonstrate that the piece of equipment or process is in heavy liquid service. 3. A determination or demonstration that a piece of equipment or process is in heavy liquid service shall include an analysis or demonstration that the process fluids do not meet the definition of "in light liquid service." Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.	

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
	[Reference: 40 CFR 63, Subpart H, §63.181(i) dated 7/1/00]	
9. **Delay of Repair.** i. Operational Standard: A. Delay of repair of equipment for which leaks have been detected is allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown. *[Reference: 40 CFR 63, Subpart H, §63.171(a) dated 12/14/00]* B. Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in organic HAP service. *[Reference: 40 CFR 63, Subpart H, §63.171(b) dated 7/1/00]* C. Delay of repair for valves, connectors, and agitators is also allowed if: 1. The Owner/Operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and 2. When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with Section 10 of this unit. *[Reference: 40 CFR 63, Subpart H, §63.171(c) dated 7/1/00]* D. Delay of repair for pumps is also allowed if: 1. Repair requires replacing the existing seal design with a new system that the Owner/Operator has determined under the provisions of 40 CFR 63, Subpart H, §63.176(d) dated 7/1/00 will provide better performance or: a. A dual mechanical seal system that	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: None required for this section. iv. Recordkeeping: All records and information required by this section shall be maintained in a manner that can be readily accessed at the plant site. *[Reference: 40 CFR 63, Subpart H, §63.181(a) dated 7/1/00]*	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]*

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
meets the requirements of Section (2)(iii)(D) of this unit, b. A pump that meets the requirements of Section (2)(iii)(E) of this unit, or c. A closed-vent system and control device that meets the requirements of Section (2)(iii)(F) of this unit; and 2. Repair is completed as soon as practicable, but not later than 6 months after the leak was detected. *[Reference: 40 CFR 63, Subpart H, §63.171(d) dated 7/1/00]* E. Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown. *[Reference: 40 CFR 63, Subpart H, §63.171(e) dated 7/1/00]*		
10. **Closed-vent Systems and Control Devices.** i. Operational Standards: A. Owners or operators of closed-vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section. *[Reference: 40 CFR 63, Subpart H, §63.172(a) dated 7/1/00]* B. Recovery or recapture devices (e.g., condensers and absorbers) shall be designed and operated to recover the organic hazardous air pollutant emissions or volatile organic compounds emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per	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. Except as provided in paragraphs (F) and (G) of this section, each closed-vent system shall be inspected according to the procedures and schedule specified in paragraphs (A)(1) and (A)(2) of this section. 1. If the closed-vent system is constructed of	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]*

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
million by volume, whichever is less stringent. *[Reference: 40 CFR 63, Subpart H, §63.172(b) dated 7/1/00]* C. Enclosed combustion devices shall be designed and operated to reduce the organic hazardous air pollutant emissions or volatile organic compounds emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent, or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 deg. C. *[Reference: 40 CFR 63, Subpart H, §63.172(c) dated 7/1/00]* D. Flares used to comply with this subpart shall comply with the requirements of 40 CFR 63, Subpart A, §63.11(b) dated 7/1/00. (Covered as part of Unit 12.) *[Reference: 40 CFR 63, Subpart H, §63.172(d) dated 7/1/00]* E. Owners or operators of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design. *[Reference: 40 CFR 63, Subpart H, §63.172(e) dated 7/1/00]* F. Whenever organic HAP emissions are vented to a closed-vent system or control device used to comply with the provisions of this subpart, such system or control device shall be operating. *[Reference: 40 CFR 63, Subpart H, §63.172(m) dated 7/1/00]*	hard-piping, the Owner/Operator shall: a. Conduct an initial inspection according to the procedures in paragraph (B) of this section, and b. Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. 2. If the vapor collection system or closed-vent system is constructed of duct work, the Owner/Operator shall: a. Conduct an initial inspection according to the procedures in paragraph (B) of this section, and b. Conduct annual inspections according to the procedures in paragraph (B) of this section. *[Reference: 40 CFR 63, Subpart H, §63.172(f) dated 7/1/00]* B. Each closed-vent system shall be inspected according to the procedures in 40 CFR 63, Subpart H, §63.180(b) dated 7/1/00 of this subpart. *[Reference: 40 CFR 63, Subpart H, §63.172(g) dated 7/1/00]* C. Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in paragraph (D) of this section. 1. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. 2. Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in paragraph (D) of this section. *[Reference: 40 CFR 63, Subpart H, §63.172(h) dated 7/1/00]* D. Delay of repair of a closed-vent system for which leaks have been detected is allowed if	

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
	the repair is technically infeasible without a process unit shutdown or if the Owner/Operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown. *[Reference: 40 CFR 63, Subpart H, §63.172(i) dated 7/1/00]* E. For each closed-vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the Owner/Operator shall comply with the provisions of either paragraph (E)(1) or (E)(2) of this section, except as provided in paragraph (E)(3) of this section. 1. Install, set or adjust, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in 40 CFR 63, Subpart G, §63.118(a)(3) dated 7/1/00. The flow indicator shall be installed at the entrance to any bypass line; or 2. Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line. 3. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph. *[Reference: 40 CFR 63, Subpart H, §63.172(j) dated 7/1/00]*	

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
	F. Any parts of the closed-vent system that are designated as unsafe to inspect are exempt from the inspection requirements of paragraphs (A)(1) and (A)(2) of this section if: 1. The Owner/Operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraph (A)(1) or (A)(2) of this section; and 2. The Owner/Operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times, but not more frequently than annually. *[Reference: 40 CFR 63, Subpart H, §63.172(k) dated 7/1/00]* G. Any parts of the closed-vent system that are designated as difficult to inspect are exempt from the inspection requirements of paragraphs (A)(1) and (a)(2) of this section if: 1. The Owner/Operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and 2. The Owner/Operator has a written plan that requires inspection of the equipment at least once every 5 years. *[Reference: 40 CFR 63, Subpart H, §63.172(l) dated 7/1/00]* H. When each leak is detected the following requirements apply: 1. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. 2. The identification on a valve may be removed after it has been monitored as	

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
	specified in 40 CFR 63.168(f)(3) and no leak has been detected during the follow-up monitoring. If the Owner/Operator elects to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in and no leak is detected during that monitoring. 3. The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to the provisions of Section 11(iii)(C)(1)(a), may be removed after it is repaired. *[Reference: 40 CFR 63, Subpart H, §63.162(f) dated 7/1/00]* iv. Recordkeeping: In addition to the requirements of Conditions 3(b)(1)(ii) and 3(b)(2) of this permit, the Company shall: 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: 40 CFR 63, Subpart H, §63.181(a) dated 7/1/00]* B. When a leak is detected, information shall be recorded and kept for 5 years as required by section 12(C) of this unit. *[Reference: 40 CFR 63, Subpart H, §63.181(d) dated 7/1/00]* C. The Owner/Operator shall maintain records of the information specified in paragraphs (C)(1) through (C)(3) of this section for closed-vent systems and control devices. The records specified in paragraph (C)(1) of this section shall be retained for the life of the equipment. The records specified in paragraphs (C)(2) and (C)(3) of this section shall be retained for 5	

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
	years. 1. The following design specifications and performance demonstrations: a. Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams. b. The dates and descriptions of any changes in the design specifications. c. The flare design (i.e., steam-assisted, air-assisted, or non-assisted) and the results of the compliance demonstration required by §63.11(b). d. A description of the parameter or parameters monitored, as required in paragraph (i)(E) of this unit, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring. 2. Records of operation of closed-vent systems and control devices, as specified in paragraphs (C)(2)(a) through (C)(2)(c) of this section. a. Dates and durations when the closed-vent systems and control devices required in sections 2 through 5 of this unit are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame. b. Dates and durations during which the monitoring system or monitoring device is inoperative. c. Dates and durations of start-ups and shutdowns of control devices required	

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
	in sections 2 through 5 of this unit. 3. Records of inspections of closed-vent systems, as specified in paragraphs (C)(3)(a) and (C)(3)(b) of this section. a. For each inspection conducted in accordance with the provisions of paragraphs (iii)(A)(1) and (2) of this section during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. b. For each inspection conducted in accordance with the provisions of paragraphs (iii)(A)(1) and (2) of this section during which leaks were detected, the information specified in section 11(C) of this unit shall be recorded. *[Reference: 40 CFR 63, Subpart H, §63.181(g) dated 7/1/00]*	
11. **Connectors in Gas/vapor Service and in Light Liquid Service.** i. Emission Limitation: The Owner/Operator shall monitor all connectors in gas/vapor service and in light liquid service according to the provisions of this section. *[Reference: 40 CFR 63, Subpart H, §63.174(a) dated 7/1/00]*	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 shall monitor all connectors in gas/vapor and light liquid service, except as provided in paragraphs (E) through (G) of this section, at the intervals specified in paragraph (B) of this section. 1. The connectors shall be monitored to detect leaks by the method specified in 40 CFR 63, Subpart H, §63.180(b) dated 7/1/00. 2. If an instrument reading greater than or equal to 500 parts per million is measured, a	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]*

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
	leak is detected. *[Reference: 40 CFR 63, Subpart H, §63.174(a) dated 7/1/00]* B. The Owner/Operator shall monitor for leaks at the frequencies specified in paragraphs (B)(1) through (B)(5) of this section except as provided in paragraph (C)(2) of this section. 1. Once per year (i.e., 12-month period), if the percent leaking connectors in the process unit was 0.5 percent or greater during the last required annual or biennial monitoring period. 2. Once every 2 years, if the percent leaking connectors was less than 0.5 percent during the last required monitoring period. The Owner/Operator may comply with this paragraph by monitoring at least 40 percent of the connectors in the first year and the remainder of the connectors in the second year. The percent leaking connectors will be calculated for the total of all monitoring performed during the 2-year period. 3. If the Owner/Operator of a process unit in a biennial leak detection and repair program calculates less than 0.5 percent leaking connectors from the 2-year monitoring period, the Owner/Operator may monitor the connectors one time every 4 years. The Owner/Operator may comply with the requirements of this paragraph by monitoring at least 20 percent of the connectors each year until all connectors have been monitored within 4 years. 4. If a process unit complying with the requirements of paragraph (B) of this section using a 4-year monitoring interval program has greater than or equal to 0.5 percent but less than 1 percent leaking connectors, the Owner/Operator shall increase the monitoring frequency to one time every 2 years. 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
	Owner/Operator may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors in the first year and the remainder of the connectors in the second year. The Owner/Operator may again elect to use the provisions of paragraph (B)(3) of this section when the percent leaking connectors decreases to less than 0.5 percent. 5. If a process unit complying with requirements of paragraph (B)(3) of this section using a 4-year monitoring interval program has 1 percent or greater leaking connectors, the Owner/Operator shall increase the monitoring frequency to one time per year. The Owner/Operator may again elect to use the provisions of paragraph (B)(3) of this section when the percent leaking connectors decreases to less than 0.5 percent. *[Reference: 40 CFR 63, Subpart H, §63.174(b) dated 7/1/00]* C. Other Monitoring: 1. Opened connectors: a. Except as provided in paragraph (C)(1)(b) of this section, each connector that has been opened or has otherwise had the seal broken shall be monitored for leaks when it is reconnected or within the first 3 months after being returned to organic hazardous air pollutants service. If the monitoring detects a leak, it shall be repaired according to the provisions of paragraph (D) of this section, unless it is determined to be non-repairable, in which case it is counted as a non-repairable connector for the purposes of paragraph (H) of this section. b. As an alternative to the requirements in paragraph (C)(1)(a) of this section, an	

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
	Owner/Operator may choose not to monitor connectors that have been opened or otherwise had the seal broken. In this case, the Owner/Operator may not count non-repairable connectors for the purposes of paragraph (H) of this section. The Owner/Operator shall calculate the percent leaking connectors for the monitoring periods described in paragraph (B) of this section, by setting the non-repairable component, C_{AN}, in the equation in paragraph (H)(2) of this section to zero for all monitoring periods. c. An Owner/Operator may switch alternatives described in paragraphs (C)(1)(a) and (b) of this section at the end of the current monitoring period he is in, provided that it is reported as required in Section 12 of this unit and begin the new alternative in annual monitoring. The initial monitoring in the new alternative shall be completed no later than 12 months after reporting the switch. 2. As an alternative to the requirements of paragraph (B) of this section, each screwed connector 2 inches or less in nominal inside diameter installed in a process unit before December 31, 1992, may: a. Comply with the requirements of Section 8 of this unit, and b. Be monitored for leaks within the first 3 months after being returned to organic hazardous air pollutants service after having been opened or otherwise had the seal broken. If that monitoring detects a leak, it shall be	

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
	repaired according to the provisions of paragraph (D) of this section. *[Reference: 40 CFR 63, Subpart H, §63.174(c) dated 7/1/00]* D. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (F) of this section and in Section 9 of this unit. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. *[Reference: 40 CFR 63, Subpart H, §63.174(d) dated 7/1/00]* E. Any connector that is designated as an unsafe-to-monitor, difficult to monitor, or unsafe to inspect connector is exempt from the requirements of paragraph (A) of this section if: 1. The Owner/Operator determines that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with paragraphs (A) through (D) of this section; and 2. The Owner/Operator has a written plan that requires monitoring of the connector as frequently as practicable during safe to monitor periods, but not more frequently than the periodic schedule otherwise applicable. *[Reference: 40 CFR 63, Subpart H, §63.174(f) dated 7/1/00]* F. Any connector that is designated as an unsafe-to-repair connector is exempt from the requirements of paragraphs (A) and (D) of this section if: 1. The Owner/Operator determines that repair personnel would be exposed to an immediate danger as a consequence of complying with paragraph (D) of this section; and	

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
	2. The connector will be repaired before the end of the next scheduled process unit shutdown. *[Reference: 40 CFR 63, Subpart H, §63.174(g) dated 7/1/00]* G. Inaccessible/Ceramic connectors 1. Any connector that is inaccessible or is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of paragraphs (A) and (D) of this section and from the recordkeeping and reporting requirements of Section 12 of this unit. An inaccessible connector is one that is: a. Buried; b. Insulated in a manner that prevents access to the connector by a monitor probe; c. Obstructed by equipment or piping that prevents access to the connector by a monitor probe; d. Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to connectors up to 7.6 meters (25 feet) above the ground; e. Inaccessible because it would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold; or f. Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would	

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
	require near proximity to hazards such as electrical lines, or would risk damage to equipment. 2. If any inaccessible or ceramic or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the leak shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in Section 9 of this unit and paragraph (F) of this section. 3. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. *[Reference: 40 CFR 63, Subpart H, §63.174(h) dated 7/1/00]* H. For use in determining the monitoring frequency, subsequent to the first monitoring period for connectors as specified in paragraph (B) of this section, the percent leaking connectors shall be calculated using the following equation: $\%C_L = [(C_L - C_{AN})/(C_t + C_C)] \times 100$ where: $\%C_L$= Percent leaking connectors as determined through periodic monitoring required in paragraphs (A) and (B) of this section. C_L= Number of connectors, including non-repairables, measured at 500 parts per million or greater, by the method specified in 40 CFR 63, Subpart H, §63.180(b) dated 7/1/00. C_{AN}= Number of allowable non-repairable connectors, as determined by monitoring required in paragraphs (B)(3) and (C) of this section, not to	

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
	exceed 2 percent of the total connector population, C_t. C_t= Total number of monitored connectors, including non-repairables, in the process unit. C_C= Optional credit for removed connectors = 0.67 x net (i.e., total removed-total added) number of connectors in organic hazardous air pollutants service removed from the process unit after October 24, 1994. If credits are not taken, then C_C= 0. *[Reference: 40 CFR 63, Subpart H, §63.174(i) dated 7/1/00]* I. Optional credit for removed connectors. If an Owner/Operator eliminates a connector subject to monitoring under paragraph (B) of this section, the Owner/Operator may receive credit for elimination of the connector, as described in paragraph (H) of this section, provided the requirements in paragraphs (I)(1) through (I)(4) are met. 1. The connector was welded after December 31, 1992. 2. The integrity of the weld is demonstrated by monitoring it according to the procedures in 40 CFR 63, Subpart H, §63.180(b) or by testing using X-ray, acoustic monitoring, hydrotesting, or other applicable method. 3. Welds created after December 31, 1992 but before October 24, 1994 were monitored or tested by January 24, 1995. 4. Welds created after December 31, 1994 are monitored or tested within 3 months after being welded. 5. If an inadequate weld is found or the connector is not welded completely around the circumference, the connector is not	

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
	considered a welded connector and is therefore not exempt from the provisions of this subpart. *[Reference: 40 CFR 63, Subpart H, §63.174(j) dated 7/1/00]* J. When each leak is detected the following requirements apply: 1. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. 2. The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and no leak has been detected during the follow-up monitoring. If the Owner/Operator elects to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in and no leak is detected during that monitoring. 3. The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to the provisions of Section 11(iii)(C)(1)(a), may be removed after it is repaired. *[Reference: 40 CFR 63, Subpart H, §63.162(f) dated 7/1/00]* 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. All records and information required by this section shall be maintained in a manner that can be readily accessed at the plant site.	

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
	[Reference: 40 CFR 63, Subpart H, §63.181(a) dated 7/1/00] B. The following information pertaining to all equipment in each process unit subject sections 2 through 11 shall be recorded: 1. A schedule for monitoring connectors subject to the provisions of paragraph 7(iii)(B) of this section. 2. Identification of screwed connectors subject to the requirements of paragraph (iii)(C)(2) of this section. Identification can be by area or grouping as long as the total number within each group or area is recorded. 3. The following information pertaining to all connectors subject to the provisions of paragraphs (iii)(E) and (F) of this section shall be recorded: a. Identification of equipment designated as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment. b. A list of identification numbers for the equipment that is designated as difficult to monitor, an explanation of why the equipment is difficult to monitor, and the planned schedule for monitoring this equipment. c. A list of identification numbers for connectors that are designated as unsafe to repair and an explanation why the connector is unsafe to repair. 4. A list of connectors removed from and added to the process unit, as described in (iii)(H) of this section, and documentation of the integrity of the weld for any removed connectors, as required in paragraph (iii)(J) of this section. This is not	

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
	required unless the net credits for removed connectors are expected to be used. *[Reference: 40 CFR 63, Subpart H, §63.181(b) dated 7/1/00]* C. When a leak is detected, information shall be recorded and kept for 5 years as required by section 12(iv)(C) of this unit. *[Reference: 40 CFR 63, Subpart H, §63.181(d) dated 7/1/00]*	
12. **General Recordkeeping and Reporting Requirements.** i. Operational Limitations: None.	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: None. iv. Recordkeeping: In addition to the requirements of Conditions 3(b)(1)(ii) and 3(b)(2) of this permit, the Company shall: A. All records and information required by this unit shall be maintained in a manner that can be readily accessed at the plant site. This could include physically locating the records at the plant site or accessing the records from a central location by computer at the plant site. *[Reference: 40 CFR 63, Subpart H, §63.181(a) dated 7/1/00]* B. The following information pertaining to all equipment in each process unit subject to the requirements in Sections 1 - 11 of this unit shall be recorded: 1. A list of identification numbers for equipment (except connectors exempt from monitoring and recordkeeping identified in Section 11 and	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. The Owner/Operator shall submit Periodic Reports containing the information in paragraphs (C) and (D) of this section shall be submitted semiannually by January 19 and July 19 of each year. Each periodic report shall cover the previous 6 month period of May 1 - November 31 and December 1 - April 30 respectively. *[Reference: 40 CFR 63, Subpart H, §63.182(d)(1) dated 7/1/00]* C. For each process unit complying with the provisions of sections 2 through 11 of this unit, the summary information listed in paragraphs (1) through (12) of this section for each monitoring period during the 6-month period. 1. The number of valves for which leaks were detected as described in section 7(iii)(A) of this unit, the percent leakers, and the total number of valves monitored; 2. The number of valves for which leaks were not repaired as required in section 7(iii)(D) of this unit, identifying the number of those that are determined

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
	instrumentation systems) subject to the requirements of this unit. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this subpart are identified as a group, and the number of connectors subject is indicated. 2. Physical tagging of the equipment to indicate that it is in organic HAP service is not required. Equipment subject to the provisions of this subpart may be identified on a plant site plan, in log entries, or by other appropriate methods. *[Reference: 40 CFR 63, Subpart H, §63.181(b) dated 7/1/00]* C. When each leak is detected, the following information shall be recorded and kept for 5 years: 1. The instrument and the equipment identification number and the operator name, initials, or identification number. 2. The date the leak was detected and the date of first attempt to repair the leak. 3. The date of successful repair of the leak. 4. Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A dated 7/1/00, after it is successfully repaired or determined to be non-repairable. 5. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. a. The Owner/Operator may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup/shutdown/malfunction plan, required by Section 1 of this unit, for	non-repairable; 3. The number of pumps for which leaks were detected as described in section 2(iii)(A) of this unit, the percent leakers, and the total number of pumps monitored; 4. The number of pumps for which leaks were not repaired as required in section 2(iii)(B) of this unit; 5. The number of compressors for which leaks were detected as described in section 3(iii)(C) of this unit; 6. The number of compressors for which leaks were not repaired as required in section 3(iii)(D) of this unit; 7. The number of connectors for which leaks were detected as described in section 11(iii)(A) of this unit, the percent of connectors leaking, and the total number of connectors monitored; 8. The number of connectors for which leaks were not repaired as required in section 11(iii)(D) of this unit, identifying the number of those that are determined non-repairable; 9. The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible. 10. The results of all monitoring to show compliance with sections 3(iii)(F), 4(i)(A) and 10(iii)(A) of this unit conducted within the semiannual reporting period. 11. If applicable, the initiation of a monthly monitoring program under section 7(B)(1)(a of this unit, or a quality improvement program under 40 CFR 63, Subpart H, §63.176 dated 7/1/00.

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
	the source or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure. b. If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion. 6. Dates of process unit shutdowns that occur while the equipment is unrepaired. 7. Opened connectors: a. Identification, either by list, location (area or grouping), or tagging of connectors that have been opened or otherwise had the seal broken since the last monitoring period required in section 11(iii)(B) of this unit, as described in section 11(iii)(C)(1), unless the Owner/Operator elects to comply with the provisions of section 11 (iii)(C)(2). b. The date and results of monitoring as required in section 11(iii)(C) of this unit. If identification of connectors that have been opened or otherwise had the seal broken is made by location under paragraph (C)(7)(a) of this section, then all connectors within the designated location shall be monitored. 8. Copies of the periodic reports as specified in paragraph (v) of this section, if records are not maintained on a computerized database capable of generating summary	12. If applicable, notification of a change in connector monitoring alternatives as described in section 11(iii)(C)(1) of this unit. *[Reference: 40 CFR 63, Subpart H, §63.182(d) dated 7/1/2000]* C. Any revisions to items reported in an earlier Notification of Compliance Status, as listed in paragraphs (1) through (4) of this section, if the method of compliance has changed since the last report. 1. Process unit identification. 2. Number of each equipment type (e.g., valves, pumps) excluding equipment in vacuum service. 3. Method of compliance with the standard (for example, "monthly leak detection and repair" or "equipped with dual mechanical seals"). *[Reference: 40 CFR 63, Subpart H, §63.182(d)(4) dated 7/1/2000]* 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]*

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
	reports from the records. *[Reference: 40 CFR 63, Subpart H, §63.181(d) dated 7/1/00]*	
bc. Emission Unit 32: Process heater 32-H-101; Emission Point 32-1.		
1. **Particulate Matter.** 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 Limitations: A. The Owner/Operator shall only combust desulfurized RFG as the primary fuel. *[Reference 7 **DE Admin Code** 1130 Section 6.1.3.2 dated 12/11/00]* B. In addition, the Owner/Operator may combust vented vapors from the Alky Merox and Poly Merox processes and benzene vapors displaced from storage and loading operations as described under Section ba. *[Reference: 40 CFR 63.113 and 40 CFR 63.116(e) both dated 1/17/1997]*	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 A shall be demonstrated by record keeping. C. Compliance with Operational Limitation B shall be based on introducing the process gas into the flame zone of 32-H-101, except that when benzene vapors are controlled by this process heater the Owner/Operator may alternatively pre mix the benzene waste with the fuel as prescribed in Operational Limitation ba.1.ii.B. iv. Monitoring/Testing: The Owner/Operator shall continuously monitor the H_2S content in the RFG. *[Reference 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* 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 fuel usage records for each unit.	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
2. **Sulfur Dioxide (SO_2).** 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 Alky Merox, Poly Merox, and benzene vapors that contains H_2S in excess of 0.1 grain/DSCF on a three hour rolling average. *[Reference: 7 **DE Admin Code** 1120, Section 11 dated 11/27/85 and 40 CFR 60.104(a)(1) dated 10/2/90 and7 **DE Admin. Code** 1108 Section 2.1 dated 12/8/1983].*	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 Continuous Emissions Monitoring System (CEMS) shall be used to demonstrate compliance with Emission Standard (B) for the primary fuel. B. Compliance with Emission Standard (B) shall be based on monitoring. C. [**RESERVED**] iv. 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 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. Recordkeeping: In addition to the requirements of Conditions 3(b)(1)(ii) and 3(b)(2) of this permit, the Company shall: A. The Owner/Operator shall keep records of all H_2S CEMS calibration, maintenance, quarterly	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
	cylinder gas audits and annual relative accuracy test audits for at least 5 years. *[Reference Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.1 dated 12/11/00]*	
3. **Nitrogen Oxides (NO_X).** i. Emission Standard: A. NO_X emissions shall not exceed 0.20 lb/mmBtu. *[Reference: APC-81/0832(A1) Condition No. 9 and 7 **DE Admin Code** 1112, Section 3.2.4.3 dated 11/24/93]* B. 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: A. Compliance with the emission standard (A) shall be demonstrated by conducting an annual stack test. *[Reference: APC-81/0832(A1) Condition No. 9]* B. Compliance with "Facility-wide Emission Limit for Nitrogen Oxides (NO_X)" in Condition 3 - Table 1.j. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.1 dated 12/11/00]* iii. Monitoring & Testing: B. The annual stack test shall conform to the procedures described in Reference Method 7 in 40 CFR 60, Appendix "A". C. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOX)" in Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.1 dated 12/11/00]* 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. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j. B. [**RESERVED**] C. [**RESERVED**]	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
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 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 6.1.7.3 dated 12/11/00]* 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 Reg. No. 30 Section 6(a)(3) dated 12/11/00]* C. In accordance with Subsection 1.5.3 of 7 **DE Admin Code** 1120, conduct visual observations at fifteen-second intervals for a period of not less than one hour except that the observations may be discontinued whenever a violation of the standard is recorded. The additional procedures, qualification and testing to be used for visually determining the opacity shall be those specified in Section 2 & 3 (except for Section 2.5 and the second sentence of Section 2.4) of Reference Method 9 set forth in Appendix A, 40 CFR, Part 60, revised July 1, 1982. *[Reference 7 **DE Admin Code** 1120, Section*	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]* 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
	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 Section 6.1.3.1.2 and 6.2.1 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.	
c. <u>Emission Unit 33</u>: Selective Hydrogenation Unit and Process Heaters 33-H-1 and 33-H-2; Emissions Points 33-1 and 33-2		
1. **Particulate Matter.** 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 Owner/Operator shall only combust desulfurized RFG or natural gas in units 33-H-1 and 33-H-2. *[Reference 7 **DE Admin Code** 1130 Section 6.1.3.2 dated 12/11/00]*	iii. Compliance Method: *[Reference 7 **DE Admin Code** 1130 Section 6.1.3.1.2 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: The Owner/Operator shall continuously monitor the H_2S content in the RFG. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* 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 fuel usage in each unit. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*	vi. 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]* 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
2. **Sulfur Dioxide (SO_2).** i. Emission Standard: [**RESERVED**] ii. Operational Limitation: The Owner/Operator shall not burn in any fuel gas combustion device any fuel gas that contains more H_2S in excess of 0.1 grain/DSCF on a three hour rolling average. *[Reference: 7 **DE Admin Code** 1120, Section 11 dated 11/27/85 and 40 CFR 60.104(a)(1) dated 10/2/90 and 7 **DE Admin. Code** 1108 Section 2.1 dated 12/8/1983]*	iii. Compliance Method: *[Reference 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* A. A Continuous Emissions Monitoring System (CEMS) shall be used to demonstrate compliance with the operational limitation. B. [**RESERVED**] iv. Monitoring/Testing: 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. 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 keep records of all H_2S CEMS calibration, maintenance, quarterly cylinder gas audits and annual relative accuracy test audits for at least 5 years.	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]*
3. **Nitrogen Oxides (NO_X).** i. Operational Limitations: A. For 33-H-2: NO_X emissions shall not exceed those achieved through an annual tune up performed by qualified personnel. *[Reference: 7 **DE Admin Code** 1112, Section*	ii. Compliance Method: *[Reference 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* A. For 33-H-2: Compliance demonstration with the Operational Limitation shall be by conducting an annual tune up of each unit by qualified personnel.	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 Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
3.3.2 dated 11/24/93] B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j.	B. Compliance with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.1 dated 12/11/00]* iii. Monitoring & Testing: A. For Unit 33-H-2: None in addition to the annual tune up. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.1 dated 12/11/00]* iv. Recordkeeping: In addition to the requirements of Conditions 3(b)(1)(ii) and 3(b)(2) of this permit, the Company shall: A. A log of all tune ups performed. B. Documentation of qualifications of personnel responsible for conducting the tune up. C. 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]*	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. **Visible Emissions Standard:** 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 dated 12/11/00]* 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*	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]* 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
	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 Subsection 1.5(c) of 7 **DE Admin. Code** 1120, conduct visual observations at fifteen-second intervals for a period of not less than one hour except that the observations may be discontinued whenever a violation of the standard is recorded. The additional procedures, qualification and testing to be used for visually determining the opacity shall be those specified in Section 2 & 3 (except for Section 2.5 and the second sentence of Section 2.4) of Reference Method 9 set forth in Appendix A, 40 CFR, Part 60, revised July 1, 1982. *[Reference: 7 **DE Admin Code** 1120, Section 1.5.3 dated 12/7/88]* 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 Section 6.1.3.1.2 and 6.2.1 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	

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
	units shall be maintained and made available to the Department upon request.	
d. **Emissions Unit 34**: Olefins Plant, Storage Tanks, Truck Loading Rack and Process Heater 134-H-101; Emission Point 34-1.		
1. **Particulate Matter (PM/PM10/PM2.5)** 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 and 0.8 TPY. *[Reference: 7 **DE Admin Code** 1104 Section 2.1 dated 2/1/81 and APC-APC-81/0808(A1)]* ii. Operational Limitation: The Owner/Operator shall only combust desulfurized RFG or natural gas in unit 134-H-101. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*	iii. Compliance Method: *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 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: *[Reference 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* The Owner/Operator shall continuously monitor the H_2S content in the RFG. 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: A. The Owner/Operator shall maintain fuel usage records of Unit 134-H-101. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* The rolling 12 month total Particulate Matter emissions shall be calculated and recorded each month. . *[Reference: APC-APC-81/0808(A1)]* B.	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]*
2. **Sulfur Dioxide (SO_2).** i. Emission Standard: A.[**RESERVED**] B. For 134-H-101, Sulfur Dioxide (SO_2) emissions shall not exceed 3.7 TPY. *[Reference: APC-81/0822(A2) & APC-81/0808(A1)]* ii. Operational Limitation: The Owner/Operator shall not burn in any fuel gas combustion device any fuel gas that	iii. Compliance Method: *[Reference: Regulation No. 30 Section 6(a)(3)(i)(B) dated 12/11/00]* A. Compliance with the Emissions Standard shall be based on the H2S CMS for the Refinery Fuel Gas (RFG). B. [**RESERVED**] iv. Monitoring/Testing: 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.	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
contains H_2S in excess of 0.1 grain/DSCF on a three hour rolling average. *[Reference: 7 **DE Admin Code** 1120, Section 11 dated 11/27/85 and 40 CFR 60.104(a)(1) dated 10/2/90 and 7 **DE Admin. Code** 1108 Section 2.1 dated 12/8/1983]*	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. 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 keep records of all H_2S CEMS calibration, maintenance, quarterly cylinder gas audits and annual relative accuracy test audits for at least five (5) years. B. The rolling 12 month total Sulfur Dioxide (SO_2) emissions shall be calculated and recorded each month.	
3. **Nitrogen Oxides (NO_X).** i. Operational Limitation: A. For 134-H-101: 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 11/24/1993]* B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j.	ii. Compliance Method: A. For 134-H-101: Compliance demonstration with the Operational Standard shall be by conducting an annual tune up of each unit by qualified personnel. B. Compliance with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.1 dated 12/11/00]* iii. Monitoring & Testing: *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*	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
	A. For Unit 134-H-101: None in addition to the annual tune up required by the Operational Standard. B. Conduct a visible emissions evaluation after conclusion of the annual tune up in accordance with Condition 3 - Table 1.db.4. C. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.1 dated 12/11/00]* 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. A log of all tune ups performed. B. Documentation of qualifications of personnel responsible for conducting the tune up. C. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j. D. The rolling 12 month total Nitorgen Oxide (NO_x) emissions shall be calculated and recorded each month.	
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 minutes in any 1 hour or more than 15 minutes in any 24 hour period. *[Reference: 7 **DE Admin Code** 1114, Section 2.1 dated 7/17/84]*	ii. Compliance Method: Compliance shall be demonstrated by proper operation and maintenance of the emission units, monitoring and testing requirements, and record keeping. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3 dated 12/11/00]* 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	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]* 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
	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 Subsection 1.5(c) of 7 **DE Admin. Code** 1120, conduct visual observations at fifteen-second intervals for a period of not less than one hour except that the observations may be discontinued whenever a violation of the standard is recorded. The additional procedures, qualification and testing to be used for visually determining the opacity shall be those specified in Section 2 & 3 (except for Section 2.5 and the second sentence of Section 2.4) of Reference Method 9 set forth in Appendix A, 40 CFR, Part 60, revised July 1, 1982. *[Reference 7 **DE Admin Code** 1120, Section 1.5(c) 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 Section 6.1.3.1.2 and 6.2.1 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. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2*	

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 12/11/00]	
5 Volatile Organic Compounds (VOC) i. Emission Standard: *[Reference: APC-81/0822(A2) & APC-81/0808(A1)]* A. For 134-H-101: VOC emissions shall not exceed 0.8 TPY. B For the storage tanks, loading rack and fugitive emissions: VOC emissions shall not exceed 4.6 TPY.	ii. Compliance Method: *[Reference 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and Permit APC-81/0822(A2) & APC-81/0808(A1)]* A. For 134-H-101, Compliance with the emission standard is based on fuel type and quality. B. For Tank 580-TF-10, compliance with the requirements of Condition 3 Table 1 (fb)(iii). C. For Tanks 582-TF-4 and 583-TF-4, compliance with the requirements of Condition 3 Table 1 (fe)(iii). D. For the Truck Loading Rack, compliance with the requirements of Condition 3 Table 1 (Part 2) (oa)(9)(ii). *iii.* Record Keeping*: [Reference 7 DE Admin Code 1130 Section 6.1.3.1.2 dated 12/11/00 and Permit APC-81/0822(A2) & APC-81/0808(A1)]* *A.* In addition to the requirements of Conditions 3(b)(1)(ii) and 3(b)(2) of this permit, the Owner/Operator shall: 1. Maintain fuel usage records of Unit 134-H-101. 2. The rolling 12 month total VOC emissions shall be calculated and recorded each month. B. For Tank 580-TF-10, meet the requirments of Condition 3 Table 1 (fc)(iv). For Tanks 582-TF-4 and 583-TF-4, meet the requirements of Condition 3 Table 1 (ff)(vi).	iv. 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]* v. 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]*
6. Carbon Monoxide i. Emission Standard*: [Reference: APC-81/0822(A2) & APC-81/0808(A1)]* A. For 134-H-101: CO emissions shall not exceed 1.2 TPY.	*ii.* Compliance Method: *[Reference 7 DE Admin Code 1130 Section 6.1.3.1.2 dated 12/11/00 and Permit APC-81/0822(A2) & APC-81/0808(A1)]* A. For 134-H-101, Compliance with the emission standard is based on fuel type and quality. iii. Record Keeping: *[Reference 7 DE Admin Code 1130*	iv. 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]* v. Certification Requirement: That required by Condition 3(c)(3) of this

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
	Section 6.1.3.1.2 dated 12/11/00 and Permit APC-81/0822(A2) & APC-81/0808(A1)] A. 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] 1. Maintain fuel usage records of Unit 134-H-101. 2. The rolling 12 month Carbon Monixide (CO) emissions shall be calculated and recorded each month.	permit. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.2.3 and 6.2.1 dated 12/11/00]*
e. **Emissions Unit 36**: Hydrocracker Unit, Process Heaters 36-H-1, 36-H-2 and 36-H-3; Emission Points 36-1 and 36-2.		
1. **Particulate Matter.** 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 Owner/Operator shall only combust desulfurized RFG or natural gas in Units 36-H-1, 36-H-2 and 36-H-3. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]*	iii. Compliance Method: *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 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: The Owner/Operator shall continuously monitor the H_2S content in the RFG. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* v. 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 Section 6.1.3.1.2 and 6.2.1 dated 12/11/00]* A. The Owner/Operator shall maintain fuel usage records of Units 36-H-1, 36-H-2 and 36-H-3.	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]*
2. **Sulfur Dioxide (SO_2).** i. Emission Standard: [**RESERVED**]	iii. Compliance Method: *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* A. A Continuous Emissions Monitoring System	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.

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
ii. Operational Limitation: The Owner/Operator shall not burn in any fuel gas combustion device any fuel gas that contains more H_2S in excess of 0.1 grain/DSCF on a three hour rolling average. *[Reference Regulation No. 20, Section 11 dated 11/27/85 and 40 CFR 60.104(a)(1) dated 10.2.90 and 7 **DE Admin. Code** 1108 Section 2.1 dated 12/8/1983]*	(CEMS) shall be used to demonstrate compliance with the operational limitation. B. [**RESERVED**] iv. Monitoring/Testing: 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. 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 Section 6.1.3.1.2 and 6.2.1 dated 12/11/00]* A. The Owner/Operator shall keep records of all H_2S CEMS calibration, maintenance, quarterly cylinder gas audits and annual relative accuracy test audits for at least 5 years.	*[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]*
3. **Nitrogen Oxides (NO_X).** i. Operational Limitation: A. For Units 36-H-1, 36-H-2 and 36-H-3: 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 11/24/1993]* B. Comply with "Facility-wide Emission Limit for	ii. Compliance Method: A. For Units 36-H-1, 36-H-2 and 36-H-3: Compliance demonstration with the Operational Limitation shall be by conducting an annual tune up of each unit by qualified personnel. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* B. Compliance with "Facility-wide Emission Limit	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

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
Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j.	for Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.1 dated 12/11/00]* iii. Monitoring & Testing: A. For Units 36-H-1, 36-H-2 and 36-H-3: None in addition to the annual tune up. B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NOx)" in Condition 3 - Table 1.j. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.1 dated 12/11/00]* 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 Section 6.1.3.1.2 and 6.2.1 dated 12/11/00]* A. A log of all tune ups performed B. Documentation of qualifications of personnel responsible for conducting the tune up. C. 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]*	permit. *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.2.3 and 6.2.1 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 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 6.1.3.1.2 dated 12/11/00]* 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	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]* 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
	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 Subsection 1.5(c) of 7 **DE Admin. Code** 1120, conduct visual observations at fifteen-second intervals for a period of not less than one hour except that the observations may be discontinued whenever a violation of the standard is recorded. The additional procedures, qualification and testing to be used for visually determining the opacity shall be those specified in Section 2 & 3 (except for Section 2.5 and the second sentence of Section 2.4) of Reference Method 9 set forth in Appendix A, 40 CFR, Part 60, revised July 1, 1982. *[Reference 7 **DE Admin Code** 1120, Section 1.5(c) 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 Section 6.1.3.1.2 and 6.2.1 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.	

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
fa. Emissions Unit 40: Refinery Tank Farm Units With External Floating Roofs with Double Seals Subject to 40 CFR part 63, Subpart CC and 40 CFR part 60, Subpart Kb: Tanks 044-TF-112, 050-TF-78, 065-TF-50, 73-TF-78. (These tanks are Group 1 MACT tanks that are 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. Equipment Standards: A. Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal. *[Reference: 40 CFR 60.112b(a)(2) dated 10/8/97]* 1. The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in Sec. 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall. *[Reference: 40 CFR 60.112b(a)(2)(i) dated 10/8/97 and 113b(b)(4)(ii)(A) dated 8/11/89]* 2. The secondary seal shall be installed above the primary seal and shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in Sec. 60.113b(b)(4). *[Reference: 40 CFR 60.112b(a)(2)(i) dated 10/8/97]* B. The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm. *[Reference: 40 CFR 60.113b(b)(4)(i) dated 8/11/1989]* C. One end of the mechanical shoe is to extend	iii. Compliance Methodology: Compliance with the standards and 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]* iv. Monitoring/Testing: In addition to the requirements of Conditions 3(b)(1)(ii) of this permit, the Company shall: A. Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency. 1. Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter. 2. Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter. *[Reference: 40 CFR Part 60, Subpart Kb, §60.113b(b)(1)(i) dated 8/11/89 and 40 CFR 63.120(b)(1)(i) dated 1/17/97]* B. Determine gap widths and areas in the primary and secondary seals individually by the following procedures: 1. Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.	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. For all inspections required by §60.113b(b)(6), the Owner/Operator shall provide a 15 day telephone notification to allow the administrator to afford the opportunity to inspect the storage vessel prior to refilling. *[Reference Regulation No. 30 Section 6(a)(3)(ii) dated 12/11/00 and 40 CFR 63.646(l) dated 2/21/97]* B. Notify the Administrator 30 days in advance of any gap measurements to afford the Administrator the opportunity to have an observer present. *[Reference: 40 CFR 60.113b(b)(4) dated 8/11/89]* C. Periodic Reports Within 60 days of performing the gap measurements required by §60.113b(b)(1), submit a report containing the information required below. A report is not needed if none of the measured gaps or calculated gap areas exceed the limitations. *[Reference : 40 CFR 60.115b(b)(2) dated 4/8/87]* 1. The date of measurement. 2. The raw data obtained in the measurement. 3. The calculations described in §60.113b(b)(2) and (b)(3). D. Periodic Reports: After each seal gap measurement that detects gaps exceeding

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
into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface. *[Reference: 40 CFR 60.113b(b)(4)(i)(A) dated 8/11/1989]*D. D. The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm. *[Reference: 40 CFR 60.113b(b)(4)(ii)(B) dated 8/11/1989]* 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: 40 CFR 60.113b (b)(4)(i)(B) and (4)(ii)(C) dated 8/11/1989]* ii. Operational Limitations: A. The roofs shall be floating the liquid at all times except during initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible. *[Reference: 40 CFR 60.112b(a)(2)(iii) dated 8/11/1989]* B. Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except	2. Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location. 3. The total surface area of each gap shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance. *[Reference: 40 CFR 60.113b(b)(2) dated 8/11/89]* C. Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this Section. *[Reference: 40 CFR 60.113b(b)(3) dated 8/11/89]* D. Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4) (i) and (ii) of this Section. *[Reference: 40 CFR 60.113b(b)(4) dated 8/11/89]* E. If a failure is detected during the inspections required by §60.113b(a)(2) or during the seal gap measurements required by §60.113b(b)(1), and the vessel cannot be repaired within 45 days and the vessel cannot be emptied within 45 days, the owner or operator may utilize up to two extensions of up to 30 additional calendar days each. The owner or operator is not required to provide a request for the extension to the Administrator. *[Reference: 40 CFR 63.649(n)(8)(iii) dated 5/25/2001]*	the limitation specified in §60.113b(b)(4) submit a report within 30 days of the inspection. The report shall identify the storage vessel and contain the information specified in §60.115b(b)(2) and the date the vessel was emptied or the repairs made and date of repair. *[Reference: 40 CFR 60.115b(b)(4) dated 4/8/87 and 40 CFR 63.640(n)(8)(v) dated 5/25/2001]* E. The Owner/Operator shall submit the reports listed below: *[Reference: 40 CFR 63.654(e) dated 8/18/1998]* 1. A Notification of Compliance Status report as described in 40 CFR 63.654(f); 2. Periodic Reports as described in 40 CFR 63.654(g); and 3. Other reports as described in 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. 5. The notification required in 40 CFR 60.113b(b)(6)(11) for tanks subject to the limitation specified in §60.113b(b)(4) submit a report within 30 days of the inspection. The report shall identify the storage vessel and contain the information specified in §60.115b(b)(2) and the date the vessel was emptied or the repairs made and date of repair. *[Reference: 40 CFR 60.115b(b)(4) dated 4/8/87and 40 CFR 63.640(n)(8)(v) dated 5/25/2001]* F. The Owner/Operator shall submit the reports listed below: *[Reference: 40 CFR 63.654(e) dated 8/18/1998]*

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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 roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening. *[Reference: 40 CFR 60.112b(a)(2)(ii) dated 10/8/97]* C. The tanks shall not store petroleum liquid unless the tanks are operating properly. *[Reference: APC-80/0869(A5)]* D. The maximum true vapor pressure of the stored petroleum liquid shall not exceed 11.1 psia. *[Reference: 40 CFR 60.112b(a) dated 8/11/1989 and 40 CFR 63.641 dated 1/17/1997]* E. If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of Monitoring/Testing (A). *[Reference: 40 CFR 60.113b(b)(1)(iii) dated 8/11/89]*	F. Visually inspect the external floating roof, primary and secondary seals, and fittings each time the vessel is emptied and degassed. *[Reference: 40 CFR 60.113b(b)(6) dated 8/11/89]* 1. If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the Owner/Operator shall repair the items as necessary so that none of the conditions specified in the paragraph exist before filling or refilling the storage vessel with VOL. *[Reference: 40 CFR 60.113b(b)(6)(i) dated 8/11/89]* 2. Comply with the reporting requirements specified in paragraph (vi)(A) of this section. G. If the owner or operator determines that it is unsafe to perform the seal gap measurements required in 40 CFR 60.113b(b) of subpart Kb or to inspect the vessel to determine compliance with 40 CFR 60.113b(a) of subpart Kb because the roof appears to be structurally unsound and poses an imminent danger to inspecting personnel, the owner or operator shall comply with the requirements in either §63.120(b)(7)(i) or §63.120(b)(7)(ii) of subpart G. *[Reference: 40 CFR 63.640(n)(8)(ii) dated 5/25/2001]* v. 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 Section 6.1.3.1.2 and 6.2.1 dated 12/11/00]* A. Keep a record of seal gap measurements. Each record shall identify the storage vessel on which the measurement was performed and	1. A Notification of Compliance Status report as described in 40 CFR 63.654(f); 2. Periodic Reports as described in 40 CFR 63.654(g); and 3. Other reports as described in 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. 5. The notification required in 40 CFR 60.113b(b)(6)(11) for tanks subject to the requirements in 40 CFR 60.113b(b)(6). 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]*

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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
	shall contain: *[Reference 40 CFR 60.115b(b)(3) dated 8/11/89]* 1. The date of measurement. 2. The raw data obtained in the measurement. 3. The calculations described in §60.113b(b)(2) and (b)(3). B. Records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. *[Reference 40 CFR 60.116b(b) dated 10/15/2003]* C. Records of the VOL stored, the period of storage, and the maximum true vapor pressure during the storage period. *[Reference: 40 CFR 60.116b(c) dated 10/15/2003]* D. Each owner or operator subject to the storage vessel provisions in §63.646 shall keep the records specified in §63.123 of subpart G of this part except as specified in paragraphs (i)(1)(i)through (i)(1)(iv) of this section: *[Reference: 40 CFR 60.654(i) dated 8/18/98]* 1. Records related to gaskets, slotted membranes, and sleeve seals are not required for storage vessels within existing sources. 2. All references to §63.122 in §63.123 of subpart G of this part shall be replaced with §63.654(e). 3. All references to §63.150 in §63.123 of subpart G of this part shall be replaced with §63.652. E. If a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent for existing sources or 2 percent for new sources, a record of any data, assumptions, and procedures used to make this determination shall be retained. *[Reference: 40 CFR 63.654(i)(1)(iv) dated 8/18/98*]	

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
fb. Emission Unit 40: Refinery Tank Farm Units With External Floating Roofs with Double Seals Subject to 40 CFR part 63, Subpart CC and 40 CFR part 60, Subpart Ka: Tanks 009-TF-400, 166-TF-112, 205-TF-153, 227-TF-400, 261-TF-50, 580-TF-10 (All tanks are Group 1 MACT tanks that are to comply with the provisions of 40 CFR part 63, subpart CC as provided by 63.640(n)(5)		
1. **Volatile Organic Compounds (VOC).** i. Equipment Standards: A. Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. 1. The closure device shall consist of 2 seals, one above the other. The lower seal is the primary seal and the upper seal is the secondary seal. 2. The primary seal shall be either a metallic shoe seal or a liquid-mounted seal. 3. Both the primary and secondary seals shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as provided by 40 CFR 63.120(b). *[Reference: 40 CFR 63.119(c)(1) dated 12/21/2006]* B. If the primary seal is a metallic shoe seal, one end of the metallic shoe shall extend into the stored liquid and the other end shall extend a minimum vertical distance of 61 cm above the stored liquid. *[Reference: 40 CFR 63.120(b)(5)(i) dated 1/17/1997]* C. The accumulated area of gaps between the 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 1/17/1997]* D. The secondary seal shall be installed above the primary seal so that it completely covers the space between the roof edge and 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. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.1, dated 12/11/00]* A. Compliance with the Emission Limitation A shall be demonstrated by using EPA's TANKS 4.09 program or an updated equivalent methodology using monthly liquid throughput and the monthly average storage temperature. *[Reference: APC-80/0868(A3)]* v. Monitoring/Testing: In addition to the requirements of Conditions 3(b)(1)(ii) of this permit, the Company shall: A. The Company shall determine the gap areas and maximum gap widths between the primary seal and the storage vessel wall during hydrostatic testing and at least once every 5 years. *[Reference: 40 CFR 63.120(b)(1)(i) dated 1/17/1997]* B. The Company shall determine the gap areas and maximum gap widths between the secondary seal and the storage vessel wall at least once every year. *[Reference: 40 CFR 63.120(b)(1)(iii) dated 1/17/1997]* C. The Company shall determine the gap widths and gap areas in the primary and secondary seals (seal gaps) individually by the procedures described in 40 CFR 63.120(b)(2)(i) and (ii). *[Reference: 40 CFR 63.120(b)(2) dated 1/17/1997]* D. The total surface area of each gap shall be determined by using probes of various widths	vii. 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. [**RESERVED**] D. Submit the reports listed below: 1. A Notification of Compliance Status report in accordance with §63.654(f). *[Reference: 40 CFR 63.654(e)(1) dated 8/18/1998]* 2. Semiannual Periodic Reports in accordance with §63.654(g)(1) and (3). *[Reference: 40 CFR 63.654(e)(1) dated 8/18/1998]* 3. [**RESERVED**] 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 §63.654. 5. Reports as specified in 40 CFR Part 63 subpart A. *[Reference: 40 CFR 63.654(h) dated 8/18/98]* 6. Reports of startup, shutdown, and malfunction required by 40 CFR 63.10(d)(5) in accordance with 40 CFR 63.654(h)(1). *[Reference: 40 CFR 63.654(h)(1)dated 8/18/98]* F. Report to the Department the refilling of each storage vessel that has been emptied and degassed. The notification shall be in writing at least 30 calendar days prior to 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
vessel wall. *[Reference: 40 CFR 63.120(b)(6)(i) dated 1/17/1997]* E. 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 1.27 cm. *[Reference: 40 CFR 63.120(b)(4) dated 1/17/1997]* F. 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: 40 CFR 63.120(b)(5)(ii) and (6)(ii) dated 1/17/1997]* G. If a cover or lid is installed on an opening on a floating roof, the cover or lid shall remain closed except when the cover or lid must be open for access. *[Reference 40 CFR Part 63.646(f)(1) dated 2/21/1997]* H. Rim space vents are to be set to open only when the floating roof is not floating or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting. *[Reference 40 CFR Part 63.646(f)(2) dated 2/21/1997]* I. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. *[Reference 40 CFR Part 63.646(f)(3) dated 2/21/1997]* ii. Operational Limitation: A. The external floating roof shall rest on the liquid surface at all times except during initial fill, after the vessel has been completely emptied and degassed, and when the vessel is completely emptied before being subsequently refilled. *[Reference: 40 CFR63.119(c)(3) dated 12/21/2006]]* B. [**RESERVED**]	to measure accurately the actual distance from the vessel wall to the seal and multiplying each such width by its respective circumferential distance. *[Reference: 40 CFR 63.120(b)(2)(iii) dated 1/17/1997]* E. To determine the accumulated area of gaps between the vessel wall and the primary and secondary seals, the owner/operator shall add the gap surface area of each gap location and divide the sum by the nominal diameter of the vessel. *[Reference: 40 CFR 63.120(b)(3) and (4) dated 1/17/1997]* F. If any storage vessel ceases to store organic HAP for a period of 1 year or more, or if the maximum true vapor pressure of the total organic HAP's in the stored liquid falls below the values defining Group 1 storage vessel specified in table 5 or table 6 of 40 CFR Part 60 subpart G for a period of 1 year or more, measurements of gaps between the vessel wall and the primary seal, and gaps between the vessel wall and the secondary seal shall be performed within 90 calendar days of the vessel being refilled with organic HAP. *[Reference 40 CFR 63.120(b)(1)(iv) dated 1/17/1997]* G. If the owner/operator is determines it is unsafe to perform the seal gap measurements of inspect the vessel because the floating roof appears to be structurally unsound and poses an imminent or potential danger to inspecting personnel, the owner/operator shall comply with the requirements of 40 CFR 63.120(b)(7). *[Reference: 40 CFR 63.120(b)(7) dated 1/17/1997]* H. The Owner/Operator shall visually inspect the external floating roof, primary and secondary seals, and fittings each time the vessel is emptied and degassed. If the external floating roof has defects, as described in 40 CFR 63.120(b)(10) dated 1/17/1997, the	filling or refilling, except as provided in 40 CFR 63.654(h)(2)(i). *[Reference 40 CFR 63.654(h)(2)(i) dated 8/18/98]* G. Report to the Department any seal gap measurements at least 30 calendar days in advance of any seal gap measurements. *[Reference: 40 CFR 63.654(h)(2)(ii) dated 8/18/98]* 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
C. The tanks shall not store petroleum liquid unless the tanks are operating properly. *[Reference: APC-80/0869(A5)]* D. The maximum true vapor pressure of the stored petroleum liquid shall be less than 76.6 kilopascals (11.1 psia). *[Reference: 40 CFR 63.641 dated 1/17/1997]* E. [**RESERVED**] F. 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]* G. Emergency roof drains shall have slotted membrane fabric covers or equivalent covers that cover at least 90% of the area of the opening. *[Reference: APC-80/0868(A3)]* iii. Emission Limitations: A. For Tanks 47, 166, 205, and 261: VOC emissions from the tanks shall not exceed 4.9 tons per 12 month rolling average. *[Reference: APC-80/0868(A3)]* B. For Tanks 166, 205, and 261: The requirements of **Permit: AQM-003/00016 – Part 2** Condition 3 – Table 1.oa shall apply to the new fugitive VOC sources associated with these tanks. *[Reference: APC-80/0868(A3)]*	owner/operator shall repair the items as necessary so that none of the defects exist before filling or refilling the storage vessel with organic HAP. *[Reference: 40 CFR 63.120(b)(10) dated 1/17/1997]* I. The O/O shall repair conditions that do not meet the requirements listed in Equipment Standards (B) through (F) no later than 45 calendar days after identification, or shall empty and remove the vessel from service no later than 45 calendar days after identification. If during seal gap measurements or during inspections necessary to determine compliance with Equipment Standards (C), (E), and (F) a failure is detected that cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as practical. *[Reference: 40 CFR 63.120(b)(8) dated 1/17/1997]* vi. 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. 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*	

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
	8/18/1998 and 40 CFR 63.123(d) dated 12/23/2004] B. Records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the vessel retains Group 1 or Group 2 status and is in operation. *[Reference 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00 and **APC-80/0868(A3)**]* C. Records of the VOL stored, the period of storage and the maximum true vapor pressure during the storage period. *[Reference 7 **DE Admin Code** 1130 Section 6.1.3.1.2 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
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. <u>Emissions Unit 40 -</u> 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: **<u>81/0120(A2)</u>**]* 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 Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
emptying or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible. *[Reference: 40 CFR 60.112b(a)(1)(i) dated 10/8/97]* B. Each internal floating roof shall be equipped with a mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof. *[Reference: 40 CFR 60.112b(a)(1)(ii) dated 10/8/97]* C. Each opening in the internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface. *[Reference: 40 CFR 60.112b(a)(1)(iii) dated 10/8/97]* D. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, and stub drains is to be equipped with a cover or lid which is to be in a closed position at all times except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use. *[Reference: 40 CFR 60.112b(a)(1)(iv) dated 10/8/97 and 7* ***DE Admin Code*** *1124 Section 31.3.3.1 dated 11/29/94]* E. Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg supports. *[Reference: 40*	service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel. *[Reference: 40 CFR 60.113b(a)(1) dated 8/11/89]* B. For tanks equipped with a single seal system 1. Visually inspect the internal floating roof and the primary seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. *[Reference 40 CFR 60.113b(a)(2) dated 8/11/89]* 2. Visually inspect the internal floating roof, the primary seal, gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed and in no event shall inspections be conducted at intervals greater than 10 years. *[Reference 40 CFR 60.113b(a)(4) dated 8/11/89]*. C. For tanks equipped with a double seal system: 1. Visually inspect the internal floating roof and the secondary seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. *[Reference 40 CFR 60.113b(a)(2) dated 8/11/89]* 2. Visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed and at least every 5 years. *[Reference 40 CFR 60.113b(a)(4) dated 8/11/89]* D. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal (if any) has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no	this section, the owner or operator shall, in the next periodic report required by 40 CFR Part 63 Subpart CC, identify the vessel, provide the information listed in Monitoring/Testing requirement B, and describe the nature and date of the repair made or provide the date the storage vessel was emptied. *[Reference: 40 CFR 63.640(n)(8)(iv) dated 5/25/2001]* C. Notify the Department in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by Monitoring/Testing requirements (A) & (D) to afford the Department the opportunity to have an observer present. If the inspection required by Monitoring/Testing requirement (D) is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Department at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Department at least 7 days prior to the refilling. *[Reference: 40 CFR 60.113b(a)(5) dated 8/11/89]* D. The Owner/Operator may submit the inspection reports required by Reporting requirement (A) as part of the periodic reports required by 40 CFR Part 63 Subpart CC, rather than within the 30-day period specified in 40 CFR 60.115b(a).

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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
*CFR 60.112b(a)(1)(v) dated 10/8/97 and 7 **DE Admin Code** 1124 Section 31.3.3.2 dated 11/29/94]* F. The tank shall be maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials. *[Reference: 7 **DE Admin Code** 1124 Section 31.3.2 dated 11/29/94]* G. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening. *[Reference: 40 CFR 60.112b(a)(1)(vii) dated 10/8/97]* H. Each penetration of the internal floating roof that allows for passage of a column supporting the roof shall have a flexible fabric sleeve or a gasketed sliding cover. *[Reference: 40 CFR 60.112b(a)(1)(viii) dated 10/8/97]* I. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. *[Reference: 40 CFR 60.112b(a)(1)(ix) dated 10/8/97]* iii. Operational Limitation for Tank 78-TC-78: The maximum true vapor pressure of the stored liquid shall not equal or exceed 0.75 psia. *[Reference: 40 CFR 60.112b(a) dated 8/11/89]*	longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph (B) and (C) exist before refilling the storage vessel with VOL. *[Reference: 40 CFR 60.113b(a)(4) dated 8/11/89 and 7 **DE Admin Code** 1124 Section 31(d)(1)(ii) & (d)(2)(ii) dated 11/29/94* E. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. *[Reference: 40 CFR 60.113b(a)(2) dated 8/11/89]* F. If a failure is detected during the inspections and the vessel cannot be repaired within 45 days and the vessel cannot be emptied within 45 days, the owner or operator may utilize up to two extensions of up to 30 additional calendar days each. The owner or operator is not required to provide a request for the extension to the Department. *[Reference: 40 CFR 63.640(n)(8)(iii) dated 5/25/2001]* G. If the owner or operator determines that it is unsafe to perform the tank inspections because the roof appears to be structurally unsound and poses an imminent danger to inspecting personnel, the owner or operator shall comply with the requirements in either 40 CFR 63.120(b)(7)(i) or 40 CFR 63.120(b)(7)(ii) of 40 CFR Part 63 Subpart G. *[Reference: 40 CFR 63.640(n)(8)(ii) dated 5/25/2001]* For Tank 470-TF-50: H. Monitor the equivalent turnovers of Tank 470-TF-50.	*[Reference: 40 CFR 63.640(n)(8)(v)]* viii. Certification: None in addition to those listed in Condition 3(c)(3) of this permit.

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
	vi. Record Keeping: In addition to the requirements of Conditions 3(b)(1)(ii) and 3(b)(2) of this permit, the Owner/Operator shall maintain the following records: A. Rolling twelve month VOC emissions from Tank 470-TF-50 based on equivalent turnovers calculated quarterly. *[Reference: APC-81/0120(A2)]* B. Records of all inspections performed as required by the Monitoring/Testing requirements. Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment. *[Reference 40 CFR 60.115b(a) dated 8/11/89 and 7 **DE Admin Code** 1124 Section 31.5.1.3 dated 11/29/94]* C. Records of the type of VOL stored and the maximum true vapor pressure of that VOL during the respective storage period. *[Reference: 40 CFR 60.116b(c) dated 10/15/03 and 7 **DE Admin Code** 1124 Section 31.5.1.1 & 31.5.1.2 & 5.2.2 & 5.2.3 dated 11/29/94]* D. Records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. *[Reference 40 CFR 60.116b(b) dated 10/15/2003]* E. For Tank 78-TC-78, records of the average monthly storage temperature. *[Reference 7 **DE Admin Code** 1124 Section 31.5.2.1 dated 11/29/94]*	
fe. Emissions Unit 40: Refinery Tank Farm Units With Fixed Roofs Subject to 40 CFR part 63, Subpart CC and 40 CFR part 60, Subpart Ka: Tanks 60-TF-28, 61-TF-28, 471-TF-28, 581-TC-10, 582-TF-4, 583-TF-4, 584-TF-112 (Tanks 60-TF-28 and 61-TF-28 are Group 1 MACT Tanks that are to comply with the provisions of 40 CFR part 63, subpart CC as provided by 63.640(n)(5); Tank 581-TC-10 stores methanol and is subject to HON Requirements)		
1. **Volatile Organic Compounds (VOC).** i. Emission Standard for Tank 471-TF-28:	iii. Compliance Method: A. Compliance with the standards and limitations	vi. Reporting: In addition to the requirements of Conditions

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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
VOC emissions from Tank 471-TF-28 shall not exceed 0.045 ton in any rolling twelve month period. *[Reference: **APC-81/0120**]* ii. Operational Limitations: A. The internal floating roofs shall rest on the surface of the liquid at all times except during the following periods: (1) During the initial fill; (2) After the vessel has been completely emptied and degassed; (3) When the vessel is completely emptied before being subsequently refilled. The process of filling emptying or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible. Each opening in the internal floating roof except for automatic bleeder vents and the rim space vents is to provide a projection below the liquid surface. Each opening in the cover except for automatic bleeder vents, rim space vents, stub drains and leg sleeves is to be equipped with a cover, seal or lid which is to be in a closed position at all times except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the cover is floating except when the cover is being floated off or is being landed on the leg supports. Rim vents are to be set to open only when the cover is being off the leg supports or at the manufacturer's recommended setting. *[Reference: 40 CFR 60.112a(a)(2)] dated 12/18/80 and 40 CFR 63.119(b)(1) dated 1/17/97]* B. The maximum true vapor pressure of the stored liquid shall not exceed 11.1 psia. *[Reference: 40 CFR 60.112a(a) dated 12/18/80 and 40 CFR 63.119(b)(1) dated 1/17/97]* C. [**RESERVED**]	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]* B. Compliance with Operational Limitations (A) and (B) shall be demonstrated by record keeping. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* C. [**RESERVED**] D. Compliance with Operational Limitation (D) shall be demonstrated by the proper operation of either process heater 41-H-1 or 42-H-1 at all times that vapors from Tank 581-TF-10 to either of these heaters. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3 dated 12/11/00]* E. Compliance with Operational Limitation (E) shall be demonstrated by satisfying the notification and reporting requirements. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3 dated 12/11/00]* iv. Monitoring/Testing: A. For Tanks 60-TF-28, 61-TF-28, 206-TF-112, 471-TF-28, 581-TC-10, 582-TF-4, 583-TF-4, 584-TF-112: None other than those required by Condition 3 - Table 1.ff.1.vii.B. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* B. For Tank 471-TF-28: Monitor the equivalent turnovers. *[Reference: **APC-81/0120**]* 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. Rolling twelve month VOC emissions from Tank 471-TF-28 calculated quarterly. *[Reference: **APC-81/0120**]* B. Records of the type of petroleum liquid stored,	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. If any of the conditions described in 40 CFR 60.112a(a)(2) are detected during the annual inspection, a report shall be furnished to the Administrator 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: 7 **DE Admin Code** 1130 Section 6.1.3.2 dated 12/11/00]* B. [**RESERVED**] C. The reports listed below for the MACT Tanks: 1. A Notification of Compliance Status report as described 40 CFR 654(f); 2. Periodic Reports as described in 40 CFR 654(g); and 3. Other reports as described in 40 CFR 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(f)(1)(i). *[Reference: 40 CFR 63.654(e) dated 8/18/1998]* 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]*

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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
D. Vapors from Tank 581-TC-10 shall be controlled by a closed vent system and control device at all times. *[Reference: 40 CFR 63.119(e) dated 1/17/97]* E. Any storage vessel that has continuously been out of service since before August 18, 1998, shall not be returned to HAP service until it satisfies the applicable MACT requirements in 40 CFR part 63, Subpart CC. *[Reference: 40 CFR Part 63, Subpart CC, Section 63.640(h)(4) dated 6/12/1996]*	the period of storage and the maximum true vapor pressure of that liquid during the respective storage period. *[Reference: 40 CFR part 60, Subpart Ka, Section 115a]*	
ff. <u>Emissions Unit 40</u>: Refinery Tank Farm Units With Fixed Roofs Subject to Regulation 1124, Section 31 and 40 CFR Part 63, Subpart CC: Tanks 045-TC-153, 062-TC-28, 066-TC-112, 075-TC-78, 076-TC-78, 077-TC-78, 078-TC-78, 139-TC-50, 149-TC-50, 150-TC-78, 244-TC-78, 245-TC-78, 246-TC-78, 264-TC-78, 265-TC-78, 266-TC-78, 390-TC-M, 405-TC-28, 406-TC-28, 407-TC-28, 408-TC-28, 441-TC-M, 442-TC-M, 443-TC-M, 444-TC-M, 445-TC-M, 446-TC-M, 447-TC-M, 482-TC-M, 581-TC-10, 060-TF-28, 061-TF-28, 071-TF-28, 202-TF-50, 470-TF-50, 471-TF-28, 582-TF-4, 583-TF-4, 584-TF-112. Tanks 047-TF-78, 60-TF-28, 61-TF-28 and 71-TF-28 470-TF-50, 471-TF-28, 582-TF-4, 583-TF-4 and 584-TF-4 are not Subject to MACT Requirements; all other Tanks are MACT Tanks. Tanks 571-TC-5 and 572-TC-5 are also subject to 40 CFR Subpart K.		
1. **Volatile Organic Compounds (VOC).** i. Equipment Standard for Tanks 047-TF-78, 060-TF-28, 061-TF-28, 071-TF-28, 470-TF-50, 471-TF-28, 582-TF-4, 583-TF-4, 584-TF-112: The internal floating roof shall be equipped with a closure seal or seals to close the space between the roof edge and tank wall. *[Reference: 7 **DE Admin Code** 1124, Section 31.c.1.i. dated 11/29/94]* ii. Operational Limitations for Tanks 047-TF-78, 060-TF-28, 061-TF-28, 071-TF-28, 202-TF-50, 470-TF-50, 471-TF-28, 582-TF-4, 583-TF-4, 584-TF-112: A. The tank is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials.	vi. Compliance Method: A. Compliance with the standards and limitations will be demonstrated by adherence to the appropriate monitoring, testing, QA/QC, and recordkeeping requirements and the following requirements: *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.1, dated 12/11/00]* B. Compliance with Tank 047-TF-78's Emission Limitation in section (v) shall be demonstrated 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. *[Reference: **<u>APC-80/0869(A6)</u>** Cond. No. 4.3]* vii. Monitoring/Testing: A. The Owner/Operator shall carry out the	ix. 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. If any of the conditions described in 7 **DE Admin Code** 1124, Section 31.3 are detected during the annual inspection, a report shall be furnished to the Administrator 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: 7 **DE Admin Code** 1130 Section 6.1.3.2 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
*[Reference: 7 **DE Admin Code** 1124, Section 31.c.2. dated 11/29/94]* B. All openings, except stub drains, are equipped with covers, lids, or seals such that: *[Reference: 7 **DE Admin Code** 1124, Section 31.c.3 dated 11/29/94]* 1. The cover, lid, or seal is in the closed position at all times except when in actual use. 2. Automatic bleeder vents are closed at all times except when the roof is being floated off or being landed on the roof leg supports. 3. Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. C. For Tank 47-TF-78: *[Reference: APC-80/0869]* 1. The internal floating roof shall be floating on the liquid surface at all times except when the floating roof must be supported by the leg supports during the initial fill, after the vessel has been completely emptied and degassed, and when the vessel is completely emptied before being subsequently refilled. 2. 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. iii. Operational Limitations for Tanks 045-TC-153, 062-TC-28, 066-TC-112, 075-TC-78, 076-TC-78, 077-TC-78, 078-TC-78, 139-TC-50, 149-TC-50, 150-TC-78, 244-TC-78, 245-TC-78, 246-TC-78, 264-TC-78, 265-TC-78, 266-TC-78, 390-TC-M, 405-TC-28, 406-	following inspections for tanks equipped with a single seal system: 1. Visually inspect the internal floating roof and its closure seal or seals through roof hatches at least once every 12 months. 2. Perform a complete inspection of any cover and single seal whenever the tank is emptied for non-operational reasons or at least every 10 years, whichever is more frequent. B. For tanks equipped with a double seal system: 1. Visually inspect the internal floating roof and its closure seal or seals through the roof hatches at least once every 5 years. 2. Perform a complete inspection of any cover and double seal whenever the tank is emptied for non-operational reasons or at least every 5 years, whichever is more frequent. 3. For Tank 47-TF-78, following the inspections conducted in (2) above, the company shall comply with the requirements of §63.120(a)(7) before refilling the tank with organic HAP. *[Reference: APC-80/0869]* viii. 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 the following records in a readily accessible location for at least 5 years and shall make copies of the records available to the Department upon verbal or written request: 1. Records of the types of volatile petroleum liquids stored in that tank. 2. Records of the maximum true vapor	B. [**RESERVED**] C. 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 as described in 40 CFR 63.654(f); 2. Periodic Reports as described in 40 CFR 63.654(g); and 3. Other reports as described in 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. x. 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
TC-28, 407-TC-28, 408-TC-28, 441-TC-M, 442-TC-M, 443-TC-M, 444-TC-M, 445-TC-M, 446-TC-M, 447-TC-M, 482-TC-M, 581-TC-10: *A.* The maximum true vapor pressure of the stored petroleum liquid shall not exceed 1.5 psia. However, for Tanks 045-TC-153, 062-TC-28, 066-TC-112, 075-TC-78, 076-TC-78, and 077-TC-78, if the maximum true vapor pressure of the stored petroleum liquid exceeds 1.0 psia, then the Owner/Operator shall keep records as described in Section (vi)(B). *[Reference: 7 **DE Admin Code** 1124, Section 31.a.2.iii. dated 11/29/94]* *B.* For Tank 47-TF-78, the maximum true vapor pressure of the total organic hazardous air pollutants in the liquid stored shall be less than 76.6 kilopascals (11.1 psia) *[Reference: AQM-80/0869]* iv. Operation Limitation for all tanks: Any storage vessel that has continuously been out of service since before August 18, 1998, shall not be returned to HAP service until it satisfies the applicable MACT requirements in 40 CFR part 63, Subpart CC. *[Reference: 40 CFR Part 63, Subpart CC, §63.640(h)(4) dated 6/12/1996]* v. Emission Limitations for Tank 047-TF-78: A. [**RESERVED**] B. For Tank 47-TF-78: VOC emissions shall not exceed those specified in Condition 3 – Table 1.fb.iii.A. *[Reference: APC-80/0868(A3)]* C. For Tank 47-TF-78: The requirements of **Permit: AQM-003/00016 – Part 2** Condition 3 – Table 1.oa shall apply to the new fugitive VOC sources associated with this tank. *[Reference: APC-80/0868(A3)]*	pressure of the liquid as stored. 3. Records of the results of the inspections required in paragraph (d) of this Section. B. For fixed roof tanks exempted from Regulation No. 1124, Section 31, but containing a petroleum liquid with a true vapor pressure greater than 7.0 kPa (1.0 psia), shall maintain the following records in a readily accessible location for at least 5 years and shall make copies of the records available to the Department upon verbal or written request: 1. Records of the average monthly storage temperature. 2. Records of the type of liquid stored. 3. Records of the maximum true vapor pressure for any petroleum liquid with a true vapor pressure greater than 7.0 kPa (1.0 psia). C. For Tank 47-TF-78, the rolling 12 month VOC emissions. *[Reference: APC-80/0869]*	

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
fg. Emissions Unit 40: Refinery Tank Farm Units Subject to Special Odor Prevention Measures: Tanks 44-TF-112, 45-TC-152, 47-TF-78, 48-TF-112, 50-TF-78, 51-TF-78, 60-TF-28, 61-TF-28, 62-TC-28, 71-TF-28, 72-TF-50, 73-TF-78, 414-TC-M, 416-TF-3, 470-TF-50, 471-TF-28		
1. **Odor Control – State Enforceable Only.** i. Operational Limitations: A. A floating layer of oil at least 1 foot thick must be maintained to control odors from Tanks 470-TF-50 and 471-TF-28. *[Reference: APC-81/0120 Cond. No. 11]* B. The oil layer shall be replaced if hydrogen sulfide is detected in tank vapor space during the weekly tank inspection. *[Reference: APC-81/0120]* C. The oil layer thickness shall be gauged every month when Tanks 470-TF-50 and 471-TF-28 are checked for sediment readings. *[Reference: APC-81/0120]* D. Tanks 470-TF-50, 471-TF-28, 414-TC-M and 416-TC-3: Each day a formal documented inspection shall be performed by an operator making a "walk-around" inspection of the tank base and by climbing each tank and viewing each roof. *[Reference: Letter from R.G. Soehlke to DNREC Acting Secretary John Hughes dated 2/28/89]* E. Tanks 44-TF-112, 45-TC-152, 047-TC-78, 48-TF-112, 50-TF-78, 51-TF-78, 60-TF-28, 61-TF-28, 62-TC-28, 71-TF-28, 72-TF-50, 73-TF-78: Each week a formal documented inspection shall be performed by an operator making a "walk-around" inspection of the tank base and by climbing each tank and viewing each roof. *[Reference: Letter from R.G. Soehlke to DNREC Secretary Jon Hughes dated 2/28/89]* F. Tank 470-TF-50 shall be monitored in accordance with the requirements of API Recommended Practice 651 - Cathodic Protection of Aboveground Petroleum	ii. Compliance Method: Compliance with the operation limitations will be demonstrated by adherence to the appropriate monitoring, testing, QA/QC, and recordkeeping requirements. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.1, dated 12/11/00]* iii. Monitoring/Testing: In addition to that described under the Operational Limitations: A. Compliance with Operational Limitation (G) shall be demonstrated weekly by a H_2S Draeger tube that displays a reading less than 10 ppm. Readings of 10 ppm or greater is indicative of an odor problem and the carbon beds shall be regenerated. *[Reference: Star Enterprise's "Carbon Canister Monitoring at Offtest and Sour Water Tanks" submitted as Attachment "A" of Permit: APC-81/0120 and APC-81/0120]* 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. A hard bound log book or electronic record shall be designated to record the following information: tank number, date, operator's initials making the inspection, and pertinent findings. *[Reference: APC-81/0120]*	v. Reporting: Comply with 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 Limitations/Standards and/or Operational Limitations/Standards	Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)	Reporting/Compliance Certification
Storage Tanks and in accordance with NACE Recommended Practice RP0193-93 - External Cathodic Protection of On-Grade Metallic Storage Tank Bottoms. *[Reference: APC-81/0120]* G. Proper operation of the Conservation Vent and Carbon Adsorption Bed of Tank 471-TF-28 shall be considered a necessary part of acceptable storage tank operation in accordance with the Notice of Conciliation Proceedings and Penalty dated February 10, 1989 signed by Acting Secretary John Hughes for the Department, R.G. Soelkhe for Star Enterprise and Robert A. Cap for Texaco Refining and Marketing, Inc. *[Reference: Star Enterprise's "Carbon Canister Monitoring at Offtest and Sour Water Tanks" submitted as Attachment "A" of **Permit: APC-81/0120**]* H. Each tank shall be checked for the presence of liquid, vapor, or odor outside of the tank. Tanks that have a mixer (or transfer) pump(s), shall also be checked. *[Reference: APC-81/0120]*		
fh. Reserved (formerly Process Heater 40-H-1) (The unit has been demolished).		
fi. Reserved Emissions Unit 40: (formerly Frozen Earth Storage System Flare) Emission Point 40-1. This emission unit has been decommissioned.		
fj. Emission Unit 40 – Ethanol Blending Project with a fixed roof tank equipped with an internal floating roof (Tank 206-TF-112) and ancillary equipment.		
1. Volatile Organic Compounds (VOC): i. Emission Limitations: VOC emissions from the Ethanol project shall not exceed 0.59 ton on a rolling 12 month basis, inclusive of 0.38 from Tank 206-TF-112 and 0.21 ton of fugitive emissions from new components installed at the refinery for purposes of the	iv. Compliance Method: A. Compliance with the emission limitation shall be demonstrated by using EPA's Tanks Version 4.09 or a Department approved method to estimate emissions from Tank 206-TF-112 and the results of the quarterly LDAR monitoring program using a Department approved method. *[Reference: APC-*	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.

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
Ethanol Blending Project. *[Reference: APC-80/0868-C/O Cond. No. 2.1.1]* ii. Emission Standard: The leak detection and repair requirements to control fugitive VOC emissions from the Ethanol Project shall be in accordance with the requirements in 40 CFR 60, Subpart GGG for new and existing components in light liquid service and in accordance with 40 CFR Part 63 Subpart CC for new and existing components in light liquid Hazardous Air Pollutant (HAP) service. The leak detection and repair requirements to control fugitive emissions from the Ethanol Project shall be in accordance with the Consent Decree for both new and existing components in light liquid service. Applicable requirements are detailed in **Permit: AQM-003/00016 – Part 2**, Condition 3 – Table 1, in the section "Facility Wide Requirements for Fugitive VOC Emissions". *[Reference: APC-80/0868-C/O Cond. No. 2.1.2]* iii. Operational Standards for Tank 206-TF-112, a fixed roof tank with an internal floating type cover equipped with a continuous closure device between the tank wall and the cover edge: A. The cover is to be floating at all times, (i.e., off the leg supports) except during initial fill and when the tank is completely emptied and subsequently refilled. The process of emptying and refilling when the cover is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible. B. Each opening in the cover except for automatic bleeder vents and the rim space vents is to provide a projection below the liquid surface. Each opening in the cover except for automatic bleeder vents, rim space vents, stub drains and leg sleeves is to be equipped with a cover, seal,	*80/0868-C/O Cond. No. 4.1]* B. Compliance with the Emission Standard for new components in light liquid HAP service shall be based on compliance with the standards in 40 CFR 63.648. Compliance with the standards in 40 CFR 60, Subpart GGG shall be based on the test methods and procedures in 40 CFR 60.592. Applicable requirements are detailed in **Permit: AQM-003/00016 – Part 2**, Condition 3 – Table 1, in the section "Facility Wide Requirements for Fugitive VOC Emissions". C. Compliance with the Operational Standards shall be based on the testing procedures in 40 CFR Part 115a. v. 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 Section 6.1.3.1.2 and 6.2.1 dated 12/11/00]* A. Results of the rolling 12 month VOC emissions comprised of working and breathing loses from Tank 206-TF-112 and LDAR monitoring program pursuant to 40 CFR 60, Subpart GGG for existing components in light liquid service and in accordance with 40 CFR 63, Subpart CC for new components in light liquid service. Applicable requirements are detailed in **Permit: AQM-003/00016 – Part 2**, Condition 3 – Table 1, in the section "Facility Wide Requirements for Fugitive VOC Emissions". B. Results of the monitoring and testing required by Compliance Method C above. [*Reference: APC-80/0868-C/O Cond. No. 5]*	*[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
or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the cover is floating except when the cover is being floated off or is being landed on the leg supports. Rim vents are to be set to open only when the cover is being floated off the leg supports or at the manufacturer's recommended setting. *[Reference: APC-80/0868-C/O Cond. No. 3.1 and 40 CFR Part 60.112a(a)(2) dated 7/1/07]*		
g. **Emissions Unit 43**: Ether Plant Cooling Tower Fugitive VOC and PM10/PM2.5 Emissions; Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries; National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries; 40 CFR Part 63 Subpart CC Compliance through Standards of Performance for Equipment Leaks of VOC in SOCMI; Subpart VV and Facility-Wide Standards of Performance for Equipment Leaks of VOC in SOCMI.		
This unit has only fugitive emissions. Applicable requirements are detailed in **Permit: AQM-003/00016 – Part 2**, Condition 3 – Table 1, in the section "Facility Wide Requirements for Fugitive VOC Emissions". 1. Volatile Organic Compounds (VOC)/(HAP): i. Emissions Standard: *[Reference APC-91/0553(A1)]* VOC emissions shall not exceed 5.5 TPY. ii. Operational Limitation: *[Reference APC-91/0553(A1)]* The Company shall comply with the MACT Heat Exchanger Leak Detection Requirements in 40 CFR 63.654.	iii. Compliance Method*: [Reference APC-91/0553(A1)]* A. The VOC concentration in the cooling water shall be obtained in accordance with the procedures in 40 CFR 63.654(c)(1) using a method approved by the department. B. Compliance with the MACT Heat Exchanger Leak Detection Requirements shall be based on information available to the Department concerning the Company'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. iv. Monitoring/Testing*: [Reference APC-91/0553(A1)]* A. To determine the cooling water VOC concentration, samples shall be taken at the entrance and exit of the cooling tower and at the point of makeup water addition.	vi. Reporting Requirement: In addition to those 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. Reporting requirements in 40 CFR 63.655. 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
	1. The entrance is the point at which cooling water leaves the cooling tower prior to being returned to the process equipment. 2. The exit is the point at which the cooling water is introduced to the cooling tower after being used to cool the process fluid. 3. A minimum of three sets of samples shall be taken at the entrance and exit and the point of makeup water entry. 4. The average concentrations shall then be calculated for each set of samples. v. Record Keeping: *[Reference APC-91/0553(A1)]* A. The Owner/Operator shall maintain: 1. Results of cooling water VOC concentration Cooling water average recirculation rate in gallons per minute. 2. Recordkeeping requirements in 40 CFR 63.655.	
3. Particulate Matter (PM10/PM2.5): i. Emissions Standard: *[Reference APC-91/0553(A1)]* PM10/PM2.5 emissions shall not exceed 0.2 grains/dry standard cubic foot and 1.7 TPY.	iii. Compliance Method: *[Reference APC-91/0553(A1)]* Compliance shall be based on the proper operation of the high-efficiency mist eliminators having a vendor guaranteed emission factor of 0.0005% drift loss per pound of cooling water circulated. iv. Monitoring/Testing: *[Reference APC-91/0553(A1)]* A. The Owner/Operator shall conduct a quarterly test of total solids using Method 2540B of Standard Methods for the Examination of Water and Wastewater. v. Record Keeping*: [Reference APC-91/0553(A1)]* A. The Owner/Operator shall maintain: 1. Results of quarterly test of total solids using Method 2540B 2. Cooling water average recirculation rate in gallons per minute	vi. 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]* 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
h. Emission Units 99-1(a), 99-1(b), 99-1(c): Cold solvent degreasers.		
1. **Operational Standards.** i. A. For each cold solvent degreaser the Owner/Operator shall: 1. Equip the cleaner with a cover that is easily operated with one hand if the cleaning solvents used have a vapor pressure greater than 15mm Hg at 100 degrees F; 2. Provide a permanent, legible, conspicuous label, summarizing the operation requirements; 3. Store waste solvent in covered containers; 4. Close the cover whenever the parts are not being handled in the cleaner; 5. Drain the cleaned parts until the dripping eases; 6. If used, supply a solvent spray that is a solid fluid stream at a pressure that does not exceed 10 psig; 7. Degrease only materials that are neither porous nor absorbent. *[Reference 7 **DE Admin Code** 1124, Section 33.3.1 dated 1/11/93]* B. The Owner/Operator shall not use any solvent containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, or chloroform or any combination of these halogenated HAP solvents, in a total concentration greater that 5 percent by	ii. Compliance Method: Compliance shall be demonstrated by monitoring/testing and record keeping requirements of this condition. *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3 dated 12/11/00]* iii. Monitoring/Testing: A. The Material Safety Data Sheet supplied with each delivery of new solvent type shall be reviewed. ASTM D323-89 shall be the method used for measuring solvent true vapor pressure. *[Reference 7 **DE Admin Code** 1124, Section 33.4.5 dated 1/11/93]* B. The concentration of the solvents listed in Operational Standard (B) may be determined using EPA Method 18, material safety data sheets, or engineer calculations. *[Reference 40 CFR 63.460(a) dated 12/11/98]* iv. Record Keeping: In addition to the requirements of Conditions 3(b)(1)(ii) and 3(b)(2) of this permit, the Owner/Operator shall maintain copies of the manufacturer supplied Material Safety Data Sheet and other records showing the solvent content and the vapor pressure of the solvent used as determined by ASTM D323-89. *[Reference 7 **DE Admin Code** 1130, Section 6.1.3 dated 12/11/00]*	v. 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. Comply with the requirements of 7 DE Admin Code 1124 Section 5.2 regarding reports of excess emissions. 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
weight, as a cleaning and/or drying agent. *[Reference 40 CFR 63.460(a) dated 12/11/98]*		
i. RESERVED		
The Owner/Operator shall comply with either Section ja or jb and jc below.		
ja. Compliance Requirements for 7 DE Admin. Code 1142: The following emission units are subject to the NOx control requirements in 7 **DE Admin. Code 1142 -** Crude Unit Vacuum Heater (Unit 21-H-2); Crude Unit Atmospheric Heater (Unit 21-H-701); Fluid Coking Unit Carbon Monoxide boiler (Unit 22-H-3); Steam Methane Reformer Heater (Unit 37-H-1); Continuous Catalyst Regenerator Reformer Heater (Unit 42-H-1,2,3); Boiler 1 (Unit 80-1); Boiler 2 (Unit 80-2); Boiler 3 (Unit 80-3); Boiler 4 (Unit 80-4); Fluid Catalytic Cracking Unit Carbon Monoxide (CO) Boiler (Unit 23-H-3).		
1. Nitrogen Oxides (NO_X):		
i. Emission Standards: *[Reference 7 **DE Admin Code** 1142, Section 2.3.1 effective 4/11/11]* A. For Units 21-H-2, 21-H-701, 42-H-1,2,3 and 80-2: NOx emissions shall not exceed 0.04 lb/mmbtu on a 24-hour rolling average basis except that the compliance date for Unit 42-H-1,2,3 shall not be effective before 12.31.2012. B. For Unit 80-1, 80-3 and 80-4: NOx emissions shall not exceed 0.015 lb/mmbtu on a 24-hour rolling average basis except that the compliance date for Units 80-3 and 80-4 shall not be effective before 05.01.2011. C. For 23-H-3: 20 ppmvd @ 0 % O2 on a 365 day rolling average basis, and 40 ppmvd @ 0 % O2 on a 7-day rolling average basis. D. For 22-H-3 and 37-H-1: **[RESERVED]**. E. Additional requirements in Attachment "F" of this permit.	ii. Compliance Method: Compliance with the NO_x emission standards shall be determined based on CEMS. *[Reference 7 **DE Admin. Code** 1142, Section 2.4.1 dated 4/11/11]* iii. Monitoring/Testing The CEMS must be certified by satisfying Performance Specification 2 in 40 CFR, Part 60, Appendix "B" and the QA/QC requirements in 40 CFR Part 60, Appendix "F". *[Reference 7 **DE Admin. Code** 1142, Section 2.4.1 dated 4/11/11]* iv. Recordkeeping: The following records shall be maintained in accordance with Condition 3(b): *[Reference: 7 **DE Admin Code** 1130, section 6.1.3.2 dated 12/11/00]* A. Hourly and rolling 24 hour NOx emissions in terms of the applicable standard B. CEMS data calibration and audit results.	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, section 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, section 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
jb. Facility-wide Emission Limit for Nitrogen Oxides (NO_x) Sources: For the purpose of the NOx Cap and its provisions, a source is defined as all NOx emitting operations at the facility including, but not limited to the collection of all boilers, process heaters, combustion turbines, flares and all insignificant combustion sources The following emission units are subject to a facility-wide emission limit for NO_x ("NOx Cap") (collectively the "NOx Cap Units") in accordance with the conditions provided in this section and the NOx Cap described in this permit will continue in effect in accordance with the provisions of 7 **DE Admin. Code 1142**: **Emission Unit No. 10** (Vapor Combustion Unit); **Emission Unit No. 15** (Marine Vapor Recovery (MVR) System); **Emission Unit No. 21** (Crude Unit Atmospheric Tower Heater 21-H-701, and Crude Unit Vacuum Tower Heater 21-H-2); **Emission Unit No. 22** (FCU, Wet Gas Scrubber (WGS), and Selective Non-Catalytic Reduction System (SNCR), FCU Start Up Heater 22-H-1, FCU Selas Steam Superheater 22-H-2, FCU Carbon Monoxide Boiler 22-H-3 and FCU Back Up Incinerator 22-H-4; **Emission Unit No. 23** (FCCU Reactor, Catalyst Regenerator, Start Up Heaters 23-H-1A and B, Carbon Monoxide Boiler 23-H-3 and Wet Gas Scrubber System); **Emission Unit No. 25** (Cracked Naphtha Hydrotreater (CNHT) Unit, Butamer Unit and Cooling Tower); **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 Unit No. 29** (Catalytic Hydrodesulfurizer Trains 29-1 through 29-5 and Process Heaters 29-H-101 and 29-H-2 through 29-H-9; **Emission Unit No. 32** (Process heater 32-H-101); **Emission Unit No. 33** (Selective Hydrogenation Unit and Process Heaters 33-H-1 and 33-H-2); **Emission Unit No. 34** (Olefins Plant and Process Heater 134-H-101); **Emission Unit No. 36** (Hydrocracker Unit, Process heaters 36-H-1, 36-H-2 and 36-H-3); **Emission Unit No. 37** (Steam Methane Reformer Hydrogen Plant, Heaters 37-H-1A/B); **Emission Unit No. 40** (Frozen Earth Storage System Flare); **Emission Unit No. 42** (Continuous Catalyst Regenerator (CCR) Reformer, Reformer Charge Heater 42-H-1,2,3 and Reboiler Heater 42-H-7); **Emission Unit No. 45** (Refinery utilities, North & South Flares and Gas Recovery System, Package Boilers); **Emission Unit No. 80** (Boiler #1, Boiler #2, Boiler #3 and Boiler #4; **Emission Unit No. 84** (Combined Cycle Unit #1 and Combined Cycle Unit #2); **Insignificant Emissions Units** listed in Attachment "C" of this Permit.		
1. Nitrogen Oxides (NO_X):		
i. Emission Standards: *[Reference: 7 **DE Admin. Code** 1125, Sections 2 and 3 dated 08/11/05 and 7 **DE Admin. Code** 1142, Section 2 effective 04/11/11]* A. The initial NOx Cap for the Refinery shall be 2525 tons per year, evaluated over each twelve (12) consecutive month rolling period, commencing with the rolling twelve (12) consecutive month period comprised by calendar year (CY) 2011 and ending with the twelve (12) consecutive month rolling period that ends on December 31, 2013. B. The NOx Cap will be further reduced to 2225 tons per year, evaluated over each twelve (12) consecutive month rolling period comprising calendar year 2014. C. The NOx Cap will be further reduced to 1650 tons per year, evaluated over each twelve (12) consecutive month rolling period, commencing with the twelve (12) month rolling period beginning on January 1, 2015 and ending on	ii. Compliance Method *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.1 dated 12/11/00]* Compliance with the Emission Standards shall be as follows: A. Compliance with the Emission Standards shall be based on CEMS for the following units: • 21-H-1 • 21-H-701 • 22-H-3 • 23-H-3 • 37-H-1A/B • 42-H-1,2,3 • 80-1 • 80-2 • 80-3 • 80-4 • 84-1 • 84-2 The CEMs shall sample, analyze, and record data	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. The owner and/or operator shall submit the following information with each Semi-Annual Report submitted pursuant to Condition 3(c)(2)(i) of **Permit: AQM-003/00016** and any Renewals or Revisions of the permit: 1. Rolling twelve month total Plantwide NOx emissions in tons for each month covered by the report including fugitive emissions, to the extent quantifiable, from all emission units; and/or 2. The owner and/or operator shall record and report NOx emissions for those periods when the minimum data capture requirements in Condition 3 – Table 1.jb.ii.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
December 31, 2015, and continuing thereafter. D. During the period of May 1 through September 30 of each calendar year (the "Ozone Season"), the Owner/Operator shall not cause or allow the emission of NO_x in excess of 1,500 TPY from the NOx Cap Units, combined. E. The plantwide applicability limit ("PAL") for the attainment pollutant, nitrogen dioxide ("NO_2") shall be 2,636 TPY. For the purpose of this emission standard, all NOx emissions shall be considered to be NO_2. F. For purposes of demonstrating compliance with its NOx CAP limitations, in lieu of monitoring, measuring, recording and/or otherwise tracking or projecting NOx emissions from individual sources listed as insignificant in Appendix A of 7 DE Admin Code 1130 or identified in Appendix C of this permit, the Owner/Operator may assign to such sources, in the aggregate, one percent of the NOx Cap limitation applicable during the relevant compliance period. Therefore, the aggregate NOx emissions that would be assigned, collectively, to these sources would be 25.25 tons per rolling 12 month period for purposes of demonstrating compliance with the NOx Cap specified in Condition 3 - Table 1.jb.1.i.A; 22.25 tons per rolling 12 month period for purposes of demonstrating compliance with the NOx Cap specified in Condition 3 - Table 1.jb.1.i.B; and 16.50 tons per rolling 12 month period for purposes of demonstrating compliance with the NOx Cap specified in Condition 3 - Table 1.jb.1.i.C.	every fifteen minutes while the emission unit is operating. At a minimum, the CEMs shall capture a minimum of 90% of the operating data each month or 95% of the operating data each quarter. B. Compliance with the Emission Standards shall be based on the fuel usage and the determination and use of a NO_x emission factor based upon the results of the most recent performance testing conducted in accordance with a protocol approved by DNREC, for the following units: • 25-H-401 • 25-H-402 • 28-S-203 • 28-S-803 • 32-H-101 C. For 25-H-401 and 25-H-402, oxygen parametric monitoring may be used as an alternative method. Hourly average NOx emissions shall be calculated consistent with the methodologies of the Premcor submittals to the Department dated November 19, 2007 and April 16, 2008 or by alternate methodologies approved by the Department. D. Fuel usage and published NO_X emission factors for such source or category of sources for all other affected units or any other method proposed by the Owner/Operator and approved by the Department. E. For purposes of demonstrating compliance with the NOx Caps the Owner/Operator shall account for NO_x emissions from permitted sources during all periods of startup, shutdown or malfunction of such equipment. To the extent that such emission rates are not measured by CEMS during such periods of startup, shutdown or malfunction, and to the further extent that performance testing for such source did not establish emission factors for such equipment	have not been met. The report shall provide all relevant assumptions and engineering calculations used in quantifying the emissions during such periods of insufficient data capture unless another method for determining emissions during such period is specified in the permit. 3. A list of any emissions units modified or added to the major stationary source during the preceding six month period including any pre-approved changes made pursuant to Condition 3 – Table 1.jc.10 of this permit; 4. The number, duration, and cause of any deviation or monitoring malfunction; and 5. The number, duration, and cause of any shutdown of any monitoring system and calculation of NOX emissions during the shutdown. *[Reference 7 **DE Admin. Code** 1130 Section 6.1.7.5 dated 12/11/00]* B. The owner and/or operator shall submit the list of pre-approved changes made pursuant to Condition 3.5 of this permit with each annual compliance certification. *[Reference 7 D**E Admin. Code** 1130 Section 6.3.5.6 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
	reflective of operations during periods of startup, shutdown or malfunction, then the Owner/Operator shall estimate such emission rates from such source during any periods of startup, shutdown or malfunction in accordance with best engineering judgment, provided however that the Owner/Operator must report to the Department the basis for the Owner/Operator's emission projections in such instance, and DNREC may object to the Owner/Operator's emission estimation methodology. F. To the extent that any applicable federal regulatory standard governing the operation of a NO_x CEMS at the refinery requires data substitution methods relevant to compliance demonstrations under such applicable regulatory standard, the Owner/Operator need not utilize such data substitution procedures to determine NO_x emission rates from the relevant source at the Refinery during any period of CEMS outage or out-of-control periods for purposes of determining compliance with Emission Standards if the Owner/Operator can identify an alternative basis for estimating NO_x emissions from such source during such period of CEMS outage or out-of-control operation. G. To the extent that any applicable regulatory standard requires the Owner/Operator to conduct performance testing for NOx emissions for a specific source at the Refinery, the Owner/operator shall determine the NO_x emission rate for such source based upon the NO_x emission factor derived from the most recent performance test conducted in accordance with the applicable regulatory standard, provided however that the Owner/Operator may, at its election, conduct performance testing in addition to that required by applicable standards to establish a lower NO_x emission factor for such source to be	

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
	used in demonstrating compliance with the NOx Caps provided however that the Owner/Operator must secure advanced approval from the Department of any proposed adjusted NO_x emission factor. The Department shall approve or disapprove any request made by the Owner/Operator for an adjusted emission factor within 90 days of receiving information from the Owner/Operator sufficient to allow the Department to determine the acceptability of such adjusted emission factor. H. Notwithstanding Compliance Methods A through D above, the owner/operator shall satisfy the unit specific compliance requirements otherwise specified in this permit. iii. Monitoring/Testing: *[Reference: 7 **DE Admin Code** 1130 Sections 6.1.3.1 dated 12/11/00]* A. The Owner/Operator shall comply with the individual Monitoring/Testing requirements provided in this permit for each NOx Cap Unit. iv. Recordkeeping: *[Reference: 7 **DE Admin Code** 1130 Section 6.1.3.2 dated 12/11/00]* A. All necessary records to assess compliance with the emission standards shall be maintained for a period of 5 years. B. CEMS records, as applicable shall comprise of CEMS data, calibration and audit results. C. Parametric monitoring data or performance test data as applicable. D. Daily and monthly fuel usage and the applicable emission factor used in calculating monthly emissions. E. Records of monthly NOx emissions from each NOx emissions unit under the facility-wide NOx cap and the rolling twelve month NOx emissions from each NOx emissions unit under the facility-	

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
	wide NOx cap. The NOx emissions from each NOx emissions unit under the facility-wide NOx cap shall be summed up and compared to the applicable NOx cap limit. F. Records of all periods of startup, shutdown and malfunction for each NOx Cap Unit, in addition to such other information concerning such startup, shutdown or malfunction event necessary to determine emissions from such source. G. The Owner/Operator shall comply with the individual Recordkeeping requirements provided in this permit for each NOx Cap Unit and shall maintain the rolling twelve (12) month NO_x emission data in accordance with Condition 3(b). H. The owner and/or operator shall immediately notify the Department of discovery of any exceedance of the NOx Cap and shall submit to the Department within thirty days of discovery a report that identifies the following: 1. The cause of the exceedance; 2. The actions that the owner and/or operator shall take to correct the violation; and 3. A schedule to correct the violation. I. Compliance with the NOx PAL shall be calculated and recorded within thirty calendar days of the end of each month based upon the previous twelve month rolling period. *[Reference 7 **DE Admin. Code** 1130 Section 6.1.3.3.3.4 dated 12/11/00]*	
jc. NOx Cap (PAL) Provisions: This permit condition provides a Plant-wide Applicability Test for New Source Review purposes		
1. [**RESERVED**] 2. [**RESERVED**] 3. [**RESERVED**] 4. [**RESERVED**] 5. [**RESERVED**]		

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. The NOx Cap shall remain in effect until the date of expiration of this permit. 6.1 6.1.1 Compliance with the NOx Cap limitation in option jb of this permit shall constitute compliance with Sections 2 and 3 of 7 **DE Admin. Code** 1125 with respect to these pollutants; 6.1.2 If the owner/operator elects compliance option ja of this permit, then in addition to the requirements of Section ja, all requirements of 7 **DE Admin. Code** 1125 shall continue to be applicable requirements. 6.2 The owner and/or operator may request to continue the NOx Cap by submitting a request for renewal at least six months prior to, but not earlier than eighteen months prior to, the date of permit expiration. If the owner and/or operator submits a complete application to renew the NOx Cap within this time period (between November 27, 2018 and May 27, 2019), then the NOx Cap shall continue to be effective until the revised permit with the renewed NOx Cap is issued. 6.2.1 The extension of the permit terms under 6.2 cannot remain in effect beyond a date ten years from issuance of the NOx Cap. If the NOx Cap has not been reevaluated and reissued by that date it shall expire. 6.3 If the potential to emit NOx from all stationary sources at the facility subject to the NOx Cap is less than the limitations set in the NOx Cap, the Department shall adjust the limitations in the NOx Cap, as applicable, to a level no greater than the potential to emit. 6.4 The Department shall not approve a renewed NOx Cap limitation at a limit higher than that given in Condition jb.1.i unless the owner and/or operator has complied with the requirements given in Condition 8 of this section of this permit. 6.5 If the Department has not already lowered the NOx Cap limitations as necessary based upon the requirements of Condition 7 of this section of this permit, the NOx Cap limitations shall be lowered at the time of permit renewal. 6.6 If the NOx Cap is not renewed in accordance with the requirements of Condition 6.2, the NOx Cap shall expire at the end of the NOx Cap effective period, and the requirements below shall apply: 6.6.1 Each emissions unit (or each group of emissions units) that existed under the NOx Cap shall comply with an allowable emission limitation under a revised permit established according to the procedures in Conditions 6.6.1.1 and 6.6.1.2: 6.6.1.1 Within the time frame specified for NOx Cap renewals in Condition 6.2 of this section of the permit, the major stationary source shall submit a proposed allowable emission limitation for each emissions unit (or each group of emissions units, if such a distribution is more appropriate as decided by the Administrator) by distributing the NOx Cap allowable emissions for the major stationary source among each of the emissions units that existed under the NOx Cap. If the NOx Cap had not yet been adjusted for an applicable requirement that became effective during the NOx Cap effective period, such distribution shall be made as if the NOx Cap had been adjusted. 6.6.1.2 The Department shall decide whether and how the NOx Cap allowable emissions will be distributed and issue a revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as the Department determines is appropriate. 6.6.2 Each emissions unit(s) shall comply with the allowable emission limitation on a 12-month rolling basis. The Department may approve the use of monitoring systems (source testing, emission factors, etc.) other than CEMS, CERMS, PEMS, or CPMS to demonstrate compliance with the allowable emission limitation. 6.6.3 Until the Department issues the revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, the source shall continue to comply with a source-wide, multi-unit emissions cap equivalent to the level of the NOx Cap emission limitation. 6.6.4 Any physical change or change in the method of operation at the major stationary source will be subject to major NSR requirements if such change meets the definition of major modification in 40 CFR 52.21 (b)(2). 6.6.5 The major stationary source owner or operator shall continue to comply with any State or Federal applicable requirements (BACT, RACT, NSPS, etc.) that may have applied either during the NOx Cap effective period or prior to the NOx Cap effective period except for those emission limitations that		

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
had been established pursuant to paragraph 40 CFR 52.21 (r)(4), but were eliminated by the NOx Cap in accordance with the provisions in 40 CFR 52.21 (aa)(1)(ii)(c). *[Reference 7 **DE Admin. Code** 1130 Section 6.1.2.1 dated 12/11/00 and Section 7.3.1 dated 12/11/00 and 40 CFR 52.21(aa)(7) dated 6/3/2010]*		
7. The NOx Cap provisions of this permit may be reopened to: *[Reference 7 **DE Admin. Code** 1130 Section 7.6 dated 12/11/00]* 7.1 Reduce the NOx Cap to create emission reductions for offset purposes; 7.2 Reduce the NOx Cap to reflect newly applicable Federal and State requirements with compliance dates after the PAL effective date; or 7.3 Reduce the NOx Cap for any pollutant consistent with any other requirement that may be imposed under the State Implementation Plan (SIP). 7.4 Any downward adjustment that is required under Condition 7.2 or 7.3 will be based upon the contribution of the affected source(s) to actual emissions at the time the rule goes into effect.		
8. The owner and/or operator shall not construct new stationary sources, modify existing stationary sources, or operate existing stationary sources such that the NOx Cap is exceeded. The owner and/or operator shall comply with 7 **DE Admin. Code** 1125, "Preconstruction Review", for any proposed activity that necessitates an increase in the NOx Cap in accordance with the following provisions: *[Reference 7 **DE Admin. Code** 1102, Section 12.4 dated 6/11/2006 and 7 **DE Admin. Code** 1130 Section 7.4 dated 12/11/2000]* 8.1 The owner and/or operator shall demonstrate that significant and major emission units at the facility meet Best Available Control Technology (BACT), equivalent BACT, or an equivalent level of control for each pollutant that an increase is being requested for: 8.1.1 The demonstrations shall be in the form of a BACT analysis unless the emissions unit is currently subject to a current (i.e. within the past ten years) BACT or Lowest Achievable Control Technology (LAER) requirement; 8.1.2 The owner and/or operator shall demonstrate to the Department's satisfaction that is not economically feasible to reduce emissions of the NOx Cap by further controlling emission units at the facility. 8.2 A new emissions unit that necessitates an increase in the NOx Cap shall be treated as a new major source and shall comply with 7 **DE Admin. Code** 1125. 8.3 The air quality impacts analysis as shown in 40 CFR 51.166(m) (July 1, 2005 edition) shall demonstrate that the increase will not cause or contribute to a National Ambient Air Quality Standard (NAAQS) or Prevention of Significant Deterioration (PSD) increment exceedance. 8.4 Revisions to the NOx Cap shall be incorporated into the facility's Title V Permit in accordance with the provisions of 7 **DE Admin. Code** 1102 Section 12.4 and 7 DE **Admin. Code** 1130 Section 7.4. 8.5 The increased NOx Cap level shall be effective upon the date of incorporation into the facility's Title V Permit.		
9. The provisions of 7 **DE Admin. Code** 1125 Sections 1 through 3 shall not apply to emissions units that that are proposed modifications with increases in associated NOX emissions or to proposed new emission units so long as the Plantwide Applicability Limits in Condition jb.1.i are not exceeded. Except for the pre-approved changes described in Condition 10 of this Section of this permit, 7 **DE Admin. Code** 1125 Section 4, "Minor New Source Review", shall continue to apply to emission units that are proposed modifications with increases in associated NOX emissions or to proposed new emission units. A complete application meeting all of the requirements of 7 **DE Admin. Code** 1125 Section 4 and 7 **DE Admin. Code** 1102 shall be submitted with sufficient information for public notice. The owner and/or operator shall specifically follow the requirements of 7 **DE Admin. Code** 1102 Section 12.4 and 7 **DE Admin. Code** 1125 Section 4 in order for the terms and conditions of the construction permit to be transferred into the 7 **DE Admin. Co**de 1130 permit via the administrative amendment process specified in 7 **DE Admin. Code** 1130 Section 7.4. *[Reference 7 **DE Admin. Code** 1125 Section 4.0 dated 8/11/05, 7 DE **Admin. Code** 1102 Section 11.0 dated 6/11/06 and Section 12.4 dated 6/11/06, and 7 **DE Admin. Code** 1130 Section 7.4 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
10. The following Pre-Approved Changes shall be treated as alternate operating scenarios. The owner and/or operator is approved to make the changes listed under Conditions 10.1 and 10.2 of this section so long as the NOx Cap is not exceeded and the activity will not result in a newly constructed or reconstructed major source of hazardous air pollutants as defined in and subject to 40 CFR Part 63.2 and Part 63.5(b)(3), National Emission Standards for Hazardous Air Pollutants. The owner and/or operator shall comply with all certification, monitoring, testing, record keeping, and reporting requirements listed in this permit for the following pre-approved changes. Any change that is subject to a new applicable requirement that is not listed in this permit shall prior to implementation comply with the permit revision procedures of this permit so long as to incorporate the new requirement into the permit. 10.1 Conventional Pre-Approved Changes *[Reference 7 **DE Admin. Code** 1130 Section 6.8 dated 12/11/00]* 10.1.1 The emission unit is replaced in kind or replaced with a unit with inherently lower emissions; 10.1.2 Operational changes which will not increase any short term NOX emission limit established in **Permit: AQM-003/00016** or any renewals or revisions thereof for NOx; and 10.1.3 Any of the exemptions listed under 7 **DE Admin. Code** 1102 Appendix A. 10.2 PAL Pre-Approved Changes 10.2.1 In-kind replacement of an emissions unit or replacement with an inherently lower emitting unit.		
11. Any activity that will result in a newly constructed or reconstructed major source of hazardous air pollutants (HAPs) as defined in and subject to 40 CFR Part 63.2 and 63.5(b)(3), National Emission Standards for Hazardous Air Pollutants, shall submit a registration in accordance with Section 9 of 7 DE **Admin. Code** 1102 or a permit application in accordance with Section 11 of 7 **DE Admin. Code** 1102 and receive approval from the Department prior to initiating the change. *[Reference 7 **DE Admin. Code** 1102 Section 9.0 dated 6/1/97 and Section 11.0 dated 6/11/06]*		
12. Any activity initiated under Condition 10 of this Section of this permit that involves the installation of new emission units as part of the source defined in Condition jb.1.i shall submit: 12.1 A registration in accordance with Section 9 of 7 **DE Admin. Code** 1102; or 12.2 A permit application in accordance with Section 11 of 7 **DE Admin. Code** 1102 and the following provisions: 12.2.1 The new emission units, as applicable, shall comply with 7 **DE Admin. Code** 1125 Section 4; 12.2.2 Any air pollution control technology requirements that result from the application of 7 **DE Admin. Code** 1125 Section 4 shall be reflected in the operating permit; 12.2.3 No additional unit specific NOx emission rate requirements will be added to the NOx Cap permit so long as NOx Cap limits are not exceeded ; and 12.2.4 Forty-five days following the public notice, unless the Department objects or issues supplemental conditions, the project with be automatically approved. Should a public hearing be requested, the automatic approval process will cease. *[Reference 7 **DE Admin. Code** 1102 Section 9.0 dated 6/1/97 and Section 11.0 dated 6/1/06 and 7 **DE Admin. Code** 1125 Section 4.0 dated 8/11/05]*		
13. The Department shall determine the need for unit specific emission factors for any new NOX emitting emission unit constructed after issuance of this permit or for any modification to an existing NOX emission unit that will be covered under the NOx Cap. Unit specific emission factor requirements for any new NOX emitting unit or for any modification to an existing NOX emission unit will be covered in the new unit's construction permit and will be incorporated into **Permit: AQM-003/00016** or any renewal or revision thereof.		

Condition 4. Operational Flexibility

a. In addition to the operational flexibility specifically provided in the terms and conditions detailed in Condition 3 – Table 1 of this permit, the Owner and/or Operator is authorized to make any changes within the facility which contravenes the terms and conditions of this permit without a permit revision if the change:

1. Is not a modification or otherwise prohibited under any provision of Title I of the Act or the State Implementation Plan (SIP); and *[Reference: 7 **DE Admin. Code** 1130 Section 6.8 dated 12/11/00]*
2. Does not involve a change in any compliance schedule date; and *[Reference: 7 **DE Admin. Code** 1130 Section 6.8 dated 12/11/00]*
3. Does not result in a level of emissions exceeding the emissions allowable under this permit, whether expressed herein as a rate of emissions or in terms of total emissions. *[Reference: 7 **DE Admin. Code** 1130 Section 6.8 dated 12/11/00]*

b. Before making a change under the provisions of Condition 4(a) of this permit, the Owner and/or Operator shall provide advance written notice to the Department and to the EPA in accordance with Condition 3(c)(2)(iii) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Section 6.8.1 dated 12/11/00]*

c. The Owner and/or Operator shall keep records of any changes made under Condition 4 of this permit in accordance with Condition 3(b)(2)(iv) of this permit. *[Reference: 7 **DE Admin. Code** 1130 Section 6.8.1 dated 12/11/00]*

Condition 5. Compliance Schedule.

This permit does not contain a compliance schedule. *[Reference: 7 **DE Admin. Code** 1130 Section 6.3.3 dated 12/11/00]*

Condition 6. Permit Shield.

Compliance with the terms and conditions of this permit shall be deemed compliance with the applicable requirements as provided in Condition 6 -Table 1 as of the effective date of this permit. *[Reference: 7 **DE Admin. Code** 1130 Section 6.6.3 dated 12/11/2000]*

Condition 6 – Table 1 – Part 1

Emission Unit	Applicable Requirement
1. Emission Unit 29	i. 7 **DE Admin. Code** 1102 ii. 7 **DE Admin. Code** 1103 iii. 7 **DE Admin. Code** 1104 Section 2.1 iv. 7 **DE Admin. Code** 1108 v. 7 **DE Admin. Code** 1112 Section 4.1 vi. 7 **DE Admin. Code** 1114 Section 2.1 vii. 7 **DE Admin. Code** 1119 viii. 7 **DE Admin. Code** 1120 Section 1.2, 1.3, 1.4 and 11 ix. 7 **DE Admin. Code** 1124 Sections 1-10, 28 and 29 x. 40 CFR Part 60 Subpart J xi. 40 CFR Part 60 Appendix B xii. 40 CFR Part 6 Appendix F
2. Emission Unit 32	i. 7 **DE Admin. Code** 1102

Emission Unit	Applicable Requirement
	ii. 7 **DE Admin. Code** 1103 iii. 7 **DE Admin. Code** 1104 Section 2.1 iv. 7 **DE Admin. Code** 1108 v. 7 **DE Admin. Code** 1112 vi. 7 **DE Admin. Code** 1114 Section 2.1 vii. 7 **DE Admin. Code** 1119 viii. 7 **DE Admin. Code** 1121 Sections 14 and 15 ix. 7 **DE Admin. Code** 1124 Section 1-10, 28, 29 and 50 x. 40 CFR Part 61 Subpart J xi. 40 CFR Part 61 Subpart V xii. 40 CFR Part 61 Subpart Y xiii. 40 CFR Part 61 Subpart BB xiv. 40 CFR Part 63 Subpart F xv. 40 CFR Part 63 Subpart G xvi. 40 CFR Part 63 Subpart H xvii. 40 CFR Part 63 Subpart CC
3. Emission Unit 33	i. 7 **DE Admin. Code** 1102 ii. 7 **DE Admin. Code** 1103 iii. 7 **DE Admin. Code** 1104 Section 2.1 iv. 7 **DE Admin. Code** 1108 v. 7 **DE Admin. Code** 1112 vi. 7 **DE Admin. Code** 1114 Section 2.1 vii. 7 **DE Admin. Code** 1119 viii. 7 **DE Admin. Code** 1124 Section 1-10, 28 and 29 ix. 40 CFR Part 60 Subpart GGG
4. Emission Unit 34	i. 7 **DE Admin. Code** 1102 ii. 7 **DE Admin. Code** 1103 iii. 7 **DE Admin. Code** 1104 Section 2.1 iv. 7 **DE Admin. Code** 1108 v. 7 **DE Admin. Code** 1112 vi. 7 **DE Admin. Code** 1114 Section 2.1 vii. 7 **DE Admin. Code** 1119 viii. 7 **DE Admin. Code** 1120 ix. 7 **DE Admin. Code** 24 Section 1-10, 28, 29 and 30 x. 40 CFR Part 60 Subpart Kb xi. 40 CFR Part 60 Appendix B xii 40 CFR Part 60 Appendix F xiii. 40 CFR Part 63 Subpart CC
5. Emission Unit 36	i. 7 **DE Admin. Code** 1102 ii. 7 **DE Admin. Code** 1103 iii. 7 **DE Admin. Code** 1104 Section 2.1 iv. 7 **DE Admin. Code** 1108 v. 7 **DE Admin. Code** 1112 vi. 7 **DE Admin. Code** 1114 Section 2.1 vii. 7 **DE Admin. Code** 1119 viii. 7 **DE Admin. Code** 1124 Sections 1-10, 28 and 29
6. Emission Unit 40	i. 7 **DE Admin. Code** 1102 ii. 7 **DE Admin. Code** 1103 iii. 7 **DE Admin. Code** 1104 Section 2.1 iv. 7 **DE Admin. Code** 1108

Emission Unit	Applicable Requirement
	v. 7 **DE Admin. Code** 1114 Section 2.1 vi. 7 **DE Admin. Code** 1119 vii. 7 **DE Admin. Code** 1120 Sections 13 and 27 viii. 7 **DE Admin. Code** 1124 Sections 1-10, 30 and 31 ix. 40 CFR Part 60 Subpart Ka x. 40 CFR Part 60 Subpart Kb xi. 40 CFR Part 63 Subpart CC
7. Emission Unit 43	i. 7 **DE Admin. Code** 1102 ii. 7 **DE Admin. Code** 1103 iii. 7 **DE Admin. Code** 1104 Section 2.1 iv. 7 **DE Admin. Code** 1119 v. 7 **DE Admin. Code** 1120 Section 1.2, 1.3, 1.4 and 22 vi. 7 **DE Admin. Code** 1124 Sections 1-10, 28 and 29 vii. 40 CFR Part 60 Subpart GGG viii. 40 CFR Part 60 Subpart QQQ ix. 40 CFR Part 63 Subpart CC
8. Facility-wide	i. 7 **DE Admin. Code** 1103 ii. 7 **DE Admin. Code** 1104 Section 2.1 iii. 7 **DE Admin. Code** 1117 Section 2.2 and 7 iv. 7 **DE Admin. Code** 1119 Section 2.1 v. 7 **DE Admin. Code** 1124 Section 1-10, 9, 28, 29, 40 and 50 vi. 40 CFR Part 60 Subpart VV vii. 40 CFR Part 63 Subpart CC

Condition 6 – Table 2 – Part 2

Emission Unit	Applicable Requirement
1. Emission Unit 10	i. **7 DE Admin. Code** 1102 ii. **7 DE Admin. Code** 1103 iii. **7 DE Admin. Code** 1104, Section 2.1 iv. **7 DE Admin. Code** 1108, section 2.1 v. **7 DE Admin. Code** 1112, Section 4.1 vi. **7 DE Admin. Code** 1114, Section 2.1 vii. **7 DE Admin. Code** 1120 viii. **7 DE Admin. Code** 1124, Sections 1-10, 26, 28, 29 and 36 ix. 40 CFR Part 60, Subpart J x. 40 CFR Part 60, Subpart QQQ xi. 40 CFR Part 62, Subpart FF xii. 40 CFR Part 63, Subpart CC

Emission Unit	Applicable Requirement
2. Emission Unit 15	i. **7 DE Admin. Code** 1102 ii. **7 DE Admin. Code** 1103 iii. **7 DE Admin. Code** 1104, Section 2.1 iv. **7 DE Admin. Code** 1108, Section 2.1 v. **7 DE Admin. Code** 1112 vi. **7 DE Admin. Code** 1114, Section 2.1 vii. **7 DE Admin. Code** 1117, Section 2.2 viii. **7 DE Admin. Code** 1120 ix. **7 DE Admin. Code** 1124, Section 1-10, 28, 29 and 43 x. 40 CFR Part 60, Subpart A xi. 40 CFR Part 60, Subpart J xii. 40 CFR Part 63, Subpart Y xiii. 40 CFR Part 63, Subpart CC
3. Emission Unit 21	i. **7 DE Admin. Code** 1102 ii. **7 DE Admin. Code** 1103 iii. **7 DE Admin. Code** 1104, Section 2.1 iv. **7 DE Admin. Code** 1108, Section 2.1 v. **7 DE Admin. Code** 1109, Section 1.1 vi. **7 DE Admin. Code** 1112 vii. **7 DE Admin. Code** 1114, Section 2.1 viii. **7 DE Admin. Code** 1117, Section 2.3 ix. **7 DE Admin. Code** 1120 x. **7 DE Admin. Code** 1124, Section 1-10 and 29 xi. **7 DE Admin. Code** 1125 xii. **7 DE Admin. Code** 1139 xiii. 40 CFR Part 60, Subpart J xiv. 40 CFR Part 60, Subpart VV xv. 40 CFR Part 60, Appendix B xvi. 40 CFR Part 60, Appendix F xvii. 40 CFR Part 63, Subpart CC
4. Emission Unit 22	i. **7 DE Admin. Code** 1102 ii. **7 DE Admin. Code** 1103 iii. **7 DE Admin. Code** 1104, Section 2.1 iv. **7 DE Admin. Code** 1105 v. **7 DE Admin. Code** 1108, Section 2.1 vi. **7 DE Admin. Code** 1109, Section 1.1 vii. **7 DE Admin. Code** 1111, Section 2.1 viii. **7 DE Admin. Code** 1112, Section 3 ix. **7 DE Admin. Code** 1114, Section 2.1 x. **7 DE Admin. Code** 1117, Section 2.3 xi. **7 DE Admin. Code** 1124, Section 1-10 and 29 xii. **7 DE Admin. Code** 1139 xiii. 40 CFR Part 60, Subpart VV xiv. 40 CFR Part 60, Appendix B xv. 40 CFR Part 60, Appendix F xvi. 40 CFR Part 63, Subpart CC

Emission Unit	Applicable Requirement
5. Emission Unit 23	i. **7 DE Admin. Code** 1102 ii. **7 DE Admin. Code** 1103 iii. **7 DE Admin. Code** 1104, Section 2.1 iv. **7 DE Admin. Code** 1105 v. **7 DE Admin. Code** 1108, Section 2.1 vi. **7 DE Admin. Code** 1109, Section 1.1 vii. **7 DE Admin. Code** 1111, Section 2.1 viii. **7 DE Admin. Code** 1114, Section 2.1 ix. **7 DE Admin. Code** 1117, Section 2.3 x. **7 DE Admin. Code** 1120 xi. **7 DE Admin. Code** 1124, Sections 1-10 and 29 xii. **7 DE Admin. Code** 1139 xiii. 40 CFR Part 60, Subpart VV xiv. 40 CFR Part 63, Subpart CC xv. 40 CFR Part 63, Subpart UUU
6. Emission Unit 24	i. **7 DE Admin. Code** 1102 ii. **7 DE Admin. Code** 1103 iii. **7 DE Admin. Code** 1120 iv. **7 DE Admin. Code** 1124, Section 1-10 and 29 v. 40 CFR Part 60, Subpart J vi. 40 CFR Part 60, Subpart VV vii. 40 CFR Part 60, Appendix B viii. 40 CFR Part 60, Appendix F ix. 40 CFR Part 63, Subpart CC
7. Emission Unit 25	i. **7 DE Admin. Code** 1102 ii. **7 DE Admin. Code** 1103 iii. **7 DE Admin. Code** 1104, Section 2.1 iv. **7 DE Admin. Code** 1105, Section 2.1 v. **7 DE Admin. Code** 1108, Section 2.1 vi. **7 DE Admin. Code** 1112, Section 3 vii. **7 DE Admin. Code** 1114, Section 2.1 viii. **7 DE Admin. Code** 1117, Section 2.3 ix. **7 DE Admin. Code** 1120 x. **7 DE Admin. Code** 1124, Sections 1-10 and 29 xi. 40 CFR Part 60, Subpart J xii. 40 CFR Part 60, Subpart VV xiii. 40 CFR Part 60, Appendix B xiv. 40 CFR Part 60, Appendix F xv. 40 CFR Part 63, Subpart CC
8. Emission Unit 28	i. **7 DE Admin. Code** 1102 ii. **7 DE Admin. Code** 1103 iii. **7 DE Admin. Code** 1104, Section 2.1 iv. **7 DE Admin. Code** 1105 v. **7 DE Admin. Code** 1108, Section 2.1 vi. **7 DE Admin. Code** 1109, Section 3

Emission Unit	Applicable Requirement
	vii. **7 DE Admin. Code** 1112 viii. **7 DE Admin. Code** 1114, Section 2.1 ix. **7 DE Admin. Code** 1117 x. **7 DE Admin. Code** 1120 xi. **7 DE Admin. Code** 1124, Sections 1-10 and 29 xii. 40 CFR Part 60, Subpart J xiii. 40 CFR Part 60, Subpart VV xiv. 40 CFR Part 60, Appendix B xv. 40 CFR Part 60, Appendix F xvi. 40 CFR Part 63, Subpart CC xvii. 40 CFR Part 63, Subpart UUU
9. Emission Unit 37	i. **7 DE Admin. Code** 1102 ii. **7 DE Admin. Code** 1103 iii. **7 DE Admin. Code** 1104, Section 2.1 iv. **7 DE Admin. Code** 1108, Section 2.1 v. **7 DE Admin. Code** 1112, Section 3 vi. **7 DE Admin. Code** 1114, Section 2.1 vii. **7 DE Admin. Code** 1117, Section 2.3 viii. **7 DE Admin. Code** 1124, Sections 1-10, 29 and 50 ix. **7 DE Admin. Code** 1139 x. 40 CFR Part 60, Subpart VV xi. 40 CFR Part 60, Appendix B xii. 40 CFR Part 60, Appendix F xiii. 40 CFR Part 60, Subpart CC
10. Emission Unit 42	i. **7 DE Admin. Code** 1102 ii. **7 DE Admin. Code** 1103 iii. **7 DE Admin. Code** 1104, Section 2.1 iv. **7 DE Admin. Code** 1108, Section 2.1 v. **7 DE Admin. Code** 1112, Section 3 vi. **7 DE Admin. Code** 1114, Section 2.1 vii. **7 DE Admin. Code** 1117, Section 2.3 viii. **7 DE Admin. Code** 1120 ix. **7 DE Admin. Code** 1124, Section 1-10 and 29 x. **7 DE Admin. Code** 1139 xi. 40 CFR Part 60, Subpart J xii. 40 CFR Part 60, Subpart VV xiii. 40 CFR Part 60, Appendix B xiv. 40 CFR Part 60, Appendix F xv. 40 CFR Part 63, Subpart CC xvi. 40 CFR Part 63, Subpart UUU
11. Emission Unit 45	i. **7 DE Admin. Code** 1102 ii. **7 DE Admin. Code** 1104 iii. **7 DE Admin. Code** 1114, Section 2.1 iv. **7 DE Admin. Code** 1117, Section 2.1 and 2.2

Emission Unit	Applicable Requirement
	v. **7 DE Admin. Code** 1124, Section 1-10 and 29 vi. 40 CFR Part 60, Subpart A vii. 40 CFR Part 60, Subpart VV
12. Emission Units 24, 26, 27 and Facility-wide	i. **7 DE Admin. Code** 1103 ii. **7 DE Admin. Code** 1114, Section 2.1 iii. **7 DE Admin. Code** 1117, Section 2.2 and 7 iv. **7 DE Admin. Code** 1119, Section 2.1 v. **7 DE Admin. Code** 1124, Section 1-10, 9, 28, 29, 40 and 50 vi. 40 CFR Part 60, Subpart VV vii. 40 CFR Part 63, Subpart CC

Condition 6 – Table 3 – Part 3

Emission Unit	Applicable Requirement
1. Emission Unit 80 Boiler Nos. 1, 2 and 3	i. 7 **DE Admin. Code** 1104 Section 2.1 ii. 7 **DE Admin. Code** 1108 Section 2.1 iii. 7 **DE Admin. Code** 1112 Section 3.2 iv. 7 **DE Admin. Code** 1114 Section 2.1 v. 7 **DE Admin. Code** 1139
2. Emission Unit 80 Boiler No. 4	i. 7 **DE Admin. Code** 1104 Section 2.1 ii. 7 **DE Admin. Code** 1108 Section 2.1 ii. 7 **DE Admin. Code** 1112 Section 3.2 iii. 7 **DE Admin. Code** 1114 Section 2.1 iv. 7 **DE Admin. Code** 1136 and 40 CFR Part 72 v. 7 **DE Admin. Code** 1139
3. Emission Unit 82	i. 7 **DE Admin. Code** 1114 Section 2.1 ii. 7 **DE Admin. Code** 1124 Section 29 and 40 CFR Part 60 subpart VV iii. 40 CFR Part 60 Subpart A
4. Emission Unit 50	i. 7 **DE Admin. Code** 1105 Section 2
5. Emission Unit 84	i. 7 **DE Admin. Code** 1104 Section 2.1 ii. 7 **DE Admin. Code** 1108 Section 2.1 iii. 7 **DE Admin. Code** 1112 Section 3.5 iv. 7 **DE Admin. Code** 1114 Section 2.1 v. 7 **DE Admin. Code** 1120 Section 26 and 40 CFR Part 60 Subpart D6 vi. 7 **DE Admin. Code** 1120 Section 11 and 40 CFR Part 60 Subpart J vii. 7 **DE Admin. Code** 1120 Section 10 and 40 CFR Part 60 Subpart GG viii. 7 **DE Admin. Code** 1125 Section 2 ix. 7 **DE Admin. Code** 1139 Section 2

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
DATE	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
DATE	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
DATE	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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Lindsay Rennie

ATTACHMENT "B"

_[RESERVED]

AQM-1001CC/Group 1 Insignificant Activities

Insignificant Activity/Description	Basis [1]	Insignificant Activity Details
Air contaminant detectors, Air contaminant recorders, combustion controllers and combustion shut-offs	(a)	No applicable federal or state requirement(s), hence no list required nor available.
Fuel-burning equipment which uses any fuel and has a rated heat input of less than 15 million BTUs per hour	(b)(1)	The stationary fuel burning sources less than 15 MMBtu/hr are included in AQM-1001A. Insignificant fuel burning activities not listed include: cooking fires, building HVAC, portable space heaters, portable igniters, etc. There are no applicable federal or state requirement(s), hence no list is required or available.
Internal Combustion Engine that Drives Compressors	(b)(2)	Internal combustion engines used to drive compressors are listed in the "Initial Compliance Certification" dated 01/24/94 for NOx RACT (see Appendix G). All equipment, if any, meeting this definition were deemed to be exempt.
Internal Combustion Engine that Drives Generators	(b)(2)	Internal combustion engines used to drive generators are listed in the "Initial Compliance Certification" dated 01/24/94 for NOx RACT (see Appendix G). All equipment, if any, meeting this definition were deemed to be exempt.
Internal Combustion Engine that Drives Water Pumps	(b)(2)	Internal combustion engines used to drive water pumps are listed in the "Initial Compliance Certification" dated 01/24/94 for NOx RACT (see Appendix G). All equipment, if any, meeting this definition were deemed to be exempt.
Internal Combustion Engine that Drives Other Auxiliary Equipment During Emergency or Standby Operations	(b)(2)	Internal combustion engines used to drive other auxiliary equipment are listed in the "Initial Compliance Certification" dated 01/24/94 for NOx RACT (see Appendix G). All equipment, if any, meeting this definition were deemed to be exempt.

Insignificant Activity/Description	Basis [1]	Insignificant Activity Details
Air Conditioning and Comfort Ventilating Systems	(c)	No applicable federal or state requirement(s), hence no list required nor available.
Vacuum Cleaning Systems Used Exclusively for Office Applications	(d)	No applicable federal or state requirement(s), hence no list required nor available.
Ventilating or Exhaust Systems for Print Storage Room Cabinets	(e)	No applicable federal or state requirement(s), hence no list required nor available.
Exhaust System for Controlling Steam and Heat	(f)	No applicable federal or state requirement(s), hence no list required nor available.
Laboratories that conduct chemical or physical analysis or determination of product quality and commercial acceptance (not part of production process)	(g)	Laboratory constructed in 1956 and is exempt per DNREC Regulation No. 2; no applicable federal or state requirement(s), hence no additional information is required nor available.
Internal Combustion Engines and Vehicles Used for the transport of passengers or freight	(h)	No applicable federal or state requirement(s), hence no list required nor available.
Maintenance, repair or replacement-in-kind or equipment for which a permit to operate has been issued	(j)	This is merely an activity, hence no list required nor available.
Equipment which only emits elemental nitrogen, oxygen, carbon dioxide and/or water vapor	(k)	No applicable federal or state requirement(s), hence no list required nor available.
Ventilating and Exhaust Systems used in cafeterias and eating facilities	(l)	No applicable federal or state requirement(s), hence no list required nor available.
Equipment used to liquefy or separate oxygen, nitrogen or the rare gases from the air	(m)	No applicable federal or state requirement(s), hence no list required nor available.

Insignificant Activity/Description	Basis [1]	Insignificant Activity Details
Outdoor painting and sandblasting equipment	(p)	No applicable federal or state requirement(s), hence no list required nor available.
Lawn mowers, tractors, farm equipment and construction equipment	(q)	No applicable federal or state requirement(s), hence no list required nor available.
Any activity related to routine maintenance and repair of a facility where emissions would not be associated with a primary production process of the facility. Such activities may include	(s)	No applicable federal or state requirement(s), hence no list required nor available.
Cleaning	(s)(i)	No applicable federal or state requirement(s), hence no list required nor available.
Solvent Use	(s)(ii)	No applicable federal or state requirement(s), hence no list required nor available.
Steam Cleaning	(s)(iii)	No applicable federal or state requirement(s), hence no list required nor available.
Painting	(s)(iv)	No applicable federal or state requirement(s), hence no list required nor available.
Degreasing	(s)(v)	No applicable federal or state requirement(s), hence no list required nor available.
Washing	(s)(vi)	No applicable federal or state requirement(s), hence no list required nor available.

Insignificant Activity/Description	Basis [1]	Insignificant Activity Details
Welding	(s)(vii)	No applicable federal or state requirement(s), hence no list required nor available.
Vacuuming	(s)(viii)	No applicable federal or state requirement(s), hence no list required nor available.
Coating	(s)(ix)	No applicable federal or state requirement(s), hence no list required nor available.
Sweeping	(s)(x)	No applicable federal or state requirement(s), hence no list required nor available.
Abrasive Use	(s)(xi)	No applicable federal or state requirement(s), hence no list required nor available.
Insulation Removal	(s)(xii)	No applicable federal or state requirement(s), hence no list required nor available.
Fire schools or firefighting training	(t)	No applicable federal or state requirement(s), hence no list required nor available.
Buildings, cabinets and facilities used for storage of chemicals in closed containers	(u)	No applicable federal or state requirement(s), hence no list required nor available.
Gasoline storage tanks that have a capacity less than 2,000 gallons and that were constructed after January 1, 1979	(v)(ii)	See either custom Form AQM-1001CC/Group 2 list or custom Form AQM-1001CC/Group 2 detail sheet(s).
Gasoline storage tanks that have a capacity less than 250 gallons and that were constructed after December 31, 1978	(v)(iii)	See either custom Form AQM-1001CC/Group 2 list or custom Form AQM-1001CC/Group 2 detail sheet(s).

Insignificant Activity/Description	Basis [1]	Insignificant Activity Details
Diesel and fuel oil storage tanks with a capacity of 40,000 gallons or less	(w)	See either custom Form AQM-1001CC/Group 2 list or custom Form AQM-1001CC/Group 2 detail sheet(s).
Gasoline and diesel fuel dispensing systems that never exceed a monthly throughput of 10,000 gallons	(x)	See either custom Form AQM-1001CC/Group 2 list or custom Form AQM-1001CC/Group 2 detail sheet(s).
Inorganic acid storage tanks equipped with an emission control device	(z)	See either custom Form AQM-1001CC/Group 2 list or custom Form AQM-1001CC/Group 2 detail sheet(s).
Sewage treatment facilities	(aa)	See custom Form AQM-1001B for Unit 10 Waste water Treating Unit.
Water treatment units	(bb)	See custom Form AQM-1001B for Unit 10 Waste water Treating Unit.
Quiescent wastewater treatment operations	(cc)	See custom Form AQM-1001B for Unit 10 Waste water Treating Unit.
Non-contact water cooling towers	(dd)	See custom Form AQM-1001B for cooling tower sources
Laundry dryers, extractors, or tumblers used for fabrics cleaned with a water solution of bleach or detergents	(ee)	No applicable federal or state requirement(s), hence no list required nor available.
Equipment used for hydraulic testing or hydrostatic testing	(ff)	No applicable federal or state requirement(s), hence no list required nor available.
Blueprint copiers or photographic processes	(gg)	No applicable federal or state requirement(s), hence no list required nor available.

NOTE [1]: Basis codes refer to items in Delaware Regulation 30, Appendix A, Insignificant Activities List.

AQM-1001CC/Group 2-Insignificant Activities

Source (Activity/Equipment Description)	Pollutant	CAS Number	Potential to Emit Emission Rate	Basis [1]	Insignificant Activity PTE Threshold [2]	Source Details
Motor Vehicle Diesel Loading	VOC	N/A	<25 TPY	a	25 TPY	See exemption for throughput < 10, 000 gallons / month in Regulation 30 Appendix A section (x).
Motor Vehicle Gasoline Loading	VOC	8006-61-9	<25 TPY	a	25 TPY	See exemption for throughput < 10, 000 gallons / month in Regulation 30 Appendix A section (x).
WWTP Wet Oil Sludge Loading	VOC	N/A	<25 TPY	a	25 TPY	See emission calculation on detail sheet AQM-1001CC/Group 2 - Calculation.
Ammonia Unloading	NH_3	7664-41-7	<25 TPY	a	N/A [3]	The regulated air contaminant is in an enclosed system; emissions are negligible.
Ammonia Storage Tank 417-TP-M Used for Ph Control at Crude Unit	Ammonia	7664-41-7	<10 TPY	a	N/A [3]	The regulated air contaminant is in an enclosed system; emissions are negligible.
Ammonia-Mobile Trailers (Hydrocracker and other Units)	Ammonia	7664-41-7	<10 TPY	a	N/A [3]	The regulated air contaminant is in an enclosed system; emissions are negligible.
Fuel Oil/Diesel Loading	VOC	N/A	<25 TPY	a	25 TPY	See exemption for throughput < 10, 000 gallons / month in Regulation 30 Appendix A section (x). No

Source (Activity/Equipment Description)	Pollutant	CAS Number	Potential to Emit Emission Rate	Basis [1]	Insignificant Activity PTE Threshold [2]	Source Details
						toluene loading here.
Decant/Heavy Oil Loading	VOC	N/A	<25 TPY	a	25 TPY	See emission calculation on detail sheet AQM-1001CC/Group 2 - Calculation.
Propane Loading	VOC	N/A	<25 TPY	a	25 TPY	The regulated air contaminant is in an enclosed system; emissions are negligible.
Glycol Water Reservoir D-38	VOC	N/A	<25 TPY	a	25 TPY	There are negligible emissions of any regulated air contaminant.
Sulfuric Acid Loading	SO_2/H_2SO_4	7446-09-05	<25 TPY	a	25 TPY	There are negligible emissions of the listed regulated air pollutant.
Vent Boxes for Cooling Water System	VOC	N/A	<25 TPY	a	25 TPY	There are negligible emissions of the listed regulated air pollutant.
Boiler Feedwater Chemical Storage Tanks	VOC	N/A	<25 TPY	a	25 TPY	There are negligible emissions of the listed regulated air pollutant.
LUB Oil Units/Systems	VOC	N/A	<25 TPY	a	25 TPY	There are negligible emissions of the listed regulated air pollutant.

Source (Activity/Equipment Description)	Pollutant	CAS Number	Potential to Emit Emission Rate	Basis [1]	Insignificant Activity PTE Threshold [2]	Source Details
Small Unit Tanks used for Raw Materials, Additives, Reagents and Intermediates with a capacity less than 40,000 gallons	VOC	N/A	<25 TPY	a	25 TPY	See detail sheet "AQM-1001CC/Group 2 Insignificant Activities Detail Sheet Small Unit Tanks Used for Raw Materials, Additives, Reagents and Intermediates"
FCCU Catalyst System	PM	N/A	<100 TPY	a	100TPY	See emission calculation on detail sheet AQM-1001CC/Group 2 - Calculation.
Cooling Water Supply Pumps	VOC	N/A	<25 TPY	a	25 TPY	There are negligible emissions of the listed regulated air pollutant.

NOTE [1]: Bases for Determinations are as follows:
(a) = potential to emit emissions rate is below threshold for insignificant activities emissions.

NOTE [2]: Insignificant Activity PTE threshold based on Delaware Regulation No. 30, Appendix A, for Emission Units for which an applicable requirement has not yet been promulgated and which are not elsewhere listed as an insignificant activity.

NOTE [3]: No Insignificant Activity PTE Threshold Established.

NOTE [4]: This source was formerly named "Toluene Loading".

Protocol for Carbon Canister Monitoring – Oily Water Sewer

The purpose of monitoring the carbon canisters is to determine if the primary canister is removing VOC emissions to prevent breakthrough which has been redefined as 50 ppm between the primary and secondary carbon canister. A Photoionization Detector (PID) will be used for this purpose. The PID will be calibrated daily prior to monitoring. The monitoring program will be conducted according to the following procedure at each canister location:

1. Calibrate the PID daily prior to monitoring;
2. Follow all routine DCR safety procedures;
3. If necessary, obtain and secure necessary work permits prior to entering process units and/or work areas to monitor canisters;
4. Check hose to the canisters to assure that there are no leaks;
5. Check for water accumulation by opening the drain valve prior to monitoring;
6. Measure the background TOV concentration at the canister (with the PID) and record the reading;
7. Measure the effluent TOV concentration at the outlet of the primary canister (with the PID) and record the reading. If the TOV concentration is less than 50 ppm proceed to the next canister location repeating steps 4-7.
8. If the TOV concentration at the outlet of the primary canister is 50 ppm or greater, the primary canister is determined to be spent.

When VOC breakthrough occurs after the primary canister, the canister configuration will be switched and the spent canister will be replaced with a fresh canister in accordance with paragraph 69 of the Consent Decree as follows:

> "[The Owner/Operator] shall replace the primary carbon canisters with fresh carbon canisters immediately when breakthrough is detected in accordance with 40 CFR 61.354(d). The original secondary carbon canister will then become the new primary carbon canister. For this Paragraph, "immediately" shall mean eight (8) hours for canisters of 55 gallons or less, twenty-four (24) hours for canisters between 55 gallons up to 20,000 lbs., and 48 hours for canisters 20,000 lbs. or larger."

Additionally, as specified in paragraph 68 of the Consent Decree, the carbon canister monitoring will be conducted in accordance with the frequency specified in 40 CFR 61.354(d).

Carbon Canister Locations

Canister ID	Location	Size (Lbs)
40-S-132	Sleeperway S of Tank 281	180
40-S-133	Sleeperway Tank 261	180
40-S-136	Sleeperway S of Tank 241	180
40-S-137	Sleeperway S of Tank 221	180
40-S-141	Sleeperway S of Tank 201	180
40-S-142	Sleeperway S of Tank 181	180
40-S-145	Sleeperway S of Tank 261	180
40-S-146	Sleeperway S of Tank 261	180
40-S-147	Sleeperway S of Tank 261	180
40-S-150	By Tank 135	180
40-S-151	S of truck loading rack	1,800
40-S-152	N of Tank 8	1,800
40-S-110	4th Street E of coker	1,800
40-S-111	4th & G Street E of Tetra	1,800
40-S-112	4th & G Street E of Tetra	180
40-S-113	4th & F Street E of Train 2	1,800
40-S-114	6th & G Street NE corner	1,800
40-S-115	6th & F Street N of Train 2	180
40-S-116	SW Tank 73 Mid Pump Pit	180
40-S-118	S of Tank 65	180
40-S-119	E of Tank 78	180
40-S-122	S of Tank 60	180
40-S-124	Field S of Tanks 405/406	180
40-S-125	W of Toluene Day Tanks	180
40-S-126	E of Tank 45	180
40-S-127	E of Tank 44 Utilities	180
10-S-330	Wet Oil Building	1,800
10-S-331	WWTP Mix Tank	180

ATTACHMENT "E"
Page 1 of 2

Protocol for Carbon Canister Monitoring – API/CPI Oily Water Separators (Canisters in Series)

The purpose of monitoring the carbon canisters is to determine if the canister is removing VOC emissions with an efficiency of 95% or greater. A Photoionization Detector (PID) will be used for this purpose. The PID will be calibrated daily prior to monitoring. The monitoring program will be conducted according to the following procedure at each canister location:

1. Calibrate the PID daily prior to monitoring;
2. Follow all routine DCR safety procedures;
3. If necessary, obtain and secure necessary work permits prior to entering process units and/or work areas to monitor canisters;
4. Check hose to the canisters to assure that there are no leaks;
5. Check for water accumulation by opening the drain valve prior to monitoring;
6. Measure the background TOV concentration at the canister (with the PID) and record the reading;
7. Measure the effluent TOV concentration at the outlet of the primary canister (with the PID) and record the reading. If no TOV concentration above background is detected proceed to the next canister location repeating steps 4-7.
8. If the TOV concentration at the outlet of the first canister is above background then open the influent sampling valve and measure influent TOV concentration with the PID. Record the concentration.
9. Calculate and record the following ratio:

$$\frac{TOV\ (Influent) - TOV\ (Effluent)}{TOV\ (Influent)}$$

If the ratio exceeds 0.95, then the first carbon canister is effectively controlling total organic vapors. If the TOV ratio is less than 0.95, the canister is deemed to be spent. The canister configuration will be switched and the spent canister will be replaced with a fresh canister.

Bypass Valve Monitoring

Once a week, the bypass valve around the pallet valve on the nitrogen blanketing system will be opened to force flow to the carbon canisters. Monitoring will then be conducted according to the above protocol.

Preventative Maintenance on the Pallet Valves

Once a month, the Owner/Operator will inspect pallet valves. The inspection will consist of removal of the top of the valve, checking the disk and seat sealing surfaces, overall cleanliness of the internals, and that the disk size conforms to design data.

ATTACHMENT "E"
Page 2 of 2

Carbon Canister System

The canisters that will be monitored include the following:

Equipment Number	Location
10-S-320	WWTP N/W of Oily CPI Inlet
10-S-321	WWTP Side of Oily CPI, Inlet Box
10-S-322	WWTP W Side of Oily CPI
10-S-323	S/E Side of Oily CPI
10-S-324	N/E Side of API
10-S-325	E side of API
10-S-326	N/W side of API
10-S-327	N/W side of API
10-S-328	S/E side of API
10-S-329	S/E side of API
VA-2000-1,2,3,4	S/W side of API
Pier 2 – A, B, C	Pier 2
Pier 3 – A, B, C	Pier 3

The carbon canister monitoring will be conducted daily, including Saturdays and Sundays.

ATTACHMENT "F"

(This Attachment is Applicable Only to Part 1, Condition 3 - Table 1 Compliance Option ja)

Emission limitations/Standards and/or Operational Limitations/Standards	**Compliance Determination Methodology (Monitoring/Testing, QA/QC Procedures (as applicable) and Recordkeeping)**	**Reporting/Compliance Certification**
1. Nitrogen Oxides (NOx): i. Emission Standards and/or Operational Limitations: A. [**RESERVED**] B. For the MVR: NOx emissions shall not exceed 61.3 lb/hour and 22.3 tons in any twelve consecutive months. *[Reference: APC-95/0471]* C. For 21-H-701 and 21-H-2 combined: NO_X emissions shall not exceed 60.9 TPY. *[Reference: APC-95/0570 (A3) and APC-95/0784 (A2)]* D. For the FCU: NO_X emissions from the FCU WGS shall not exceed 689.8 TPY. *[Reference: APC-81/0829 (A7)]* E. For the FCCU: NO_X emissions from the FCCU shall not exceed 719.5 TPY on a 365-day rolling average basis. *[Reference: APC-82/0981 (A7)]* F. For 25-H-401 and 25-H-402: 13.7 TPY and 10.1 TPY both on a rolling twelve month basis; and 0.029 lb/mmBtu. *[Reference: APC-98/0522]* G. For the SRA: NO_X emissions shall not exceed 7.0 lb/hr in each SCOT stack and 51.9 TPY combined from both SCOT stacks. *[Reference: APC-98/0264(A7)]* H. For Boilers 80-1, 80-2 and 80-3: The Owner/Operator shall not cause or allow the emission of NO_X in excess of	ii. Compliance Method: A. Compliance with Operational Limitation A shall be based on recordkeeping. *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3.1.2 dated 12/11/00]* B. Compliance with Emission Standard B shall be based on monitoring/testing and recordkeeping. *[Reference: 7 **DE Admin. Code** 1130, Section 6.1.3.1.2 dated 12/11/00]* C. Compliance with Emission Standard C shall be that required by Part 2 Condition 3 - Table 1.c.4.ii.A. *[Reference: APC-95/0570 (A 3) and APC-95/0784 (A2)]* D. Compliance with Emission Standard D shall be that required by Part 2 Condition 3 - Table 1.da.4.ii.C. *[Reference: APC-81/0829 (A7)]* E. Compliance with Emission Standard E shall be that required by Part 2 Condition 3 - Table 1.e.4.ii.A. *[Reference: APC-82/0981 (A7)]* F. Compliance with Emission Standard F shall be that required by Part 2 Condition 3 - Table 1.ga.4.iii. *[Reference: APC-98/0522]* G. Compliance with Emission Standard G shall be based on stack testing conducted in accordance with Part 2 Condition 3 - Table 1.j.4.iv. *[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. *[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]*

ATTACHMENT "F"

(This Attachment is Applicable Only to Part 1, Condition 3 - Table 1 Compliance Option ja)

the following baseline emission levels for the boilers : *[Reference APC-90/0288(A5), APC-90/0289(A6), APC-90/0290(A5)]* 1. Boiler 80-1: 541.4 TPY 2. Boiler 80-2: 125.4 TPY 3. Boiler 80-3: 541.4 TPY I. For the CCUs 84-1 and 84-2: The Owner/Operator shall not cause or allow the emission of NO_X in excess of 360 TPY from each CCU. *[Reference APC-97/0503 (A3)]*	H. Compliance with Emission Standard H shall be that required by Part 3 Condition 3 - Table 1.a.5.iii.A. *[Reference APC-90/0288(A5), APC-90/0289(A6), APC-90/0290(A5)]* I. Compliance with Emission Standard I shall be that required by Part 3 Condition 3 - Table 1.d.4.iii. *[Reference: APC-97/0503 (A3)]* iii. Monitoring/Testing: A. For the WWTP VCU: The Owner/Operator shall continuously monitor the fuel usage by the VCU. *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* B. For the MVR: The Owner/Operator shall conduct a Department approved stack test once every 5 years. *[Reference: Permit APC-95/0471 (A2)]* C. For 21-H-701 and 21-H-2: that required by Part 2 Condition 3 - Table 1.c.4.iii. *[Reference: APC-95/0570 (A 3) and APC-95/0784 (A2)]* D. For the FCU: that required by Part 2 Condition 3 - Table 1.da.4.iii.B. *[Reference APC-81/0829 (A7)]* E. For the FCCU: that required by Part 2 Condition 3 - Table 1.e.4.iii. *[Reference APC-82/0981 (A7)]* F. For 25-H-401 and 25-H-402: that required by Part 2 Condition 3 - Table 1.ga.4.iii. G. For the SRA: The Owner/Operator shall	

ATTACHMENT "F"

(This Attachment is Applicable Only to Part 1, Condition 3 - Table 1 Compliance Option ja)

	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)]* H. For Boilers 80-1, 80-2 and 80-3: that required by Part 3 Condition 3 - Table 1.a.5.iv. *[Reference APC-90/0288(A5), APC-90/0289(A6), APC-90/0290(A5)]* I. For the CCUs 84-1 and 84-2: that required by Part 3 Condition 3 - Table 1.d.4.iv. *[Reference APC-97/0503 (A3)]* iv. Recordkeeping: *[Reference: 7 **DE Admin. Code** 1130 Section 6.1.3.1.2 dated 12/11/00]* The following records shall be maintained in accordance with Condition 3(b): A. For the WWTP VCU: the type and rolling twelve month fuel usage by the VCU. B. For the MVR: Comply with "Conditions Applicable to Multiple Pollutants" in Condition 3 - Table 1.b.1.iv. C. For 21-H-701 and 21-H-2: that required by Part 2 Condition 3 - Table 1.c.iv.D. D. For the FCU: that required by Part 2 Condition 3 - Table 1.da.4.iv. E. For the FCCU: that required by Part 2 Condition 3 - Table 1.e.4.iv. F. For 25-H-401 and 25-H-402: that required by Part 2 Condition 3 - Table	

ATTACHMENT "F"

(This Attachment is Applicable Only to Part 1, Condition 3 - Table 1 Compliance Option ja)

	1.ga.4.iv. G. For the SRA: that required by Part 2 Condition 3 - Table 1.j.1.iv. H. For Boilers 80-1, 80-2 and 80-3: that required by Part 3 Condition 3 - Table 1.a.5.v. I. For the CCUs 84-1 and 84-2: that required by Part 3 Condition 3 - Table 1.d.4.v. *[Reference APC-97/0503 (A3)]*	

ATTACHMENT "F"

(This Attachment is Applicable Only to Part 1, Condition 3 - Table 1 Compliance Option ja)

ATTACHMENT "G"

Page 1 of 2

FCCU CO Boiler Bypass Events – Conversion to Full Burn

The procedures described herein shall apply during periods of transition when the CO Boiler experiences an unplanned start-up or shut-down event.

These planned start up and shut down provisions will not apply to the COB if the FCCU regenerator is operating in full burn mode.

Rationale:

DCRC is installing a bypass line around the CO boiler to allow for regenerator flue gas to be treated in the wet gas scrubber (WGS) during periods when the CO boiler is not available or otherwise out of service. When the regenerator flue gas is bypassing the CO boiler, the FCCU will be converted to operate in full burn to minimize CO emissions. However, if the CO boiler were to shutdown unexpectedly, it is not possible to instantaneously convert the regenerator from partial burn operation to full burn operation and, thus, the following provisions address the operation of the FCCU during such transition periods.

Interim Control Measures

The Owner/Operator shall comply with the following interim control measures:

1. Unplanned Start-up and Shutdown of Fluid Catalytic Cracker Unit CO Boiler. In the event that the FCCU COB is to be shut down for a period longer than 24 hours, DCRC shall promptly begin necessary process changes to provide for the complete combustion of carbon monoxide. Full CO combustion operation shall be achieved within 24 hours.

2. If there is an emergency shutdown of the FCCU CO Boiler due to upsets or malfunctions, the refinery will take the following steps:

   - Open the bypass line to allow for treatment of regenerator flue gases in the wet gas scrubber;
   - Immediately begin the necessary process changes to allow for the complete combustion of carbon monoxide in the regenerator; and
   - FCCU throughput and operating conditions will be safely adjusted as necessary (see FCCU Turndown Factor below) to allow full CO combustion operation to be achieved within 24 hours of attainment of appropriate operating conditions.

   If there is an unplanned or emergency shutdown of the FCCU CO Boiler, the refinery will conduct an evaluation of the cause of the shutdown. If the CO Boiler can be repaired and brought back on line in less than 24 hours, then the regenerator flue gas may continue to bypass the COB to allow it to be repaired or restarted, and combustion promoter need not be added. Until the FCCU CO boiler is returned to normal operation or until full promoted burn

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(This Attachment is Applicable Only to Part 1, Condition 3 - Table 1 Compliance Option ja) conditions are established in the regenerator, in order to minimize FCCU CO emissions, the FCCU feed rate will be reduced to the minimum operating rate as described in the FCCU

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Turndown Factor below. During this period (24 hours maximum), the requirements in Condition 2.1.6 and 7 **DE Admin. Code** 1111 shall not apply.

FCCU Turn Down Factor

These procedures have been incorporated to minimize FCCU CO emissions during time periods that the FCCU COB is bypassed.

1. If the Company's initial assessment indicates that the FCCU COB can be returned to service within 24 hours after the unplanned shutdown or emergency shutdown, or full combustion of CO has been achieved to meet applicable emission limits, then no rate cuts will be initiated and combustion promoter need not be added. The FCCU may continue to operate until the COB is restarted.

2. If the Company's initial assessment indicates that the FCCU COB cannot be returned to service within 24 hours after the unplanned or emergency shutdown, the Company shall take the following actions:

    a. The Company will promptly begin to reduce the FCCU feed rate at a rate of 5,000 bph until the unit is operating at 55,000 bpd; and

    b. Combustion promoter will be added to the FCCU regenerator when appropriate operating conditions have been achieved. Fully promoted (complete) combustion will be achieved within 24 hours of the start of the unplanned or emergency shutdown.

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(This Attachment is Applicable Only to Part 1, Condition 3 - Table 1 Compliance Option ja)

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Calculation & Monitoring Plan - DCRC CO_2 Emissions Associated with Power Export

Calculation of R, Daily CO_2 Emissions associated with Power Export:

$\mathbf{R} = P_{EXP} * Q_{HR} * f_{CO2} * (mmbtu/10^6\ btu)$

Where:

R = **Tons of CO_2 per day associated with Power Export**

P_{EXP} = Total Daily Exported Power from the Refinery in kWh, calculated (see below)

Q_{HR} = Daily Average Heat rate in btu/kWh, calculated (see below)

f_{CO2} = 0.05940 tons CO_2/mmbtu, constant

= (1,040 scf/mmbtu) * (lbmol/385.3 scf) *(44.01 lb/lbmol) *(ton/2000lb)

Calculation of $\mathbf{P_{EXP}}$, Exported Power from the Refinery

The Refinery has 3 Tie-lines with the DP&L transmission system:

13825 Line
AT1 (transformer)
T6A (transformer)

DCRC meters are "Enerwise" custody transfer meters that transmit power transmission data to PJM. Each meter measures power going into or out of DCRC. Power coming into DCRC through any of these three tie-lines is assigned a positive value. Power exported through any tie-line from DCRC is assigned a negative value. The total facility power export must account for all three of these tie-lines simultaneously, as at any given time, power can be flowing in either direction on any tie-line (that is, power can be coming in from one tie-line at the same time power is being exported through another).

Calculation:

$$\mathbf{P_{EXP} = - (P_{13825} + P_{AT1} + P_{T6A})}$$

Where:

P_{13825} = Daily overall power flow through 13825 Line in kWh, measured
P_{AT1} = Daily overall power flow through AT1 Transformer in kWh, measured
P_{T6A} = Daily overall power flow through T6A Transformer in kWh, measured

Note: When "Line 13825 + AT1 + T6A" is positive, indicating an overall import of power to DCRC, P_{EXP} will be assigned a value of zero (i.e., DCRC will not be "credited" CO_2 emissions for days of overall power import). Negative values for the above parameters indicate power export. Also see example calculations shown at the end of this document.

Calculation of Q_{HR}, Daily Average Heat Rate

DCRC operates four boilers and their associated turbine generators as baseload generators to operate the refinery processing units and ancillary facilities. Typically, these four boilers are not generating power that is exported to the grid, except for periods of power imbalance. For the majority of cases (past performance indicates ~98% of the time), power export occurs due to operation of the combined cycle units (CCU 1 and CCU 2) only. As such, the Daily Average Heat Rate, Q_{HR}, would be equivalent to the Daily Average Heat Rate for the CCUs. On rare occasions that the power generation from the turbine generators exceeds that of the refinery base load, Q_{HR} would be a weighted average of the heat rate from the combined cycle units and the design heat rate from the turbine generators. See Section 3 of the permit application for further details.

IF $P_{EXP} > 0$ AND $P_{TG} < P_{REF}$ THEN $Q_{HR} = Q_{CCU}$

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(This Attachment is Applicable Only to Part 1, Condition 3 - Table 1 Compliance Option ja)

Where:

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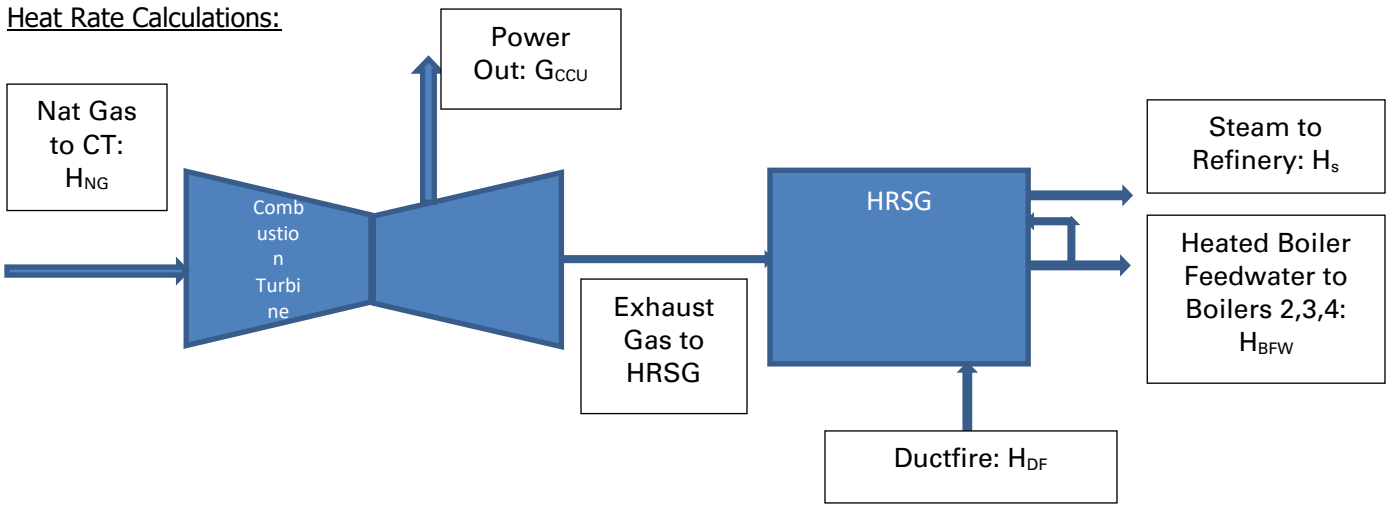
Q_{CCU} = Daily Average Heat Rate for the Combined Cycle Units in btu/kWh, calculated (see below)

P_{TG} = Power Generation from Turbine Generators in kWh, measured

P_{REF} = Power required to operate the refinery in kWh, measured

Note: The calculated Heat Rate ($Q_{CCU\ 1}$ and/or $Q_{CCU\ 2}$) for both CCU 1 and/or CCU 2 will be averaged daily to obtain Q_{CCU}.

Heat Rate Calculations:



Overall Calculation:

$Q_{CCU\ 1}$ or $Q_{CCU\ 2}$ = Daily Average Heat Rate for Each Combined Cycle Unit in btu/kWh

$Q_{CCU\ 1}$ or $Q_{CCU\ 2}$ = $(H_{NG} + H_{DF} - H_S - H_{BFW}) \div G_{CCU}$

Where:

CCU is Combined Cycle Unit

HRSG is Heat Recovery Steam Generator

$Q_{CCU\ 1}$ = Daily Average Heat Rate of CCU 1 in btu/kWh

$Q_{CCU\ 2}$ = Daily Average Heat Rate of CCU 2 in btu/kWh

H_{NG} = natural gas to CCU in btu/hr, calculated (see below)

H_{DF} = fuel gas to ductfire in btu/hr, calculated (see below)

H_S = enthalpy rise of steam in btu/hr, calculated (see below)

H_{BFW} = enthalpy of boiler feedwater returned to Boilers 2,3,4 in btu/hr, calculated (see below)

G_{CCU} = electrical generation from CCU generator in kW, measured

For "measured" values, see Table 1 of Galaxy Tag information

H_{NG} = Natural Gas to CCU in btu/hr

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(This Attachment is Applicable Only to Part 1, Condition 3 - Table 1 Compliance Option ja)

$H_{NG} = V_{NG} * f_{NG} * h_{NGbtu}$

Where:

V_{NG} = volume of natural gas to CT in lb/sec, measured

f_{NG} = conversion factor, lb/sec to scf/hr = 84,750lb/s/scf/hr, constant
h_{NGbtu} = heat content of natural gas from pipeline = 1030 btu/scf HHV, constant

H_{DF} = Fuel gas to ductfire in btu/hr

$H_{DF} = V_{DF}$*1000scf/mscf * h_{FG}

Where:

V_{DF} = Flow of fuel gas to ductfire in mscfh, measured
H_{FG} = heat content of fuel gas = 1030 btu/scf HHV, constant

H_S = Enthalpy rise of steam in btu/hr

$H_S = M_S$*1000lb/mlb * ($h_S - h_{CBFW}$) ÷ e

Where:

M_S = mass flow of high pressure steam from HRSG in mlb/hr, measured
h_S = enthalpy of high pressure steam in btu/lb, based on thermodynamic enthalpy tables for 1200 pounds per square inch gauge (psig) steam at the measured steam temperature
h_{CBFW} = enthalpy of boiler feedwater to the HRSG in btu/lb, based on thermodynamic enthalpy tables for saturated liquid at 255°F
e = HHV boiler efficiency of Boilers 2,3,4 = 78%, constant

H_{BFW} = Enthalpy of Boiler Feedwater returned to Boilers 2,3,4 in btu/hr

$H_{BFW} = M_{BFW}$*1000lb/mlb * ($h_{BFW} - h_{CBFW}$) ÷ e

Where:

M_{BFW} = mass flow of heated boiler feedwater returned to Boilers 2,3,4 in mlb/hr, measured
h_{BFW} = enthalpy of water at the returned temperature in btu/lb, based on thermodynamic enthalpy tables for saturated liquid at the measured feedwater temperature
h_{CBFW} = same as above
e = same as above

IF $P_{EXP} > 0$ AND $P_{TG} > P_{REF}$ THEN $Q_{HR} = ((Q_{CCU\,1} * P_{CCU\,1}) + (Q_{CCU\,2} * P_{CCU\,2}) + (Q_{TG} * (P_{TG} - P_{REF}))) / (P_{CCU\,1} + P_{CCU\,2} + (P_{TG} - P_{REF}))$

Where:

$Q_{CCU\,1}$ = Daily Average Heat Rate for CCU 1 in btu/kWh, calculated (see above)
$Q_{CCU\,2}$ = Daily Average Heat Rate for CCU 2 in btu/kWh, calculated (see above)
Q_{TG} = Design Heat Rate for Turbine Generators = 10,000 btu/kWh, constant
$P_{CCU\,1}$ = power generation from CCU 1 in kWh, measured
$P_{CCU\,2}$ = power generation from CCU 2 in kWh, measured
P_{TG} = total power generation from Turbine Generators in kWh, measured
P_{REF} = power required to operate the refinery in kWh, measured

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(This Attachment is Applicable Only to Part 1, Condition 3 - Table 1 Compliance Option ja)

Note: The Design Heat Rate for Turbine Generators (Q_{TG}) of 10,000 btu/kWh is used for the calculation of the Daily Average Heat Rate (Q_{HR}) when the refinery load is less than the generation from the turbine generators ($P_{TG} > P_{REF}$). This is a conservative estimate of the heat rate for this scenario because all four of the turbine generators operate more efficiently than their design heat rate and some much lower than 10,000 btu/kWh. Again, this conservative design heat rate for the turbine

generators of 10,000 btu/kWh will only be used during the infrequent periods of power imbalance at the refinery.

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Ravi Rangan