Ohio Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

1/5/2016

Certified Mail

Bill Rupert
BP-Husky Refining LLC
4001 Cedar Point Road
Oregon, OH 43616

Facility ID: 0448020007
Permit Number: P0104782
County: Lucas

RE: DRAFT AIR POLLUTION TITLE V PERMIT
Permit Type: Renewal

Dear Permit Holder:

A draft of the OAC Chapter 3745-77 Title V permit for the referenced facility has been issued. The purpose of this draft is to solicit public comments. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, Toledo Blade. A copy of the public notice, the Statement of Basis, and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page,www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

and

Toledo Department of Environmental Services
348 South Erie Street
Toledo, OH 43604

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified if a public hearing is scheduled. A decision on processing the Title V permit will be made after consideration of comments received and oral testimony if a public hearing is conducted. You will then be provided with a Preliminary Proposed Title V permit and another opportunity to comment prior to the 45-day Proposed Title V permit submittal to U.S. EPA Region 5. The permit will be issued final after U.S. EPA review is completed and no objections to the final issuance have been received. If you have any questions, please contact Toledo Department of Environmental Services at (419)936-3015.

Sincerely,

Michael E. Hopkins,P.E
Assistant Chief, Permitting Section, DAPC

Cc: U.S. EPA Region 5 - *Via E-Mail Notification*
TDES; Michigan; Indiana

PUBLIC NOTICE

The following matters are the subject of this public notice by the Ohio Environmental Protection Agency. The complete public notice, including any additional instructions for submitting comments, requesting information, a public hearing, or filing an appeal may be obtained at:http://epa.ohio.gov/actions.aspx or Hearing Clerk, Ohio EPA, 50 W. Town St., Columbus, Ohio 43215. Ph: 614-644-2129 email:HClerk@epa.ohio.gov

Draft Title V Permit Renewal
BP-Husky Refining LLC
4001 Cedar Point Road, P.O. Box 696, Oregon, OH 43697
ID#: P0104782
Date of Action: 1/5/2016
Permit Desc: Title V renewal permit for a petroleum refinery..
The permit and complete instructions for requesting information or submitting comments may be obtained at: http://epa.ohio.gov/dapc/permitsonline.aspx by entering the ID # or: Pam Barnhart, Toledo Department of Environmental Services, 348 South Erie Street, Toledo, OH 43604. Ph: (419)936-3015

Statement of Basis For Air Pollution Title V Permit

Facility ID:	0448020007
Facility Name:	BP-Husky Refining LLC
Facility Description:	Toledo Refinery
Facility Address:	4001 Cedar Point Road, Oregon, OH 43697
Permit #:	P0104782, Renewal

This facility is subject to Title V because it is major for:

☐ Lead ☒ Sulfur Dioxide ☒ Carbon Monoxide ☒ Volatile Organic Compounds ☒ Nitrogen Oxides
☒ Particulate Matter ≤ 10 microns ☒ Single Hazardous Air Pollutant ☒ Combined Hazardous Air Pollutants
☒ Maximum Available Control Technology Standard(s) ☐ GHG ☐ Title IV

A. Standard Terms and Conditions

Has each insignificant emissions unit been reviewed to confirm it meets the definition in OAC rule 3745-77-01(U)?	Yes
Were there any "common control" issues associated with this facility? If yes, provide a summary of those issues and explain how the DAPC decided to resolve them.	No
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a minor permit modification per OAC rule 3745-77-08(C)(1)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a significant permit modification per OAC rule 3745-77-08(C)(3)	N/A

Please identify the affected unit(s)and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a reopening per OAC rule 3745-77-08(D)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document resulting from a renewal per OAC rule 3745-77-08(E)	The following PTI's were issued in the past 11 years: P0119763, P0117988, P0117083, P0116671, P0117081, P0115518, P0112354, P0110087, P0113472, P0111667, P0111328, P0110958, P0110265, P0107416, P0108887, P0108950, P0107122, P0106444, P0105902, P0107114, P0106190, P0103694, P0103974, P0104032, 04-01496, 04-01496, 04-01492, 04-01482, 04-01471, 04-01346, 04-01460, 04-01330, 04-00959, 04-01394, 04-01346, 04-01329. All PTI's are in STARS2 for look-up.
Please identify the affected unit(s) and pollutant(s) for which a Compliance Assurance Monitoring (CAM) Plan is required per 40 CFR 64. Provide more emissions unit specific detail in Section C.	FCCCU (P007) – PE and NOx Crude/Vac Unit 1 (P011) - VOC

B. Facility-Wide Terms and Conditions

Term and Condition (paragraph)	Basis		Comments
	SIP (3745-)	Other	
B.2	21-09(T); 21-09(DD)(10)	40 CFR 63, sp CC; 40 CFR 60, sp GGG & GGGa	Facility-Wide Leak Detection and Repair Program NOTE: In accordance with OAC rule 3745-21-09(T)(4), BPH has submitted to the Director an alternative monitoring, recordkeeping and reporting program for that required by 3745-21-09(T)(1) since the permittee has demonstrated to the director that the alternative program is as effective in identifying and reporting leaks from petroleum refinery equipment as the program outlined in 3745-21-09(T)(1). BP-Husky chose to comply with the requirements of 40 CFR Part 63, Subpart CC, 40 CFR 60, Subpart GGG or 40 CFR Part 60 or 40 CFR 60, Subpart GGGa as they apply to all the individual equipment components mentioned in this rule.
B.3.	N	N	The sections listed under this term include the monitoring, record keeping, reporting and testing requirements for the total sulfur analyzers that will be used for compliance with SO_2 limits from combustion sources after the start-up and initial shakedown of the Coker Gas Plant (P068). [Emission units subject to these requirements are: B015, B019, B022, B029, B030, B031, B032, B034, B035] (from PTI P0119763 issued 10/30/2015).
B.4.	N	40 CFR 60, sp J	The permittee requested that the Hydrogen Sulfide (H_2S) Continuous Emissions Monitoring (CEM) requirements for Monitoring, Recordkeeping and Reporting be placed in Section B. so there is consistency in the terms. Specific emission units will reference this term.
B.5.	N	40 CFR	The permittee requested that the Hydrogen Sulfide (H_2S) Continuous Emissions Monitoring (CEM)

		60, sp Ja	requirements for Monitoring, Recordkeeping and Reporting be placed in Section B. so there is consistency in the terms. Specific emission units will reference this term.
B.6.	N	40 CFR 63, sp DDDDD	The permittee requested that the MACT subpart DDDDD requirements for Monitoring, Recordkeeping and Reporting be placed in Section B. so there is consistency in the terms. Specific emission units will reference this term.
B.7.	N	40 CFR 63, sp CC	Lists applicability of 40 CFR, Part 63, Subpart CC.
B.8.	N	40 CFR 63, sp UUU	Lists applicability of 40 CFR, Part 63, Subpart UUU.
B.9.	N	40 CFR 63, sp DDDDD	Lists applicability of 40 CFR, Part 63, Subpart DDDDD.
B.10.	N	40 CFR 63, sp ZZZZ	Lists applicability of 40 CFR, Part 61, Subpart ZZZZ.
B.11.	N	40 CFR 61, sp FF	Lists applicability of 40 CFR, Part 61, Subpart FF.
B.12.	N	40 CFR 60 sp Db	Lists applicability of 40 CFR, Part 60, Subpart Db.
B.13.	N	40 CFR 60 sp J	Lists applicability of 40 CFR, Part 60, Subpart J.
B.14.	N	40 CF 60 sp Ja	Lists applicability of 40 CFR, Part 60, Subpart Ja.
B.15	N	40 CFR 60 sp K	Lists applicability of 40 CFR, Part 60, Subpart K.
B.16.	N	40 CFR 60 sp Ka	Lists applicability of 40 CFR, Part 60, Subpart Ka.
B.17.	N	40 CFR 60 sp	Lists applicability of 40 CFR, Part 60, Subpart Kb.

		Kb	
B.18.	N	40 CFR 60 sp VV	Lists applicability of 40 CFR, Part 60, Subpart VV to emissions units P003 & P004 (East and West Hydrocarbon system) because other rules under NSPS reference this part as applicable for control equipment..
B.19	N	40 CFR 60 sp GGG	Lists applicability of 40 CFR, Part 60, Subpart GGG.
B.20	N	40 CFR 60 sp GGGa	Lists applicability of 40 CFR, Part 60, Subpart GGGa.
B.21	N	40 CFR 60 sp NNN	Lists applicability of 40 CFR, Part 60, Subpart NNN.
B.22		40 CFR 60 sp QQQ	Lists applicability of 40 CFR, Part 60, Subpart QQQ.
B.23	77-07(A)(13)	N	Lists insignificant emissions units subject to one or more applicable requirements contained in a permit to install or in the SIP-approved versions of OAC Chapters 3745-17 and 3745-21 or have the potential to emit greater than 5 TPY pollutant.

C. Emissions Unit Terms and Conditions

Key:
EU = emissions unit ID
ND = negative declaration (i.e., term that indicates that a particular rule(s) is (are) not applicable to a specific emissions unit)
OR = operational restriction
M = monitoring requirements
ENF = did noncompliance issues drive the monitoring requirements?
R = record keeping requirements
Rp = reporting requirements
ET = emission testing requirements (not including compliance method terms)
St = streamlining term used to replace a PTI monitoring, record keeping, or reporting requirement with an equivalent or more stringent requirement
Misc = miscellaneous requirements

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
B008, B009, B010, B015, B017, B019, B022, B029, B030, B031, B032, B033, B034, B035, B036	20% opacity as a 6-minute average	17-07(A)(1)	N	N	Y	Y	N	Y	Y	N	N	N	OR – the permittee shall fire only natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) [B015] in these emissions units M – the permittee is required to track the fuel type and quantity (refinery fuel gas or natural gas) to ensure compliance with the emission limit ET – Testing not required per Engineering Guide 16, inherently clean fuel. CAM is not applicable
B008, B009, B010, B015, B017, B019, B022, B029, B030, B031, B032, B033, B034, B035, B036	0.020 lb PE per mmBtu per heat input	17-10(B)(1)	N	N	Y	Y	N	Y	Y	N	N	N	OR – the permittee shall fire only natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in these emissions units. This emission limit is less stringent than the limitation established in OAC rule 3745-31-05(A)(3). M – the permittee is required to track the fuel type and quantity (refinery fuel gas or natural gas) to ensure compliance with the emission limit ET – Testing not required per Engineering Guide 16, inherently clean fuel. CAM is not applicable
B008, B015, B017, B019, B022, B029, B030, B031, B032, B033, B034, B035, B036	0.29 lb SO_2 per mmBtu of heat input	18-54(W)(1)	N	N	N	N	N	N	N	N	N	N	Basis: The emission limitation specified by OAC rule 3745-18-54(W)(1) is less stringent than the emission limitation specified by 40 CFR 60.104(a)(1) of Subpart J. CAM is not applicable (no control equipment)

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
B009, B010,	0.57 lb SO_2 per mmBtu of heat input	18-54(W)(5)	N	N	N	N	N	N	N	N	N	N	Basis: The emission limitation specified by OAC rule 3745-18-54(W)(5) is less stringent than the emission limitation specified by 40 CFR 60.104(a)(1) of Subpart J. CAM is not applicable (no control equipment)
B008, B009, B010, B015, B017, B019, B022, B029, B030, B031, B032, B033, B034, B035	H_2S concentration of fuel gas shall not exceed 0.10 grain/dscf as a rolling 3-hr average	N	40 CFR 60 sp A and J	N	Y	Y	Y	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(D) and 40 CFR 60, subparts A and J. ENF - This emissions unit is an affected facility under the requirements of this rule as a result of Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CV095 RL), and is not due to the emissions unit being installed, modified, or reconstructed after June 11, 1973 and prior to May 14, 2007. The requirements of the Consent Decree were incorporated into PTI 04-01290 issued 7/25/2002. OR- the permittee shall fire only natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in these emissions units M, R, Rpt – Permittee uses a H_2S CEM for monitoring the H_2S in the fuel. The facility submits quarterly excess emission reports for CEM. ET – Testing not required per Engineering Guide 16, inherently clean fuel. CAM is not applicable (no control equipment).
B008, B009, B010, B015, B017, B019, B022, B029, B030, B031, B032, B033, B034, B035,	**Boiler MACT, no limits**	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis: – NESHAP, 40 CFR Part 63, Subparts A and DDDDD. These emissions units are required to comply with the applicable periodic tune-up and one-time energy assessment requirements specified in Table 3 to this Subpart no later than January 31, 2016. All are in the Gas 1 subcategory. OR – The permittee must conduct a tune-up of the boiler or process heater as specified in 63.7540(a)(10) or (a)(12) M, R, Rp, ET - applicable requirements are incorporated by reference in term B.6. of Section B. CAM is not Applicable.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
B036													
B015	34.53 tons SO_2 per rolling 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(D) – all requirements from PTI 0119763 were incorporated in the Title V permit. This limit applies after the construction and shakedown of the Coker 3 Gas Plant (P068). OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. M, R, & Rp – some of the requirements are from term B.3. of Section B. ET - testing not required for annual limit. Prior to EU P068 going online, compliance will be assumed if there is compliance with NSPS Subpart J limit for H_2S. After P068 becomes operational, compliance will be determined by the monitoring and recordkeeping requirements in term B.3 of Section B. CAM is not applicable (no control equipment).
B019	NOx emissions shall not exceed 262.8 tons per rolling, 12-month period	N	Y	N	Y	Y	N	Y	Y	Y	N	N	Basis - OAC rule 3745-31-05(D) – all requirements from PTI 0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - testing is not required for annual limit, but testing is required 6 months prior to the permit expiration to determine an emission factor in lb NOx/mmBtu to use for the calculation of the annual limit. CAM is not applicable
	SO_2 shall not exceed 21.02 tons per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - OAC rule 3745-31-05(D) – all requirements from PTI P0119763 were incorporated in the Title V permit. This limit applies after the construction and shakedown of the Coker 3 Gas Plant (P068). OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. M, R, & Rp – some of the requirements are from term B.3. of Section B. ET - testing not required for annual limit. Prior to EU P068 going online, compliance will be assumed if there is compliance with NSPS Subpart J limit for H_2S. After P068 becomes operational, compliance will be

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													determined by the monitoring and recordkeeping requirements in term B.3 of Section B. CAM is not applicable (no control equipment).
B029	CO shall not exceed 1.88 pounds per hour.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis r – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A CAM is not applicable
	NOx shall not exceed 1.60 pounds per hour.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET – Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 7 of 40 CFR Part 60, Appendix A. CAM is not applicable
	PM_{10} shall not exceed 0.17 pounds per hour.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 201 and 202 of 40 CFR Part 51, Appendix M. CAM is not applicable
	VOC shall not exceed 0.12 pound per hour.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													liquefied petroleum gas (LP gas) in this emissions unit. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. CAM is not applicable
	maximum firing rate of 175,200 mmBtu per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – the firing rate limitation was stated under term b)(2).b. ET - annual firing rates cannot be tested. The annual firing rate is determined through the monitoring and recordkeeping requirements. CAM is not applicable.
B029	CO emissions - 7.21 tons per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(D) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - testing not required for annual limit. The CO emission limit is determined through the monitoring and recordkeeping requirements. CAM is not applicable
	NOx emissions - 6.13 tons per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(D) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - testing not required for annual limit. The NOx emission limit is determined through the monitoring and recordkeeping requirements. CAM is not applicable
	PM_{10} emissions - 0.65 ton per rolling, 12-	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(D) – all requirements from PTI P0119763 were incorporated in the Title V permit.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	month period.												OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - testing not required for annual limit. The PM_{10} emission limit is determined through the monitoring and recordkeeping requirements. CAM is not applicable
	SO_2 emissions - 2.32 tons per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis r – OAC rule 3745-31-05(D) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - testing not required for annual limit. Prior to EU P068 going online, compliance will be assumed if there is compliance with NSPS Subpart J limit for H_2S. After P068 becomes operational, compliance will be determined by the monitoring and recordkeeping requirements in term B.3 of Section B. CAM is not applicable (no control equipment)
	VOC emissions - 0.47 ton per rolling, 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(D) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - testing not required for annual limit. The VOC emission limit is determined through the monitoring and recordkeeping requirements. CAM is not applicable
	H_2S concentration of fuel gas shall not exceed 0.10 grain/dscf as a rolling 3-hr average	N	40 CFR 60 sp A and J	N	Y	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(D) and 40 CFR 60, subparts A and J. OR- the permittee shall fire only natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in these emissions units M, R, Rpt – Permittee uses a H_2S CEM for monitoring the H_2S in the fuel. The facility submits quarterly excess emission reports for CEM. ET – Testing not required per Engineering Guide 16, inherently clean fuel. Performs quarterly Cylinder Gas Audits and annual RATA's on the H_2S CEM.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													CAM is not applicable
	maximum firing rate of 175,200 mmBtu per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(D) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – the firing rate limitation was stated under term b)(2).b. ET - annual firing rates cannot be tested. The annual firing rate is determined through the monitoring and recordkeeping requirements. CAM is not applicable.
B031	CO emissions- 12.45 pounds per hour	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A CAM is not applicable
	NOx emissions 10.6 pounds per hour	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 7 of 40 CFR Part 60, Appendix A. CAM is not applicable
	PM_{10} emissions- 0.28 pound per hour	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 201 and 202 of

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													40 CFR Part 51, Appendix M. CAM is not applicable
	VOC emissions - 1.29 pounds per hour	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. CAM is not applicable
B031	11.62 tons SO_2 per rolling 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(D) – all requirements from PTI P0119763 were incorporated in the Title V permit. This limit applies after the construction and shakedown of the Coker 3 Gas Plant (P068). OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. M, R, & Rp – some of the requirements are from term B.3. of Section B. ET - testing not required for annual limit. Prior to EU P068 going online, compliance will be assumed if there is compliance with NSPS Subpart J limit for H_2S. After P068 becomes operational, compliance will be determined by the monitoring and recordkeeping requirements in term B.3 of Section B. CAM is not applicable (no control equipment)
B031	H_2S concentration of fuel gas shall not exceed 0.10 grain/dscf as a rolling 3-hr average	N	40 CFR 60 sp A and J	N	Y	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3), OAC rule 31-05(D) and 40 CFR 60, subparts A and J. OR- the permittee shall fire only natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in these emissions units M, R, Rpt – Permittee uses a H_2S CEM for

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													monitoring the H_2S in the fuel. The facility submits quarterly excess emission reports for CEM. ET – Testing not required per Engineering Guide 16. Performs quarterly Cylinder Gas Audits and annual RATA's on the H_2S CEM. CAM is not applicable
B032	CO emissions- 18.94 pounds per hour and 82.64 tons per rolling, 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A. Testing not required for annual limit. CAM is not applicable
	NOx emissions 14.95 pounds per hour and 65.48 tons per rolling, 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 7 of 40 CFR Part 60, Appendix A. Testing not required for annual limit. CAM is not applicable
	PM_{10} emissions- 1.71 pounds per hour and 7.51 tons per rolling, 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 201 and 202 of 40 CFR Part 51, Appendix M. Testing not required for

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													annual limit. CAM is not applicable
	VOC emissions - 1.24 pounds per hour and 5.43 tons per rolling, 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Testing not required for annual limit. CAM is not applicable
	Sulfur dioxide (SO_2) emissions shall not exceed 20.46 tons per rolling, 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) and 40 CFR 60 subparts A and J – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. ET - testing not required for annual limit. Prior to EU P068 going online, compliance will be assumed if there is compliance with NSPS Subpart J limit for H_2S. After P068 becomes operational, compliance will be determined by the monitoring and recordkeeping requirements in term B.3 of Section B. CAM is not applicable (no control equipment)
	H_2S concentration of fuel gas shall not exceed 0.10 grain/dscf as a rolling 3-hr average	N	40 CFR 60 sp A and J	N	Y	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3), OAC rule 31-05(D) and 40 CFR 60, subparts A and J. OR- the permittee shall fire only natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in these emissions units M, R, Rpt – Permittee uses a H_2S CEM for monitoring the H_2S in the fuel. The facility submits quarterly excess emission reports for CEM.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													ET – testing not required per Engineering Guide 16, inherently clean fuel. Performs quarterly Cylinder Gas Audits and annual RATA's on the H_2S CEM. CAM is not applicable
B036	CO emissions- 18.6 pounds per hour and 81.61 tons per rolling, 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – ORC 3704.03(T)) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A. Testing not required for annual limit. CAM is not applicable
	NOx emissions 0.045 pound per million Btu and 79.56 tons per rolling, 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – ORC 3704.03(T) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 7 of 40 CFR Part 60, Appendix A. Testing not required for annual limit. CAM is not applicable
	SO_2 emissions- 30.00 tons per rolling, 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – ORC 3704.03(T) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. ET - testing not required for annual limit. The SO_2 emission limit is determined through the monitoring and recordkeeping requirements. CAM is not applicable (no control equipment)
	VOC emissions – 2.8 pounds per hour and 12.28 tons per rolling, 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – ORC 3704.03(T) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. ET - Not required per Engineering Guide #16. If required,

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Testing not required for annual limit. CAM is not applicable
B036	$PM_{10}/PM_{2.5}$ emissions-7.6 pounds per million Btu; 3.9 pounds per hour and 16.94 tons per rolling, 12-month period.	31-10 thru 20	N	N	Y	Y	N	Y	Y	N	N	N	Other – OAC rule 3745-31-10 through 20 – all requirements from PTI P0119763 were incorporated in the Title V permit. All PM_{10} emissions are assumed to be $PM_{2.5}$. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. ET – Not required per Engineering Guide #16, however, initial compliance with the hourly emission limitation shall be demonstrated using "Other Test Method 027", initial test required in the PTI. No further testing requirements in the Title V once the initial testing is complete. Testing not required for annual limit. CAM is not applicable.
B036	162 ppmv fuel gas H_2S, determined hourly on a 3-hour rolling average basis and 60 ppmv determined daily on a 365-day rolling average basis.	N	40 CFR 60 sp A and Ja	N	Y	Y	N	Y	Y	N	N	N	Basis: ORC 3704.03(T) and 40 CFR 60, subparts A and J. OR- the permittee shall fire only natural gas and/or refinery fuel gas in this emissions unit. M, R, Rpt – Permittee uses a H_2SCEM for monitoring the H_2S in the fuel. The facility submits quarterly excess emission reports for CEM. ET – Testing not required per Engineering Guide 16. Performs quarterly Cylinder Gas Audits and annual RATA's on the H_2S CEM. CAM is not applicable
	NOx concentration of 40 ppmvdb, corrected to 0% excess air, on a 30-day rolling average	N	40 CFR 60 sp A and	N	Y	Y	N	Y	Y	N	N	N	Basis: ORC 3704.03(T)and 40 CFR 60, subparts A and Ja. OR- the permittee shall fire only natural gas and/or

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	basis		Ja										refinery fuel gas, in this emissions unit M, R, Rpt – Permittee uses a NOx CEM for monitoring the NOx concentration. The facility submits quarterly excess emission reports for CEM. ET – Testing not required per Engineering Guide 16. Performs quarterly Cylinder Gas Audits and annual RATA's on the NOx CEM. CAM is not applicable
Group B2 (B022)	6.45 tons SO_2 per rolling 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(D) – all requirements from PTI P0119763 were incorporated in the Title V permit. This limit applies after the construction and shakedown of the Coker 3 Gas Plant (P068). OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. M, R, & Rp – some of the requirements are from term B.3. of Section B. ET - testing not required for annual limit. Prior to EU P068 going online, compliance will be assumed if there is compliance with NSPS Subpart J limit for H_2S. After P068 becomes operational, compliance will be determined by the monitoring and recordkeeping requirements in term B.3 of Section B. CAM is not applicable (no control equipment).
Group B3 (B030)	CO emissions - 4.74 pounds per hour.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI 04-01346 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A. CAM is not applicable
	NOx emissions- 4.03 pounds per hour	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI 04-01346 were incorporated in the Title V

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 7 of 40 CFR Part 60, Appendix A. CAM is not applicable
	PM_{10} emissions- 0.43 pound per hour	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI 04-01346 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 201 and 202 of 40 CFR Part 51, Appendix M. CAM is not applicable
	SO_2 emissions 1.53 pounds per hour.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI 04-01346 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - Not required per Engineering Guide #16. The hourly emission limitation is based on operation at maximum capacity at the maximum H2S concentration of 0.10 grain/dscm (160 ppm) allowed by 40 CFR Part 60, Subpart J, therefore compliance with the 0.10 grain H_2S per dry standard cubic foot of fuel gas burned as a volume-weighted, rolling, 3-hour average emission limitation constitutes compliance with the hourly SO_2 emission limitation.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													CAM is not applicable (no control equipment)
	VOC emissions- 0.31 pound per hour	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI 04-01346 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. CAM is not applicable
Group B3 B030	CO emissions- 12.01 tons per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(D) – all requirements from PTI 04-1346 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - testing not required for annual limit. The CO emission limit is determined through the monitoring and recordkeeping requirements. CAM is not applicable
	PM_{10} emissions- 1.09 tons per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(D) – all requirements from PTI 04-1346 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - testing not required for annual limit. The PM_{10} emission limit is determined through the monitoring and recordkeeping requirements. CAM is not applicable

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	SO_2 emissions- 3.86 tons per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis r – OAC rule 3745-31-05(D) – all requirements from PTI 04-1346 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - testing not required for annual limit. Prior to EU P068 going online, compliance will be assumed if there is compliance with NSPS Subpart J limit for H_2S. After P068 becomes operational, compliance will be determined by the monitoring and recordkeeping requirements in term B.3 of Section B. CAM is not applicable (no control equipment).
	VOC emissions- 0.79 ton per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(D) – all requirements from PTI 04-1346 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - testing not required for annual limit. The VOC emission limit is determined through the monitoring and recordkeeping requirements. CAM is not applicable
Group B3 B033	CO emissions- 2.74 pounds per hour and 12.01 tons per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI 04-01346 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A. Testing not required for the annual limit. CAM is not applicable
	NOx emissions - 0.67 pound per hour and	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI 04-01346 were incorporated in the Title V

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	2.92 tons per rolling, 12-month period												permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 7 of 40 CFR Part 60, Appendix A. Testing not required for the annual limit. CAM is not applicable
	PM_{10} emissions - 0.25 pound per hour and 1.09 tons per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI 04-01346 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 201 and 202 of 40 CFR Part 51, Appendix M. Testing not required for the annual limit. CAM is not applicable
	SO_2 emissions - 0.88 pound per hour and 3.86 tons per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI 04-01346 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - Not required per Engineering Guide #16. The hourly emission limitation is based on operation at maximum capacity at the maximum H2S concentration of 0.10 grain/dscm (160 ppm) allowed by 40 CFR Part 60, Subpart J. Therefore compliance with the 0.10 grain H2S per dry standard cubic foot of fuel gas burned as a volume-weighted, rolling, 3-hour average emission

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													limitation constitutes compliance with the hourly SO2 emission limitation CAM is not applicable (no control equipment)
	VOC emissions - 0.18 pound per hour and 0.79 ton per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI 04-01346 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Testing not required for the annual limit. CAM is not applicable
Group B3 B030, B033	Combined annual NOx emissions from B030 and B033 shall not exceed 9.0 tons per rolling, 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(D) – all requirements from PTI 04-1346 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 291,708 mmBtu/yr for each unit, based on a rolling, 12-month summation of the monthly firing rates. ET - Testing not required for annual limit. Compliance with the combined NOx emission limit is determined through the monitoring, recordkeeping and reporting requirements. CAM is not applicable.
Group B4 B034, B035	CO emissions (each unit) - 38.48 pounds per hour and 168.53 tons per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI PP0119763 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a combined maximum firing rate of 3,766,800 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A. Testing not required for the annual limit. CAM is not applicable
	NOx emissions (each unit) - 12.71 pounds per hour	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI PP0119763 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a combined maximum firing rate of 3,766,800 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. Also, required to have a NOx CEM. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 7 of 40 CFR Part 60, Appendix A. CAM is not applicable
	PM_{10} emissions (each unit) - 2.63 pound per hour and 11.52 tons per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum combined firing rate of 3,766,800 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 201 and 202 of 40 CFR Part 51, Appendix M. Testing not required for the annual limit. CAM is not applicable
	SO_2 emissions (combined limit) - 34.7 tons per rolling, 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. This limit applies after the construction and shakedown of the Coker 3 Gas Plant (P068). Before completion of P068, the combined SO_2 limit is 22.0 tons per rolling 12-months.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													Also, compliance with 3745-31-05(A)(3) also includes compliance with the H_2S limit stated in NSPS subpart J. OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. Has a maximum combined firing rate of 3,766,800 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. M, R, & Rp – some of the requirements are from term B.3. of Section B. ET - testing not required for annual limit. Prior to EU P068 going online, compliance will be assumed if there is compliance with NSPS Subpart J limit for H_2S. After P068 becomes operational, compliance will be determined by the monitoring and recordkeeping requirements in term B.3 of Section B. CAM is not applicable (no control equipment).
	VOC emissions (each unit) - 1.90 pound per hour and 8.34 ton per rolling, 12-month period.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 3,766,800 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Testing not required for the annual limit. CAM is not applicable
	Sulfuric acid mist (H_2SO_4) emissions (each unit) - 1.01 ton per rolling, 12 month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - OAC rule 3745-31-05(A)(3) – all requirements from PTI P0119763 were incorporated in the Title V permit. This limit applies after the construction and shakedown of the Coker 3 Gas Plant (P068). Before completion of P068, the combined SO2 limit is 22.0 tons

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													per rolling 12-months OR – Can only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit. Has a maximum combined firing rate of 3,766,800 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. M, R, & Rp – some of the requirements are from term B.3. of Section B. ET - testing not required for annual limit. The permittee established that 3% of the SO_2 emissions are converted to H_2SO4. Compliance shall be demonstrated by multiplying the maximum annual SO_2 emissions rate (22 tons/yr) by 0.03 multiplied by the molecular weight of H_2SO4 and divided by the molecular weight of SO_2. After the completion and construction and the initial shakedown of the Coker Gas Plant (P068), this limit will no longer be in effect, then the combined limit of 1.59 tons per year will be in effect. CAM does not apply.
Group B4 B034, B035	The combined CO, NOx, PM_{10}, VOC, SO_2, and H_2SO_4 emissions from B034 and B035 shall not respectively exceed 205.29, 38.5, 14.03, 16.67, 34.7, and 1.59 tons per rolling 12-month period	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – OAC rule 3745-31-05(D) – all requirements from PTI P0119763 were incorporated in the Title V permit. OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a maximum firing rate of 3,766,800 mmBtu/yr for each unit, based on a rolling, 12-month summation of the monthly firing rates. ET - Testing not required for annual limits. CAM is not applicable except for SO_2.
Group B4 B034, B035	-----	3745-14	N	Y	N	N	N	N	N	N	N	N	Basis – OAC rule 3745-14 – NOx Budget Program - In accordance with OAC rule 3745-14-01(c)(2), these units are exempt from OAC rule 3745-14 because they are subject to OAC rule 3745-109 (Ohio's CAIR program)
Group B4 B034, B035	-----	3745-109	N	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-109, Ohio's CAIR program. The permittee shall ensure that any emissions unit(s) subject to the Clean Air Interstate Rule (CAIR) complies with the requirements of the Ohio Administrative Code (OAC) Chapter 3745-109, which includes submitting timely

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													permit applications.
Group B4 B034, B035	0.10 pound of NOx (expressed as NO_2) per mmBtu heat input determined on a 30-day rolling average basis including during periods of startup, shutdown or malfunction	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – 40 CFR 60, subparts A and Db OR – Can only burn natural gas and/or refinery fuel gas in this emissions unit. Has a combined maximum firing rate of 3,766,800 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rates. Also, the facility has a NOx CEM. ET - Not required per Engineering Guide #16. Ongoing compliance shall be demonstrated based upon the data collected through the monitoring and record keeping requirements and through demonstration of compliance with the Quality Assurance/ quality Control plan, which shall meet the requirements of 40 CFR Part 60 and the procedures outlined in 40 CFR 60.46b(e)(3). CAM is not applicable.
F001	no visible PE from any paved roadway or parking area except for a period of time not to exceed six minutes during any sixty-minute observation period	17-07(B)(4)	N	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-17-07(B)(4) M – Weekly inspections to determine need for implementing control measures. ET – none required per Engineering Guide #16. If required, compliance with the emission limitation for the paved and unpaved roadways and parking areas identified above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources," as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03. CAM is not applicable
F001	no visible PE from any unpaved roadway or parking area except for a period of time not to exceed thirteen minutes during any sixty-minute observation period	17-07(B)(5)	N	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-17-07(B)(5) M – Weekly inspections to determine need for implementing control measures. ET – none required per Engineering Guide #16. If required, compliance with the emission limitation for the paved and unpaved roadways and parking areas identified above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													for New Stationary Sources," as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03. CAM is not applicable.
F001, F005, F006	Reasonably available control measures to sufficiently minimize or eliminate visible emissions of fugitive dust	17-08(B), (B)(2), (B)(8), (B)(9)	N	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-17-08(B), (B)(2), (B)(8), (B)(9) M – Weekly inspections to determine need for implementing control measures for F001; daily inspections for F005 & F006 ET – none required per Engineering Guide #16. CAM is not applicable.
F005	PM_{10} emissions shall not exceed 6.31 tons per rolling, 12-month period.	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(D), from PTI 04-01471 issued 7/17/2002. Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. The permittee shall maintain a partial enclosure on the coke pit. M – Maintain records of tons of coke handled and calculate monthly emissions and 12-month rolling summation of monthly emissions. ET – none required per Engineering Guide #16. This emission limitation was developed based on the maximum capacity of Coker 3. Compliance shall be determined by calculating PM_{10} emissions using the emission factors from AP-42 5th Edition, along with the actual tons of coke handled. CAM is not applicable.
	No BAT for PM_{10}<10 TPY	N	Y	N	N	N	N	N	N	N	N	N	Basis: BAT for < 10 TPY, OAC Rule 3745-31-05(A)(3) June 30, 2008 Compliance with the requirements of this rule includes compliance with the requirements established pursuant to OAC rule 3745-31-05(D). This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	No BAT for PM_{10}<10 TPY	N	Y	N	N	N	N	N	N	N	N	N	Basis: BAT for OAC rule 3745-31-05(A)(3)(a)(ii), as effective June 30, 2008. Applies after the approval of the <10 TPY BAT rule as part of the SIP. Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM_{10} emissions from this air contaminant source since the potential to emit is less than 10 tons per year taking into account the requirement to install partial enclosure on the coke crusher and conveyor required under OAC rule 3745-17-08(B). ET – testing is not applicable, no limit. CAM is not applicable
F006	PE shall not exceed 2.52 tons per rolling, 12-month period.	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(D), from PTI 04-01471 issued 7/17/2002. Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. The permittee shall maintain a partial enclosure on the coke crusher. M – Maintain records of the amount of coke crushed and calculate monthly emissions and 12-month rolling summation of monthly emissions. ET – none required per Engineering Guide #16. This emission limitation was developed based on the maximum production rate of Coker 3. If required, the permittee shall demonstrate compliance using the particulate emission factor of 0.02 lb/ton from the Ohio EPA Reasonably Available Control Measures Guide dated August, 1983 along with the actual coke production and using an estimated control efficiency of 70% for a partial enclosure. CAM is not applicable.
	No BAT for PM_{10}<10 TPY	N	Y	N	N	N	N	N	N	N	N	N	Basis: BAT for < 10 TPY, OAC Rule 3745-31-05(A)(3) June 30, 2008 Compliance with the requirements of this rule includes compliance with the requirements established pursuant to OAC rule 3745-31-05(D). This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
	No BAT for PM_{10}<10 TPY	N	Y	N	N	N	N	N	N	N	N	N	Basis: BAT for OAC rule 3745-31-05(A)(3)(a)(ii), as effective June 30, 2008. Applies after the approval of the <10 TPY BAT rule as part of the SIP. Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM_{10} emissions from this air contaminant source since the potential to emit is less than 10 tons per year taking into account the Federally enforceable limitation of 2.52 tons PE per rolling, 12-month period established under OAC rule 3745-31-05(D). ET – testing is not applicable, no limit. CAM is not applicable
F005, F006	Visible emissions of fugitive dust shall not exceed 20% opacity as a three-minute average.	17-07(B)(1)	N	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-17-07(B)(1) M – Daily inspections to determine need for implementing control measures. ET – none required per Engineering Guide #16. CAM is not applicable.
J004, J005	State LDAR Program	21-09(T)	N	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-21-09(T) - Refer to term B.2. of Section B. for applicable leak detection and repair requirements.
J004	< 10 TPY HAP and <25 TPY combined HAPs	N	N	N	N	N	N	Y	Y	N	N	Y	Basis: 40 CFR 63, subparts A (Table 1) and Y - In accordance with 40 CFR 63.561, this emissions unit is an existing Group 2 marine tank vessel loading operation; a "source with emissions less than 10 and 25 tons"; and a "source with throughput less than 10 M barrels and 200 M barrels" and subject to the recordkeeping and emission estimation requirements specified in this section. R - Comply with the recordkeeping requirements of 40 CFR 63.567(j)(4) and the emission estimation requirements of 63.565(l) ET – Not required per Engineering Guide #16 MISC - applicable construction and reconstruction requirements required under 40 CFR Part 63, Subpart Y. CAM is not applicable

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
J004	LDAR program of the Refinery MACT	N	Y	N	N	N	N	N	N	N	N	N	Basis: 40 CFR Part 63 subparts A (Table 6) and CC, Refer to term B.2. of Section B. for applicable leak detection and repair requirements.
J005	VOC emissions - 0.123 pound per 1,000 gallons loaded	N	Y	N	N	N	N	N	N	N	N	N	Basis: BAT for OAC rule 3745-31-05(A)(3)(a)(ii), as effective June 30, 2008. From PTI 04-01460 modified 12/26/2006. OR - The maximum annual throughput for the asphalt loading rack shall not exceed 91,200,000 gallons, based upon a rolling, 12 month summation of the gallons of the asphalt loaded ET – Not required per Engineering Guide #16. Calculate the loading loss by use of the equation from AP-42 5th Edition, June, 2008, Chapter 5.2. CAM is not applicable
	5.61 tons of VOC per rolling, 12-month period	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(D), from PTI 04-01460 modified on 12/26/2006. OR - The maximum annual throughput for the asphalt loading rack shall not exceed 91,200,000 gallons, based upon a rolling, 12 month summation of the gallons of the asphalt loaded ET – not required for annual limits CAM is not applicable.
J005	LDAR program	N	Y	N	N	N	N	N	N	N	N	N	Basis: 40 CFR 60, subparts A and GGG - Refer to term B.2. of Section B. for applicable leak detection and repair requirements.
J005	LDAR program of 40 CFR 63, subpart CC	N	Y	Y	N	N	N	N	N	N	N	N	Basis: 40 CFR 63, subpart CC – emissions from non-gasoline loading racks are not subject to the Refinery MACT loading rack standards.
J005	-------	N	Y	Y	N	N	N	N	N	N	N	N	Basis: 40 CFR 63, subpart LLLLL –Exempt, this emissions unit does not meet the definition of asphalt processing facility as defined under 40 CFR 63.8698. This loading rack is not used for loading oxidized asphalt.
P4 Group P003, P004	Requirements for OAC 3745-21-09(DD)(10)	21-09(DD)(10)	N	N	N	N	N	N	N	N	N	Y	Basis: OAC rule 3745-21-09(DD)(10) East Hydrocarbon Flare (P003) and West Hydrocarbon Flare (P004) M, R, Rp - Consistent with the U.S. EPA streamlining policy, the permittee may elect to demonstrate

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													compliance with OAC rule 3745-21-09(DD)(10) by demonstrating compliance with the flare standards in 40 CFR Part 63.11(b). The MACT requirements of 40 CFR 63.11(b) are generally more stringent than the requirements of OAC rule 3745-21-09(DD)(10). ET - no emission limit to test. Misc - The table summarizes which emissions units are controlled by the Hydrocarbon flare system and which rule(s) apply to specific emission units. CAM is not applicable.
P4 Group P003, P004	no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours,	N	Y	N	Y	Y	N	Y	Y	N	N	Y	Basis: 40 CFR 63, subpart A – NOTE: On October 17, 2013, U.S. EPA approved an Alternative Monitoring Parameter (AMP) request submitted on August 9, 2013, to use two IR monitors and one UV camera per flare as a permanent back-up in case the primary monitoring by pilot thermocouples are not operating properly. OR - Monitor flares to assure that they are operated and maintained in conformance with their designs. -Operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device. - other restrictions from 63.11. such as heat content, maximum tip velocity, net heat value, exit velocity, flow rate. ET - Not required per Engineering Guide #16. If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1). Misc - The table summarizes which emissions units are controlled by the Hydrocarbon flare system and which rule(s) apply to specific emission units. CAM is not applicable.
P4 GroupP003, P004	The permittee shall reduce the emissions of organic HAP's using a flare meeting the requirements of 40	N	Y	Y	N	Y	Y	Y	Y	N	N	Y	Basis: 40 CFR 63, subparts CC and UUU NOTE: On October 17, 2013, U.S. EPA approved an Alternative Monitoring Parameter (AMP) request submitted on August 9, 2013, to use two IR monitors and one UV camera per flare as a permanent back-up in case

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	CFR 63.11(b).												the primary monitoring by pilot thermocouples are not operating properly. OR - Monitor flares to assure that they are operated and maintained in conformance with their designs. -Operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device. - other restrictions from 63.11. such as heat content, maximum tip velocity, net heat value, exit velocity, flow rate. ET - Not required per Engineering Guide #16. If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1). Misc - The table summarizes which emissions units are controlled by the Hydrocarbon flare system and which rule(s) apply to specific emission units. CAM is not applicable.
P4 Group P003, P004	no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours,	N	Y	N	Y	Y	N	Y	Y	N	N	Y	Basis: 40 CFR 60, subpart A – NOTE: On October 17, 2013, U.S. EPA approved an Alternative Monitoring Parameter (AMP) request submitted on August 9, 2013, to use two IR monitors and one UV camera per flare as a permanent back-up in case the primary monitoring by pilot thermocouples are not operating properly OR - Monitor flares to assure that they are operated and maintained in conformance with their designs. -Operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device. - other restrictions from 60.18. such as heat content, maximum tip velocity, net heat value, exit velocity, flow rate. ET - Not required per Engineering Guide #16. If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1). Misc - The table summarizes which emissions units are controlled by the Hydrocarbon flare system and which

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													rule(s) apply to specific emission units. CAM is not applicable.
P4 Group P003, P004	The permittee shall not burn in any affected flare any fuel gas that contains H_2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this limit.	N	Y	N	Y	Y	N	Y	Y	N	N	Y	Basis: 40 CFR 60, subparts A and Ja. OR- Must develop and implement the Flare Management Plan -shall conduct a root cause analysis and a corrective action analysis for each of the following conditions per 60.103a(c)(1). ET – Not required per Engineering Guide #16. The monitoring and recordkeeping requirements shall be used to demonstrate compliance. If required, the permittee shall demonstrate compliance using the methods and procedures of 40 CFR 60.106a(j). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA Misc - The table summarizes which emissions units are controlled by the Hydrocarbon flare system and which rule(s) apply to specific emission units. CAM is not applicable
P4 Group P003, P004	In accordance with 40 CFR 60.482-10(d), the flare should comply with the requirements of 40 CFR Part 60.18.	N	Y	N	Y	Y	N	Y	Y	N	N	Y	Basis: 40 CFR 60, subparts A and VV; and 40 CFR 61, subpart FF. In accordance with 60.481, this emissions unit acts as a control device that is referenced by other rules under NSPS. NOTE: On October 17, 2013, U.S. EPA approved an Alternative Monitoring Parameter (AMP) request submitted on August 9, 2013, to use two IR monitors and one UV camera per flare as a permanent back-up in case the primary monitoring by pilot thermocouples are not operating properly. This emissions unit is a control device serving a closed vent system subject to 40 CFR Part 60, subpart VV standards. OR-Monitor flares to assure that they are operated and maintained in conformance with their designs. -Operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device. - other restrictions from 60.18. such as heat content,

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													maximum tip velocity, net heat value, exit velocity, flow rate. ET - Not required per Engineering Guide #16. Demonstration that the minimum heating value of the gas being combusted in each flare is greater than 300 Btu/scf. -Testing to prove the maximum exit velocity requirement of less than 60 feet per second for each flare Misc - The table summarizes which emissions units are controlled by the Hydrocarbon flare system and which rule(s) apply to specific emission units. CAM is not applicable.
P4 Group P003, P004	Smokeless operations, except during reliefs, which exceed the steam assist capabilities of the flare.	N	Y	N	N	N	Y	N	N	Y	N	N	Basis/ENF: Director's Final Findings and Orders issued August 19,1987. M,R - Provide information for each known relief which results in non-smokeless operation of the flare(s). Rp - Submit reports which provide the information in the records (above) for each known relief which results in non-smokeless operation of the flare(s). ET - Not required per Engineering Guide #16. Smokeless is defined as no visible emissions, as determined by U.S. EPA Reference Method 22, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours CAM is not Applicable.
P007	Ammonia emissions - 20 parts per million by volume dry basis or 41.61 tons per year.	N	Y	N	N	N	N	N	N	Y	N	N	Basis: BAT for OAC rule 3745-31-05(A)(3). All requirements from PTI 0108887 as modified on 5/4/2012) were incorporated in the Title V permit. This emission limitation is the potential to emit based on vendor's design data, therefore, monitoring, recordkeeping and reporting are not required ET – testing shall be conducted approximately 2.5 years after permit issuance and within 6 months prior to permit renewal using U.S. EPA Conditional Test Method (CTM) 027 for ammonia emissions. CAM is not applicable
	VOC emissions - (PTE from equipment leaks)	N	Y	N	N	N	N	N	N	N	N	N	Basis: BAT for OAC rule 3745-31-05(A)(3). All requirements from PTI 0108887 as modified on 5/4/2012)

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	shall not exceed 9.7 tons per year.												were incorporated in the Title V permit. This emission limitation is the potential to emit based on vendor's design data, therefore, monitoring, recordkeeping and reporting are not required ET – not required for annual limits CAM is not applicable
P007	CO emissions - 500 ppm by volume dry basis (ppmvd) as a 1-hour average	N	Y	N	N	Y	Y	Y	Y	N	N	N	Basis: BAT for OAC rule 3745-31-05(D). All requirements from PTI 0108887 as modified on 5/4/2012) were incorporated in the Title V permit. Requires demonstration by using a CO CEM. ENF - This requirement is due to (Project Sunshine PTI 04-01290 issued 7/25/2002), which incorporated the requirements from the Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CV095 RL, Date of Entry 8/29/2001). ET – Not required per Engineering Guide #16. Compliance is demonstrated through the monitoring, recordkeeping and reporting requirements for the CO CEM. CAM is not applicable
	reduce total particulate emissions (PE) at the FCCU to 1 pound per 1,000 pounds of coke burned	N	Y	N	N	Y	Y	Y	Y	Y	N	N	Basis: BAT for OAC rule 3745-31-05(D). All requirements from PTI 0108887 as modified on 5/4/2012) were incorporated in the Title V permit. The permittee shall achieve these reductions through the operation of the electrostatic precipitator. OR - The continuous opacity monitor shall be located in stack on the outlet of the CO Boiler/ESP and/or in the outlet of any other stack prior to the discharge of the FCCU gases to the atmosphere such that representative measurements of opacity are obtained (40 CFR Part 64 Plan; and per 63.1564(b)(1) and Table 3, item 5.a. (option 4)). ENF - This requirement is due to (Project Sunshine PTI 04-01290 issued 7/25/2002), which incorporated the requirements from the Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CV095 RL, Date of Entry 8/29/2001). ET – testing performed within 6 months of permit

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													issuance and then 2.5 years after following the 40 CFR 60.106(a) and (b) for filterable PM. CAM is applicable. The CAM performance indicator for visible particulate emissions is the opacity of the visible emissions from the Electrostatic Precipitator (ESP) exhaust stack as measured and recorded by the certified continuous opacity monitoring (COM) system.
	162 ppmv fuel gas H_2S, determined hourly on a 3-hour rolling average basis	N	Y	N	N	Y	Y	Y	Y	N	N	N	Basis: BAT for OAC rule 3745-31-05(D). All requirements from PTI 0108887 as modified on 5/4/2012) were incorporated in the Title V permit. Fuel gas is burned in the CO boiler. M, R & Rp – monitored with a H_2S CEM, see term B.4. of Section B. ENF - The CO Boiler (not the FCCU) shall be considered an affected facility for purposes of 40 CFR Part 60, Subpart J, and shall comply with all requirements of 40 CFR Part 60, Subparts A and J as those subparts apply to fuel gas combustion devices. The applicability of 40 CFR 60 Subpart J is due to PTI 04-01290 (Project Sunshine PTI), which incorporates the requirements from the Consent Decree (United States of America, et al., v. BP Exploration & Oil CO., et al., Civil Action No. 2:96CF095 RL, Date of Entry 8/29/2001) not because the heater was modified or installed after the applicability date. ET – Not required per Engineering Guide #16. If required, compliance shall be demonstrated based upon the methods and procedures of 40 CFR 60.106(e)(1) CAM is not applicable.
	SO_2 emissions - 260 ppmvd at 0% oxygen as a rolling 7-day average or 160 ppmvd at 0% oxygen as a 365-day rolling average; limit the emissions of SO_2 from FCCU to 1,020 tons per rolling,	N	Y	N	N	Y	Y	Y	Y	N	N	N	Basis: BAT for OAC rule 3745-31-05(D). All requirements from PTI 0108887 as modified on 5/4/2012) were incorporated in the Title V permit. Fuel gas is burned in the CO boiler. NOTE: the purpose of the 1,020 tons per rolling, 12-month period was to obtain a net decrease of 80 tons/yr SO2 for PTI P0108887 as modified on 5/3/2012. M, R & Rp – monitored with a SO_2 CEM ENF -Based on 12-month demonstration of SO_2

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	12-month period.												absorbing catalyst and approved by EPA as required by Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CF095 RL, Date of Entry 8/29/2001) set forth in PTI 04-01290 (Project Sunshine PTI), and finally approved in PTI 04-1330 (6/27/06). ET – Not required per Engineering Guide #16. If required, compliance shall be demonstrated using data from the SO_2 CEM. CAM is not applicable.
	NOx Emissions - 58.1 ppmvd NOx at 0% O_2 on a 365-day rolling average	N	Y	N	N	Y	Y	Y	Y	N	N	N	Basis: BAT for OAC rule 3745-31-05(D). All requirements from PTI 0108887 as modified on 5/4/2012) were incorporated in the Title V permit. M, R & Rp – monitored with a NOx CEM ENF – These NOx requirements are due to (PTI P0105902 issued 5/18/2011), which incorporated the requirements from the Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CV095 RL, Date of Entry 8/29/2001). ET – Not required per Engineering Guide #16. Compliance shall be demonstrated using data from the NOx CEM CAM is applicable. The CAM performance indicator for NOx emissions is a continuous emissions monitor in the CO Boiler and regenerator stacks. Upon detecting an excursion of the NOx emissions limit, the owner or operator shall restore operation of the emissions unit (including the control device) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
	NOx emissions - 93.4 ppmvd NOx at 0% O2 on a 7-day rolling average basis	N	Y	N	N	Y	Y	Y	Y	N	N	N	Basis: BAT for OAC rule 3745-31-05(D). All requirements from PTI 0108887 as modified on 5/4/2012) were incorporated in the Title V permit. M, R & Rp – monitored with a NOx CEM ENF – These NOx requirements are due to (PTI P0105902 issued 5/18/2011), which incorporated the requirements from the Consent Decree (United States of

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CV095 RL, Date of Entry 8/29/2001). ET – Not required per Engineering Guide #16. Compliance shall be demonstrated using data from the NOx CEM CAM is applicable. The CAM performance indicator for NOx emissions is a continuous emissions monitor in the CO Boiler and regenerator stacks. Upon detecting an excursion of the NOx emissions limit, the owner or operator shall restore operation of the emissions unit (including the control device) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
P007	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.	17-07(A)	N	N	Y	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-17-07(A). OR - The continuous opacity monitor shall be located in stack on the outlet of the CO Boiler/ESP and/or in the outlet of any other stack prior to the discharge of the FCCU gases to the atmosphere such that representative measurements of opacity are obtained. ET – Not required per Engineering Guide #16. Compliance shall be demonstrated through the monitoring and recordkeeping requirements for the Opacity CEM. CAM is not applicable for opacity but is applicable for PE.
P007	0.020 pound of particulate emissions (PE) per million Btu of actual heat input from fuel burned in the CO boiler	17-10(B)(1)	N	N	Y	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-17-10(B)(1). OR - The continuous opacity monitor shall be located in stack on the outlet of the CO Boiler/ESP and/or in the outlet of any other stack prior to the discharge of the FCCU gases to the atmosphere such that representative measurements of opacity are obtained. ET – Compliance shall be demonstrated through the monitoring and recordkeeping requirements for the Opacity CEM. CAM is not applicable for opacity but is applicable for PE.
P007	91.7 pounds per hour particulate emissions (PE)	17-11(B)(1)	N	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-17-11(B)(1). ET – No testing requirement because this limit is less stringent than the PE limit in OAC 3745-31-05(D).

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													CAM is not applicable
P007	0.92 lb SO_2 per 1,000 lbs fresh feed	18-54(W)(6)	N	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-17-11(B)(1). ET – No testing requirement because this limit is less stringent than the SO_2 limit in OAC 3745-31-05(D). CAM is not applicable
P007	0.29 pounds of SO_2 per mmBtu actual heat input from any fuel burning unit	18-54(W)(1)	N	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-17-11(B)(1). ET – No testing requirement because this limit is less stringent than the SO_2 limit in OAC 3745-31-05(D). CAM is not applicable
P007, P009, P010, P011 P014, P017, P021, P022, P023, P025, P028, P029, P036, P037, P041, P043, P059, P060, P063, P803	LDAR program for Equipment Leaks	21-09(T)	N	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3746-21-09(T) All monitoring, recordkeeping, reporting and testing requirements for this regulation is subsumed in term B.2. The permittee may demonstrate compliance with this rule by demonstrating compliance with the equipment leak standards in 40 CFR 63, subpart CC for both equipment in HAP service and equipment not in organic HAP service. The MACT level of monitoring in 40 CFR 63 subpart CC, is generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T).
P007, P011, P025, P029, P041, P043, P060, P063, P803	LDAR program for Equipment Leaks for NSPS sp GGGa	N	Y	N	N	N	N	N	N	N	N	N	Basis: 40 CFR Part 60, subpart GGGa. All monitoring, recordkeeping, reporting and testing requirements for this regulation is subsumed in term B.2. NOTE: For P007, the FCCU Wet Gas Compressor is an affected facility for purposes of 40 CFR 60 subpart GGGa.
P007, P009,	LDAR program for Equipment Leaks for	N	Y	N	N	N	N	N	N	N	N	N	Basis: 40 CFR Part 63, subparts A and CC – Equipment leak requirements. All monitoring, recordkeeping,

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
P010, P011, P014, P017, P021, P022, P023, P028, P029, P036, P037, P041, P043, P059, P060, P063, P803	40 CFR 63 subpart CC												reporting and testing requirements for this regulation is subsumed in term B.2. Table 6 of Subpart CC specifies which parts of the General Provisions in 40 CFR 63, Subpart A apply.
P007	Metal HAP limits, Table 1; Organic HAP limits, Table 8; HAP emissions from bypass Lines, Table 36	N	Y	N	Y	Y	Y	N	Y	N	N	N	Basis: 40 CFR Part 63, subparts A and UUU – for metal HAPs, organic HAPs and emissions from bypass lines Table 44 to Subpart UUU specifies which parts of the General Provisions apply in 40 CFR 63, Subpart A. OR - Maintain the daily average Ni operating value no higher than the Ni operating limit established during the performance test. -Install, operate and maintain a continuous opacity monitoring system to measure and record the opacity of emissions from the FCCU and continuous parameter monitoring system to measure and record the gas flow rate entering or exiting the control device according to the requirements in 63.1572. Note: BPH uses the EPA Region 5 approved alternative monitoring plan to estimate the gas flow rate instead of a continuous parameter monitoring system for gas flow rate as allowed in 63.1573(e). -Establish each site-specific operating limit in Table 2 to 40 CFR 63 Subpart UUU that applies according to the procedures in Table 4 to 40 CFR 63 Subpart UUU. Note: BPH has chosen Option 4 in item 5 of Table 1 of Subpart UUU as of the issuance of this Title V permit. ET – Metal HAPS: Follow options under Table 4; which lists the required test methods, see Note above. ET - Organic HAPS: follow Table 11; ET- Bypass Lines: compliance with work practice standards from Table 38 and 36 in accordance with 40

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													CFR 63.1569(b). CAM is not applicable.
P007	Work Practice Standards for the Boiler MACT	N	Y	N	Y	Y	Y	N	Y	N	N	N	Basis: 40 CFR Part 63, subpart DDDDD – OR - An existing process heater in the gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler as specified in 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup The monitoring, recordkeeping, and reporting requirements are located in term B.6. of Section B. ET – no emission limits from Boiler MACT is established, so no testing requirement. CAM is not applicable.
P007	Maximum opacity of 10% as a one hour average.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis: 40 CFR Part 64 (Compliance Assurance Monitoring) OR – Requires a continuous opacity monitor located in the stack on the outlet of the CO Boiler/ESP and/or in the outlet of any other stack prior to the discharge of the FCCU gases to the atmosphere such that representative measurements of opacity are obtained (40 CFR Part 64 Plan. ET – Compliance is demonstrated through the data collected for the opacity monitor. If required, Method 9 of 40 CFR 60, Appendix A shall be used to demonstrate compliance. CAM is applicable, see above.
P007	Air Toxics Policy for ammonia	N	Y	N	N	Y	N	Y	Y	Y	N	N	Basis: ORC 3745.03(F)(4)(d) Air Toxics Policy for ammonia ET- Testing is required every 2.5 years using USEPA Conditional Test Method (CTM) 027 for ammonia emissions. CAM is not applicable.
P009 , P037	SO_2 emissions from each incinerator stack do not exceed	N	Y	N	N	Y	Y	N	N	N	N	N	Basis: BAT for OAC rule 3745-31-05(D). All requirements from PTI 0119763 as modified on 10/30/2015) were incorporated in the Title V permit.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	250 ppm on a rolling 12-hour average for greater than 7.5% of the operating time for the SRU for any rolling 12- month period												The permittee shall maintain all NSPS sulfur recovery pit emissions such that they are treated, monitored, and included as part of the sulfur recovery plant's emissions subject to the NSPS Subpart J limit for SO_2, 40 CFR 60.104(a)(2). M, R & Rp – monitored with a SO_2 CEM ENF – The SO_2 requirement is due to (PTI P0119763 modified on 10/30/2015), which incorporated the requirements from the Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CV095 RL, Date of Entry 8/29/2001). The requirements of the Consent Decree were originally incorporated into PTI 04-01290 issued 7/25/2002. ET – Not required per Engineering Guide #16. Compliance shall be demonstrated using data from the SO_2 CEM CAM is not applicable.
P009, P037	No limit established from visible PE	17-07(A)(1)	N	Y	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-17-07(A)(1) ND - This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to a mass emission limitation in OAC rule 3745-17-11.CAM is not applicable
P009, P037	Exempt because less than 10 pounds per hour particulate emissions (PE)	17-11(B)(1)	N	Y	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-17-11(B)(1). ND - The uncontrolled mass rate of particulate emissions (PE)* from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-17-01(B)(17). CAM is not applicable
P009	Sulfur recovery unit (OEPA source number P009); a maximum of 0.025 per cent by volume of sulfur	18-54(W)(7)	N	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3754-18-54(W)(7) This emission limitation is as stringent as the emission limitation specified by 40 CFR Part 60, Subpart J. ET - Ongoing compliance shall be demonstrated through the data collected as required in the Monitoring and

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	dioxide at zero per cent oxygen on a dry basis.												Recordkeeping section of this permit, and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60, Subpart J. If required, the permittee shall demonstrate compliance using the methods and procedures of 40 CFR 60.106(f). CAM is not applicable
P009, P037	250 ppm SO_2 by volume (dry basis) at zero percent excess air as a rolling, 12-hour average.	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: 40 CFR Part 60, Subpart J for SO_2 (SRU) The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit. ET - Ongoing compliance shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping section of this permit, and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60. If required, the permittee shall demonstrate compliance using the methods and procedures of 40 CFR 60.106(f). CAM is not applicable.
P009, P037	230 mg/dscm (0.10 gr/dscf)(the equivalent concentration is 162 parts per million by volume of H_2S dry basis) as a volume-weighted, rolling 3-hour average concentration greater than 0.10 grain per dry standard cubic foot, except during periods of startup, shutdown or malfunction of the refinery fuel gas amine	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: 40 CFR Part 60, Subpart J for H_2S The permittee shall not burn in the tail gas incinerator any refinery fuel gas that contains hydrogen sulfide (H2S) in excess of 230 mg/dscm (0.10 gr/dscf)(the equivalent concentration is 162 parts per million by volume of H2S dry basis) as a volume-weighted, rolling 3-hour average concentration greater than 0.10 grain per dry standard cubic foot, except during periods of startup, shutdown or malfunction of the refinery fuel gas amine systems provided that the permittee shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. The monitoring, record keeping and reporting

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	systems												requirements for compliance with this condition is maintained under term B.4. of Section B. of this permit. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit. ET – Ongoing compliance with the hydrogen sulfide emission limitation(s) contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping term B.4. of Section B. of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60. If required, compliance shall also be demonstrated based upon the methods and procedures of 40 CFR 60.106(e)(1). CAM is not applicable
P009, P037	250 ppmv (dry basis) of sulfur dioxide (SO_2) at zero percent excess air if you use an oxidation or reduction control system followed by incineration.	N	Y	N	M	Y	N	Y	Y	N	N	N	Basis: 40 CFR Part 63, Subparts A and UUU The SO_2 emission limitation specified by this rule is equivalent to that specified by 40 CFR Part 60, Subpart J under 40 CFR 60.104(a)(2)(i). Table 44 of subpart UUU specifies the applicability requirements of 40 CFR Part 63, subpart A. [Table 29, row 1 to 40 CFR Part 63, Subpart UUU] OR – 63.1570(c) - Operate and maintain the affected source, including air pollution control and monitoring equipment, according to the provisions in 63.6(e)(1)(i). ET - Ongoing compliance shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping section of this permit, and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60. If required, the permittee shall demonstrate compliance using the methods and procedures of 40 CFR 60.106(f). CAM is not applicable.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
P010, P011	0.40 pounds SO_2 per ton of actual process weight input	18-54(W)(2)	N	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-18-54(W)(2) Emissions from the vacuum producing system are ducted to the refinery fuel gas system. All refinery heaters and boilers burning refinery fuel gas (RFG) are subject to the standards for sulfur dioxides under 40 CFR 60.104 (NSPS subpart J) which restricts the permittee from burning in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf). The SO2 emission limitation specified by OAC rule 3745-18-54(W)(2) is less stringent than the standard in 40 CFR 60.104 Subpart J. Continuous compliance with this emission limitation is monitored by the permittees hydrogen sulfide continuous emissions monitoring system (CEMS). Monitoring, recordkeeping, reporting and testing requirements for the fuel gas CEMS are contained under the heater emissions unit terms and conditions of this permit. And in term B.4. of Section B. ET – see above CAM is not applicable.
P010, P011	VOC emissions from vacuum system (no limit)	21-09(M)(1)	N	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-21-09(M)(1) The permittee shall control the emissions of VOC from any vacuum producing systems by compressing the vapors and adding them to the refinery fuel gas system. ET – not required per Eng. Guide #16 CAM is applicable.
P010, P017, P022, P023, P028, P036, P037, P041, P043, P059	LDAR program for Equipment Leaks for NSPS subpart GGG	N	Y	N	N	N	N	N	N	N	N	N	Basis: 40 CFR Part 60, subpart GGG All monitoring, recordkeeping, reporting and testing requirements for this regulation is subsumed in term B.2. In accordance with 40 CFR Part 63.640(p)(1) of 40 CFR 63 subpart CC, equipment leaks that are subject to the provisions of both 40 CFR Part 60, subpart GGG and 40 CFR Part 63, subpart CC are required to comply only with the provisions specified in 40 CFR Part 63, subpart CC. See Term B.2. for the LDAR programs.
P010	CAM Plan for VOC	N	Y	N	N	N	N	N	N	N	N	N	Basis: 40 CFR Part 64 (Compliance Assurance Monitoring) This process unit is subject to the terms and conditions of

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													40 CFR Part 64 for VOC, however, there are no additional emission limitations and work practice standard for this emissions unit because the Vac 2 off-gas is educted into the refinery fuel gas system performance specifications required for the combustion device to which the gases are routed, the combustion device, in this case, is considered inherent process equipment, therefore, no VOC CAM plan is required for the control device ET – not required, see above. CAM is applicable, see above.
P011	10.09 tons per year VOC emissions (from equipment leaks)	N	Y	N	N	N	N	Y	N	N	N	N	Basis: ORC 3704.03(T) Chapter 31 mod incorporates PTI P0119763. The annual VOC emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation ET -As long as compliance with the applicable leak monitoring and repair requirements of NSPS Subpart GGGa are maintained, compliance with the VOC emission limit shall be demonstrated. The emission limit of 10.09 tons per year VOC emissions from equipment leaks was established to reflect the potential to emit for this emissions unit using the procedures specified in Protocol for Equipment Leak Emission Estimates (EPA document 453/R-95-017, subsequent updates to Protocol for Equipment Leak Emission Estimates, or alternative emission factor approved by Ohio EPA) to calculate the VOC emissions from equipment leaks.
P011	Comply with NSPS Subpart J	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-31-05(D) from PTI P0110958 issued 9/11/2012. The SO_2 emission limitation specified by OAC rule 3745-18-54(W)(2) is less stringent than the emission limitation specified under 40 CFR 60.104. All refinery heaters and boilers burning refinery fuel gas are subject to the standards for sulfur oxides under 40 CFR 60.104 (NSPS Subpart J) or 40 CFR 60.102a(g)(1) (NSPS Subpart Ja)

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													which restricts the permittee from burning in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis. Continuous compliance with this emission limitation is monitored by the permittee's hydrogen sulfide continuous monitoring systems (CEMS). Monitoring, recordkeeping, reporting and testing requirements for the fuel gas CEMS are contained under specific emissions unit terms and conditions for fuel burning equipment. ET – see comment above.
P011	CAM requirements for VOC	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: 40 CFR Part 64 (CAM) NOTE: the applicable regulation is OAC rule 3745-21-09(M)(1) which requires the control of emissions of VOC from any vacuum producing systems (Vac 1) by piping the vapors to an appropriate firebox or incinerator, or by compressing the vapors and adding them to the refinery fuel gas system The refinery stated they route the Vacuum 1 offgas to the Crude 1 overhead drum and, from there, directly to the refinery fuel gas system. The following R & Rp is what is proposed to meet the bypass monitoring requirements. M & R - The permittee is required to keep records of those times when the Vac 1 vent gas from the process is not ducted to the refinery's fuel system and is bypassed to the flare. Rp – report when the above records were not kept. ET – no emission limit to test. CAM is applicable to VOC.
P014	The operating hours of this emissions unit shall not exceed 4,380 hours per year	N	Y	N	Y	N	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3) OR - The operating hours of this emissions unit shall not exceed 4,380 hours per year ET - no emission limit to test.
P014	Misc. Process Vents (Group 2)	N	Y	N	N	N	N	N	N	N	N	N	Basis: 40 CFR Part 63, subparts A and CC – Miscellaneous Process Vents – GROUP 2 VENTS.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													This emissions unit is a Group 2 Miscellaneous Process Vent and has no applicable stack emission limitation under this regulation
P017	18.3 tons per year VOC (from coke cutting and equipment leaks); 4.1 pounds of VOC per coking cycle from the hydrocarbon flare system; 1.3 tons per year VOC from the hydrocarbon flare system	N	Y	N	Y	N	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3), from PTI 04-0945. OR - maximum allowable operating rate for this emissions unit is 626 coking cycles per year ET: Long-term limits: Testing is not required for annual limits. Short-term limit: The permittee now complies with this emission limitation by design, since the blowdown emissions are now recovered at the flare gas recovery system and used as refinery fuel gas. CAM is not applicable
	109.5 pounds of SO_2 per coking cycle from the hydrocarbon flare system; and 34.3 tons per year SO_2 from the hydrocarbon flare system	N	Y	N	Y	N	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3), from PTI 04-0945. OR - maximum allowable operating rate for this emissions unit is 626 coking cycles per year ET: Long-term limits: Testing is not required for annual limits. Short-term limit: The permittee now complies with this emission limitation by design, since the blowdown emissions are now recovered at the flare gas recovery system and used as refinery fuel gas. CAM is not applicable
P017	Blowdown drum vented to a flare that complies with OAC 3745-21-09 (DD)(1)(d)	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-21-09(UU)(3) All VOC emissions from the Coker 2 blowdown drum shall be vented to a flare that complies with the requirements of OAC rule 3745-21-09(DD)(1)(d). All flare requirements are in the hydrocarbon flare terms for P003 and P004. ET: No emission limit to test. CAM is not applicable
P017, P021, P022, P023, P028, P029, P036,	Misc. Process Vents (Group 1) controlled by hydrocarbon flare(s) for 40 CFR 63 subpart CC	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: 40 CFR Part 63, subparts A and CC – Miscellaneous Process Vents – GROUP 1 VENT(S) controlled by the P003 and P004 hydrocarbon flares. ET - Not required per Engineering Guide #16. The permittee shall test for visible emissions, net heating value and exit velocity per 40 CFR 63.116 of 40 CFR 63,

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
P041, P043													subpart G. NOTE: Flare testing requirements of 63.116 are included in the P003/P004 flare testing requirements. CAM is not applicable.
P1 Grp: P021, P022	Requirements for the blowdow drums of the Alky 1 and Alky 2 units	21-09(UU)(2)	N	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-21-09(UU)(2) All VOC emissions from the Alky 1 blowdown drum (P021) and the Alky 2 blowdown drum (P022) shall be vented to a flare that complies with the requirements of OAC rule 3745-21-09 (DD)(10)(d), (DD)(10)(e), and (DD)(10)(f) of this rule. NOTE: The flare requirements applicable to these emissions units are subsumed into the terms for emissions units for the East and West Hydrocarbon flares, P003 and P004. M, R, Rp - The blowdown vents from these systems are considered Group 1 miscellaneous process vents under 40 CFR 63, subpart CC. ET – Refer to EU P003 and P004 for the flare testing requirements.
P025	BAT	N	Y	N	N	N	N	N	N	N	N	N	Basis: ORC 3704.03(T) BAT from PTI P0119763 Compliance with the requirements of this rule includes compliance with the requirements of OAC rule 3745-21-09(M)(2), OAC rule 3745-21-09(T), OAC rule 3745-21-09(UU)(4), 40 CFR Part 60, Subpart QQQ, 40 CFR Part 61, Subpart FF, and 40 CFR Part 63, Subpart CC CAM is not applicable.
P025	Control VOC emissions from wastewater separators by covers and seals	21-09(M)(2)	N	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-21-09(M)(2) Except for any wastewater separator which is used solely for once-through, noncontact cooling water or for intermittent tank farm drainage resulting from accumulated precipitation, the permittee shall control the emissions of VOC from any wastewater separator by equipping all forebay sections and other separator sections with covers and seals which minimize the amount of oily water exposed to the ambient air. In addition, all covers and forebay and separator sections shall be equipped with lids and seals which are kept in a closed position at all times except when in actual use.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													ET – No emission limit to test. Compliance would be covered by the monitoring, recordkeeping and reporting requirements of 40 CFR Part 61 Subpart FF and 40 CFR Part 60 Subpart QQQ. CAM is not applicable.
P025	all VOC emissions from the steam stripper shall be vented to a flare that complies with the requirements of OAC rule 3745-21-09(DD)(10)(d)	21-09(UU)(4)	N	N	N	N	N	Y	N	N	N	N	Basis: OAC rule 3745-21-09(UU)(4) All process wastewater from the crude desalter shall be discharged to a steam stripper for the recovery of condensable hydrocarbons, and all VOC emissions from the steam stripper shall be vented to a flare that complies with the requirements of OAC rule 3745-21-09(DD)(10)(d). Flare requirements are found in EU's P003 and P004. M – Daily records of the operating times for the Benzene wastewater strippers, Tanks 14 & 15, the West flare, and the crude desalters. ET – No emission limit to test CAM is not applicable.
P025	Manage and treat benzene waste containing at least 10% water, except for a 6Mg uncontrolled benzene emissions, considered Group 1 wastewater streams.	N	Y	N	Y	Y	N	Y	Y	N	N	Y	Basis: 40 CFR Part 63, subpart CC and 40 CFR Part 61 subpart FF. Group 1 wastewater streams are defined in 40 CFR 63.641 of subpart CC. OR – The permittee has chose to control benzene according to the alternative requirements specified in 61.342(e)(1) and (e)(2). ET – The permittee uses Method 21 for the VOC LDAR program. MISC – Table I, Benzene Waste NESHAPs (40 CFR Part 61, Subpart FF) Affected Equipment. CAM is not applicable.
P025, P028, P029	Manages Group 2 wastewater streams according to 40 CFR 60 subpart QQQ	N	Y	N	Y	Y	N	Y	Y	N	N	Y	Basis: 40 CFR Part 60 subpart QQQ - Group 2 wastewater streams are defined in 40 CFR 63.641 of subpart CC. OR – Lists operational restrictions for drains, oil-water separators and aggregate facilities and closed vent systems with control equipment. ET – The permittee uses Method 21 for the VOC LDAR program. MISC – Table 2, Individual Drain Systems Subject to 40

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													CFR Part 60, Subpart QQQ, Affected Equipment CAM is not applicable.
P036	13.85 tons of VOC per rolling 12-month period (from coke cutting) and 10.81 tons of VOC from fugitive emissions (equipment leaks) per rolling 12-month period	N	Y	N	Y	N	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3), from PTI P0119763. Annual limits for equipment leaks are based on PTE. OR - The permittee shall vent the coker blowdown emission to the refinery flare gas recovery system ET - Long-term limits: Testing is not required for annual limits. CAM is not applicable
P2. Group, P028, P029	Emissions Unit P028: 22.03 tons per year VOC emissions (from equipment leaks) Emissions Unit P029: 22.08 tons per year VOC emissions (from equipment leaks)	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-31-05(A)(3), For P028,from PTI P0119763 and for P029 from PTI P0108950. The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-09(T) and 40 CFR Part 60, Subparts A, GGG (P028), GGGa (P029), QQQ, and 40 CFR Part 63, Subpart CC. M, R, Rp - The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation ET -These emissions limits were established to reflect the potential to emit for this emissions unit using the procedures specified in Protocol for Equipment Leak Emission Estimates (EPA document 453/R-95-017, subsequent updates to Protocol for Equipment Leak Emission Estimates, or alternative emission factor approved by Ohio EPA) to calculate the VOC emissions from equipment leaks. A summary of the calculations were submitted to Ohio EPA in Application for P0112686 for P028 and P0108950 for P029. CAM is not applicable
P037	CO emissions - 2.7 lbs/hr and 8.07 tons per rolling, 12-month period.	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3), from PTI P0119763. M, R - The permittee shall monitor and record the monthly average volumetric firing rate in the Thermal Oxidizer in units of standard cubic feet per month. From these data, the permittee shall calculate and maintain

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													records of the monthly and rolling, 12-month total for CO. ET -Not required per Engineering Guide #16. Compliance shall be demonstrated by multiplying the actual volumetric firing rate of fuel gas burned in the Thermal Oxidizer in units of standard cubic feet (SCF) (as a monthly average value) by the CO emission factor from AP-42 Table 1.4-1 dated 7/98 (84 lb/mmscf), multiplied by the fuel gas heating value correction factor. The heating value correction factor is equal to the actual fuel gas heat content divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf). If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. CAM is not applicable
	NOx emissions shall not exceed 4.4 lbs/hr and 12.76 tons per rolling, 12-month period	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3), from PTI P0119763. M, R - The permittee shall monitor and record the monthly average volumetric firing rate in the Thermal Oxidizer in units of standard cubic feet per month. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total for NOx. ET -Not required per Engineering Guide #16. Compliance may be demonstrated by multiplying the actual firing rate of fuel gas burned in the Thermal Oxidizer in units of mmBtu/hr as a monthly average value, by the manufacturer's guaranteed low-NOx burner emission factor of 0.10 lb/mmBtu. If required, Methods 1 through 4 and Method 7E of 40 CFR Part 60, Appendix A shall be used to demonstrate compliance. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA CAM is not applicable
	PM_{10} emissions shall not exceed 0.6 lb/hr and 1.74 tons per	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3), from PTI P0119763. M, R - The permittee shall monitor and record the monthly average volumetric firing rate in the Thermal

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	rolling, 12-month period												Oxidizer in units of standard cubic feet per month. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total for PM_{10} ET – Not required per Engineering Guide #16. Compliance may be demonstrated by multiplying the volumetric firing rate of fuel gas burned in the Thermal Oxidizer in units of standard cubic feet (SCF) (as a monthly average value) by the PM10 emission factor from AP-42 Table 1.4-2 dated 7/98 (7.6 lb/mmscf) multiplied by the fuel gas heating value correction factor. The heating value correction factor is equal to the actual fuel gas heat content divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf). If required, Methods 201 and 202 of 40 CFR Part 51, Appendix M shall be used to demonstrate compliance. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. CAM is not applicable
	SO_2 emissions from this emissions unit shall not exceed 172 tons per rolling, 12-month period.	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3), from PTI P0119763. M, R - The permittee shall monitor and record the monthly average volumetric firing rate in the Thermal Oxidizer in units of standard cubic feet per month. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total for SO_2. ET – Not required per Engineering Guide #16.Compliance with this emissions limitation shall be demonstrated by using the monthly emissions of SO_2 from this emissions unit, calculated by multiplying the calculated total flue gas volume (scf/yr) corrected to 0% O_2 by the SO_2 density at 60 F(0.1733 lb SO_2/ft^3 SO_2) multiplied by a temperature correction factor of (560R/ 520R) to correct the SO_2 density to the standard temperature of the SO_2 CEMS (100^0F) then multiplied by the monthly average concentration of SO_2 in the flue gas (ppmv) as measured by the CEMS, divided by $1E^{06}$, and divided by 2,000 pounds per ton. Add the SO_2 emissions from the current month to the total SO_2 emissions for the

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													previous 11 months to determine the tons of SO_2 emitted per rolling, 12-month period from this emissions unit. CAM is not applicable
	VOC emissions from equipment leaks shall not exceed 6.2 tons per year (from fugitive equipment leaks)	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-31-05(A)(3), from PTI P0119763. M, R - The annual VOC emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation ET – No testing required for annual limits. Compliance with this emissions limit is demonstrated by compliance with the applicable leak monitoring and repair requirements of NSPS Subpart GGG for equipment leaks. CAM is not applicable
P043	Requirements for the VOC emissions from the POLY water wash flash drum	21-09(UU)(1)	N	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-21-09(UU)(1) All VOC emissions from the POLY water wash flash drum shall be vented to a flare that complies with the requirements of paragraphs (DD)(10)(d), (DD)(10)(e), and (DD)(10)(f) of this rule. (NOTE: Flare requirements are outlined under the terms and conditions of EU's P003 & P004)ET – Refer to EU P003 and P004 for the flare testing requirements. ET – permit has no VOC limit to test. All VOC's from the flash drum are vented to a flare which may have testing requirements. See EU's P003 and P004.
P044, P045, P048, P053, P054	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.	17-07(A)(1)	N	N	Y	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-17-07(A)(1) OR - (1) The permittee shall only burn diesel fuel in this emissions unit. P048 burns gasoline. ET - Not required per Engineering Guide #16.If required, compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Reference Method 9 in 40 CFR, Part 60, Appendix A
P044, P045, P054	Particulate emissions (PE) shall not exceed 0.062 lb/mmBtu of	17-11(B)(5)(b)	N	N	Y	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-17-11(B)(5)(b) OR - (1) The permittee shall only burn diesel fuel in this emissions unit.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	actual heat input.												ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the emission limitations through exhaust emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5. CAM does not apply.
P044, P045, P048, P053, P054	0.5 pounds of sulfur dioxide per MM Btu actual heat input	18-06(B)	N	Y	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-17-11(B)(5) ND – Exempt. Pursuant to OAC rule 3745-18-06(B), stationary internal combustion engines which have rated heat input capacities equal to, or less than, ten MM Btu per hour total rated capacity are exempt from OAC rule 3745-18-06(G) (0.5 pounds of sulfur dioxide per mmBtu actual heat input)
P7 Group P044, P045	No emission limit	N	Y	N	Y	Y	N	Y	N	N	N	N	Basis: 40 CFR Part 63, Subpart ZZZZ (RICE MACT) – Emergency RICE engines. Pursuant to 40 CFR Part 63.6590(b)(3)(iii), existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR Part 63.6640(f)(2)(ii) and (iii) do not have to meet the requirements of this subpart and of 40 CFR Part 63, subpart A, including initial notification requirements. OT – The EU's shall meet all of the requirements for emergency engines in accordance with 40 CFR 63.6640(f)(1) through (3). M - Requires maintaining records or a log for the operation of the engine in emergency and non-emergency service, as recorded through the non-resettable hour meter. The records shall include the number or hours spent in emergency operation, including what classified the operation as an emergency; the number or hours spent in maintenance checks and readiness testing; and the number or hours spent in non-emergency operations. Rp – MACT does not have any reporting requirements for emergency engines.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													ET – no emission limit to test. CAM is not applicable.
P048	Particulate emissions (PE) shall not exceed 0.310 lb/mmBtu of actual heat input from RICE less than or equal to 600 horsepower (HP)	17-11(B)(5)	N	N	Y	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-17-11(B)(5) Knock Test Engines OR - The permittee shall only burn gasoline in this emissions unit. ET - Not required per Engineering Guide #16.If required, the permittee shall demonstrate compliance with the emission limitations through exhaust emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5. CAM does not apply.

P048	No emission limit, work practice standards from MACT RICE	N	Y	N	Y	Y	N	Y	N	N	N	Y	Basis: 40 CFR Part 63, Subpart ZZZZ (RICE MACT) – Comply with the maintenance/operational requirements from the RICE MACT for Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE. See Table 2c, option 7 of Subpart ZZZZ. OR - The permittee must comply with the emission limitations and other requirements in Table 2c to this subpart: a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. ET – no emission limit to test. Misc - Any amendment to Part 63, Subpart ZZZZ shall supersede the Subpart ZZZZ compliance limitations and/or compliance options contained in this permit CAM is not applicable.
P053	Particulate emissions (PE) shall not exceed 0.310 lb/mmBtu of actual heat input.	17-11(B)(5)(a)	N	N	Y	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-17-11(B)(5)(a) OR - (1) The permittee shall only burn diesel fuel in this emissions unit. ET - Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance with the emission limitations through exhaust emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5. CAM does not apply.
P053, P054	No emission limit	31-03(A)(4)(b)	N	N	Y	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-03(A)(4)(b) OR - (1) The permittee shall only burn diesel fuel in this emissions unit. M – tracks the monthly rolling, 12-month hours of operation; type of fuel used and sulfur content of distillate oil used. ET – no emission limit to test CAM does not apply.
P053	No emission limit, work practice standards from MACT RICE	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis: 40 CFR Part 63, Subparts A and ZZZZ (RICE MACT) – Emergency stationary compression ignition (CI) RICE engine (<500 hp) Table 8 of subpart ZZZZ, shows which parts of the General

													Provisions of subpart A applies to this emissions unit OT – The EU's shall meet all of the requirements for emergency engines in accordance with 40 CFR 63.6640(f)(1) through (3). -Change the oil & filter every 500 hrs, inspect the air filter every 1000 hrs, inspect the hoses & belts every 500 hrs, minimize idle time and startup time (< 30 min.). ET – no emission limit to test. CAM is not applicable.
P054	No emission limit, work practice standards from MACT RICE	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis: 40 CFR Part 63, Subparts A and ZZZZ (RICE MACT) – Emergency stationary compression ignition (CI) RICE engine (>500 hp). Table 8 of subpart ZZZZ, shows which parts of the General Provisions of subpart A applies to this emissions unit OT – The EU's shall meet all of the requirements for emergency engines in accordance with 40 CFR 63.6640(f)(1) through (3). ET – no emission limit to test CAM is not applicable.
P5 Grp P055, P056, P057, P058	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.	17-07(A)	N	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-17-07(A). Noncontact Cooling Towers In accordance with OAC rule 3745-17-07(A)(2), it shall not be deemed a violation of OAC 3745-17-07(A) where the presence of uncombined water is the only reason for failure of a stack emission to meet the requirements of this rule. ET – If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1 CAM is not applicable.
P5 Grp P055, P056, P057, P058	P055: 111.5 lbs/hr of particulate emissions P056: 93.9 lbs/hr of particulate emissions P057: 101.9 lbs/hr of particulate emissions P058: 89.8 lbs/hr of particulate emissions	17-11(B)	N	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-17-11(B) M – Test and record the TDS concentration of the cooling water once per quarter. ET – No testing required. The particulate emissions are calculated as follows: [(actual gallons/hour) x (mg/liter TDS) x (0.0002) x (3.785 liters/gallon)] ÷ (453,592mg/lb) = particulate emissions, in lbs/hr CAM is not applicable.
P5 Grp P055, P056, P057,	In accordance with 63.640(h), the permittee of heat exchange systems subject to 40	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: 40 CFR 63, subpart CC for heat exchange systems. ET – No limit to test CAM is not applicable.

P058	CFR Part 63, Subpart CC, shall be in compliance with the existing source standards in 63.654 no later than October 29, 2012.												
P803	Fugitive Volatile Organic Compound (VOC) emissions from equipment leaks shall not exceed 10.79 tons per year.	N	Y	N	N	N	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3) Incorporates the requirements of PTI P0115518 issued 8/22/2014. M, R, Rpt – limits based on PTE, so M, R, Rp not required. ET – Testing not required for annual limits. The leak detection and repair monitoring, recordkeeping and reporting requirements are detailed in term B.2 of Section B. (applicable leak detection and repair requirements) and shall serve as demonstration of compliance with this emission limitation. CAM is not applicable.
	VOC emissions from the regenerator vent shall not exceed 0.16 pound per hour and 0.70 tons per year.	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-31-05(A)(3) Incorporates the requirements of PTI P0115518 issued 8/22/2014. M, R, Rpt – limits based on PTE, so M, R, Rp not required. ET – short term limit: Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-21-10(C). Alternative U.S. EPA approved methods may be used with prior approval from Ohio EPA. Long term limit: No testing required for annual limits. Compliance may be demonstrated by multiplying the hourly emission limitation (0.16 lb/hr) by 8,760 hrs/yr and dividing by 2,000 pounds per ton. CAM is not applicable.
P803	CO emissions shall not exceed 1.1 pounds per hour and 4.8 tons per year.	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-31-05(A)(3), as of June 30, 2008. Incorporates the requirements of PTI P0115518 issued 8/22/2014. Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP) M, R, Rpt – limits based on PTE, so M, R, Rp not required. ET – short term limit: Not required per Engineering Guide

													#16. If required, the permittee shall demonstrate compliance using the methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved methods may be used with prior approval from Ohio EPA Long term limit: No testing required for annual limits. PTE based on the short-term limit CAM is not applicable.
	NOx emissions shall not exceed 0.01 pound per hour and 0.05 ton per year.	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-31-05(A)(3), as of June 30, 2008. Incorporates the requirements of PTI P0115518 issued 8/22/2014. Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP) M, R, Rpt – limits based on PTE, so M, R, Rp not required. ET – short term limit: Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance using the methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved methods may be used with prior approval from Ohio EPA. Long term limit: No testing required for annual limits. PTE based on the short-term limit CAM is not applicable.
	SO_2 emissions shall not exceed 0.16 pound per hour and 0.7 ton per year.	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-31-05(A)(3), as of June 30, 2008. Incorporates the requirements of PTI P0115518 issued 8/22/2014. Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP) M, R, Rpt – limits based on PTE, so M, R, Rp not required. ET – short term limit: Not required per Engineering Guide #16. If required, the permittee shall demonstrate compliance using the methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved methods may be used with prior approval from Ohio EPA. Long term limit: No testing required for annual limits. PTE based on the short-term limit CAM is not applicable.

P803	During coke burn-off and catalyst regeneration, reduce uncontrolled emissions of HCl by 97 percent by weight or to a concentration of 10 ppmv (dry basis), corrected to 3 percent oxygen from the process vents associated with the coke burn-off and catalyst rejuvenation operations. (63.1567(a)(1))	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis: 40 CFR Part 63, subparts A and UUU, defined as a catalytic reforming unit per 63.15161(a)(1)(iii). Table 6 of 40 CFR 63 Subpart UUU show which parts of the General Provisions in 40 CFR63.1-15 apply. OR - Meet each site-specific operating limit in Table 23 of this subpart that applies to this unit. These operating limits apply during coke burn-off and catalyst rejuvenation. BP chose option 5 which includes the following: The daily average temperature of the gas entering or exiting the adsorption system must not exceed the limit established during the performance test (387.2 degrees, tested on May 15, 2013); and the weekly average chloride level on the sorbent entering the adsorption system must not exceed the design or manufacturer's recommended limit (1.35 weight percent for the ChlorsorbTM System); and the weekly average chloride level on the sorbent leaving the adsorption system must not exceed the design or manufacturer's recommended limit (1.8 weight percent for the ChlorsorbTM System). ET - If required, demonstrate compliance using 40 CFR 63.1575(b)(2) and (b)(4). CAM is not applicable.
P803	This EU has new emergency relief vent piping and other connections that may trigger the applicability of NSPS Subpart Ja.	N	Y	N	N	N	N	N	N	N	N	N	Basis: 40 CFR Part 60, subparts A and Ja In accordance with 40 CFR 60.100a(c)(1), the conditions as they apply to modified flares are applicable. (See EU's P003 and P004, Hydrocarbon Flares, for details.) CAM is not applicable..
P803	Reduce emissions of TOC (less methane and ethane) by 98 weight-percent, or to a TOC (less methane and ethane) concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen, whichever is less stringent.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis: 40 CFR Part 60, subparts A and NNN The permittee submitted a request to use an AMP to U.S. EPA which was approved 9/6/2013. The AMP allows BHP to comply monitoring requirements of 40 CFR 60 Subpart RRR, specifically 60.703(c)(1), (c)(1)(i), (c)(1)(ii), and (c)(2) as an alternative means of demonstrating compliance with 40 CFR 60 Subpart NNN 60.663(b)(2), (c)(1), (c)(2), and (c)(3). OR - The permittee shall comply with 60.662(a) for each vent stream on and after the date on which the initial performance test required by 60.8 and 60.664 is completed. ET - Compliance with this limitation is demonstrated by venting the emissions to a boiler or process heater with the primary fuel.

													CAM is not applicable.
T047, T139	BAT – no limit established	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-31-05(A)(3) – FR, Grp 2 tank, operate this emissions unit in accordance with good engineering practices. The requirements of this rule are less stringent than the requirements of 40 CFR 63, subpart CC for storage vessels. CAM is not applicable
T010, T011, T012, T013, T014, T045, T046, T047, T051, T078, T080, T081, T082, T086, T087, T088, T089, T092, T100, T107, T108, , T109, T110, T111, T113, T114, T115, T116, T136, T137, T138, T153, T154, T155, T156,	Requirements of OAC 3745-21-09(L)	21-09(L)	N	N	N	N	N	N	N	N	N	N	Basis – OAC rule 3745-21-09(L) The requirements of this rule are less stringent than the requirements of 40 CFR 63, subpart CC for storage vessels. ET – no VOC limit to test but has work practice standards for compliance. CAM is not applicable

T157, T161, T175, T176, T182, T183, T184, T190													
T010, T011, T012, T013, T014, T045, T046, T051	Requirements of 40 CFR 63 subpart CC for Grp 1 IFR Storage Vessel	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis 40 CFR Part 63, subparts A & CC - IFR Grp 1 Storage vessel This tank is classified as a Group 1 storage vessel for 40 CFR 63 subpart CC which requires compliance with 40 CFR 63 subpart G. -Table 6 of 40 CFR 63, subpart CC, provides the applicability provisions of the General Provisions in subpart A. In accordance with 40 CFR 63.119(a)(1) of Subpart G, the permittee shall reduce the emissions of HAPs to the atmosphere by operating and maintaining an internal floating roof in compliance with the applicable requirements in 63.119(b). OR – Work practice standards for covers/lids; rim vents and automatic bleeder vents. ET – no VOC limit to test CAM is not applicable
T047, T078, T080, T081, T082, T086, T087, T088, T089, T092, T100, T102, T107, T108, , T109, T110, T111, T113,	Requirements of 40 CFR 63 subpart CC for Grp 2 storage vessels	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis 40 CFR Part 63, subparts A & CC 40 CFR 63, Subpart CC, establishes no emission limitation or control measures for Group 2 storage vessels. Table 4 of subpart CC provides the applicability of the General Provisions of subpart A. M&R - Maintain a record of any data, assumptions, and procedures used to make the determination that this storage vessel is Group 2, e.g., that the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent. ET – no VOC limit to test but has work practice standards for compliance. CAM is not applicable

T114, T115, T116, T136, T137, T138, T139, T153, T154, T155, T156, T157, T161, T175, T176, T182, T183, T184, T190													
T047, T120	Requirements of 40 CFR 60 subpart Ka	N	Y	N	N	Y	N	N	N	N	N	N	Basis 40 CFR Part 60, subpart Ka As specified under 40 CFR 63.640(n)(7) of 40 CFR Part 63, subpart CC, a Group 2 storage vessel that is subject to the provisions of 40 CFR Part 60, Subpart Ka, but not to the control requirements of Ka, is required to only comply with the provisions of 40 CFR Part 63, Subpart CC. CAM is not applicable
T073, T166, T167	Requirements of OAC 3745-21-09(Z)	21-09(Z)	N	N	N	N	N	N	N	N	N	N	Basis – OAC rule 3745-21-09(Z) The requirements of this rule are less stringent than the requirements of 40 CFR 63, subpart CC for storage vessels. ET – no VOC limit to test but has work practice standards for compliance. CAM is not applicable
T073	Requirements of 40 CFR 63 subpart CC for Grp 1 Storage Vessel	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis 40 CFR Part 63, subparts A & CC - EFR Grp 1 Storage vessel This tank is classified as a Group 1 storage vessel for 40 CFR 63 subpart CC which requires compliance with 40 CFR 63 subpart G. NOTE: The T073 tank is subject to both 40 CFR 61 subpart FF tank requirements and 40 CFR 63 subpart CC storage vessel requirements because it has both wastewater and petroleum liquid stored at most times in this tank. BPH requested to comply with the NSPS Kb

													requirements and demonstrated this by comparing the requirements of the 2 rules. They proved that the requirements of subpart CC and FF were very similar, so approval was given to comply with one both regulations through NSPS Kb requirements for EFR tanks. ET – no VOC limit to test but has work practice standards for compliance. CAM is not applicable
T073, T166, T167	Requirements of 40 CFR 61 subpart FF for a storage vessel holding BWON regulated material at a petroleum refinery.	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis 40 CFR Part 61, subparts A & FF This tank is also classified as a storage vessel holding BWON regulated material at a petroleum refinery. In accordance with 40 CFR 61.351(a), as an alternative to the standards for tanks specified in 61.343, the permittee elects to comply with subpart FF by having an external floating roof meeting the requirements of 40 CFR 60.112b(a)(2) of 40 CFR 60, Subpart Kb although this tank is not subject to 40 CFR Part 60, subpart Kb. OR – comply with 40 CFR 61.61.351(a) of Subpart FF → 60.112(a)(2). ET – no VOC limit to test but has work practice standards for compliance. CAM is not applicable
T102	Requirements of OAC 3745-21-09(Z) - exempt	21-09(Z)	N	Y	N	N	N	N	N	N	N	N	Basis – OAC rule 3745-21-09(Z) ND - In accordance with OAC rule 3745-21-09(Z)(3)(c), this tank is exempt from the requirements of OAC 3745-21-09(Z)(1) and (Z)(2) since the tank contains a petroleum liquid which, as stored, has a maximum true vapor pressure less than 1.5 pounds per square inch absolute.
T120	BAT – no limit established	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-31-05(A)(3) – EFR Group 1 tank The requirements of this rule are less stringent than the requirements of 40 CFR 63, subpart CC for storage vessels. CAM is not applicable
T019, T016, T017, T018, T020, T021, T024, T025,	Requirements of OAC 3745-21-09(Z)	21-09(Z)	N	N	Y	Y	N	Y	N	N	N	N	Basis – OAC rule 3745-21-09(Z) The EFR tank must be equipped with a mechanical shoe primary seal and rim-mounted secondary seal. OR – Lists control measures required for the EFR tank. ET – no VOC limit to test but has work practice standards for compliance. CAM is not applicable

T026, T027, T028, T029, T030, T031, T032, T033, T034, T035, T036, T037, T038, T039, T040, T041, T044, T045, T059, T060, T084, T085, T090, T091, T096, T097, T120, T174, T187, T188													
T016, T017, T018, T020, T021, T024, T025, T026, T027, T028, T029, T030, T031,	Requirements of 40 CFR 63 subpart CC for Grp 1 Storage Vessel	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis 40 CFR Part 63, subparts A & CC - EFR Grp 1 Storage vessel These tanks are classified as a EFR Group 1 storage vessels for 40 CFR 63 subpart CC which requires compliance with 40 CFR 63 subpart G. -Table 6 of subpart CC provides applicability of the General Provisions of subpart A. OR – Work practice standards for covers/lids; rim vents and automatic bleeder vents. ET – no VOC limit to test CAM is not applicable

T032, T033, T034, T035, T036, T037, T038, T039, T040, T041, T044, T045, T059, T060, T085, T090, T091, T096, T097, T120													
T010, T011, T016, T017, T018, T035, T040, T041, T044, T085, T089, T120	Requirements of 40 CFR 61 subpart FF for drains subject to this regulation.	N	Y	N	N	N	N	N	N	N	N	N	Basis 40 CFR Part 61, subparts A & FF The 40 CFR Part 61, Subpart FF, drain(s) at this tank is/are subject to 40 CFR 61.346 – Standards: Individual Drain Systems and uses a water seal to comply. All OR, M, R, Rp and ET requirements are included in the terms for Emissions Unit P025 in this Title V Permit. ET – no VOC limit to test but has work practice standards for compliance. CAM is not applicable
T139	Requirements of OAC 3745-21-09(L)	21-09(L)	N	Y	N	N	N	N	N	N	N	N	Basis – OAC rule 3745-21-09(L) ND - In accordance with OAC rule 3745-21-09(L)(2), this emissions unit is exempt because it is defined as a fixed roof tank with a capacity less than forty thousand gallons. CAM is not applicable
T139	Requirements of NSPS 40 CFR 60, subpart Kb	N	Y	Y	N	N	N	N	N	N	N	N	Basis – 40 CFR 60, subpart Kb ND - In accordance with 40 CFR 60.110b(b), the design capacity of this storage vessel is greater than 75 m3 (19,814 gal) but less than 151 m3 (39,890 gal) and the maximum vapor pressure of the stored material is less than

													15.0 kPa (2.176 psi), this tank is exempt from 40 CFR Part 60, Subpart A and Subpart Kb. CAM is not applicable
T164	0.94 tons per year volatile organic compounds (VOC)	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3) – Fixed roof tank with a closed vent system, Group 1 storage vessel for wastewater streams. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Kb. This emission unit shall be equipped with a closed vent system controlled by the SRU #1 Acid Gas Flare (P051) meeting the requirements of 40 CFR 60.18. OR, M, R, Rp – compliance is demonstrated by the requirements from 40 CFR 63, subpart CC and 40 CFR 61, subpart FF. ET – compliance is demonstrated using the latest version of "Tanks" computer software, or equivalent AP-42 methodology issued by U.S. EPA for calculating tank emissions; records required by section c) of the terms and conditions for unit; and an estimated flare control efficiency of 98 percent. CAM is not applicable
T139, T170, T177	Requirements of OAC 3745-21-09(L)	21-09(L)	N	N	N	Y	N	Y	N	N	N	N	Basis – OAC rule 3745-21-09(L) c. The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid that, as stored, has a true vapor pressure greater than 1.52 pounds per square inch absolute, unless the tank is equipped with an internal floating roof (or equivalent control approved by the Director) in accordance with the requirements of paragraph (L)(1) of OAC rule 3745-21-09 prior to storing a petroleum liquid with a higher vapor pressure. NOTE: Per OAC rule 3745-21-09(L)(1)(a)(ii), the Director of Ohio EPA approved installation of a closed vent system vented to a flare as an alternative equivalent control device in PTI 04-708 issued 3/18/1992 for EU T139 and PTI 04-919 issued 7/3/1996 for T170. ET – This regulation doesn't require testing. CAM is not applicable
T164, T166, T167, T170	Requirements of 40 CFR 63 subpart CC for a storage tank storing Group 1 Wastewater streams and complies with the requirements of	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis 40 CFR Part 63, subparts A & CC - FR storage vessel with a closed vent system controlled by the Hydrocarbon Flare system (P003 & P004). This tank is classified as a storage vessel storing Group 1 Wastewater streams that complies with the requirements of 40 CFR 61 subpart FF.

	40 CFR 61, subpart FF												-Table 6 of subpart CC provides applicability of the General Provisions of subpart A. OR – Work practice standards for the closed vent system and control device (Flares, also see P003 & P004). ET – Compliance is demonstrated using the latest version of "Tanks" computer software, or equivalent AP-42 methodology issued by U.S. EPA for calculating tank emissions; records required by section c) of the terms and conditions for unit; and an estimated flare control efficiency of 98 percent.. CAM is not applicable
T164, T170	Requirements of 40 CFR 61, subpart FF	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis 40 CFR Part 61, subpart FF - FR storage vessel with a closed vent system controlled by the Hydrocarbon Flare system (P003 & P004). This tank is classified as a storage vessel storing Group 1 Wastewater streams (per 40 CFR 63, subpart CC) that complies with the requirements of 40 CFR 61 subpart FF. It is required to operate and maintain a fixed roof and closed vent system that routes all organic vapors vented from the tank to a control device or the permittee may choose to comply with the alternative requirements in 40 CFR 61.343(b). OR – Work practice standards for the closed vent system and control device (Flares, also see P003 & P004). ET – Compliance is demonstrated using the latest version of "Tanks" computer software, or equivalent AP-42 methodology issued by U.S. EPA for calculating tank emissions; records required by section c) of the terms and conditions for unit; and an estimated flare control efficiency of 98 percent. -Requirements for testing equipment for compliance with no detectable emissions (i.e., use Method 21, calibrate the detection instrument daily, how to monitor the equipment). CAM is not applicable
T164	Requirements of NSPS 40 CFR 60, Kb for closed vent and control systems.	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis – 40 CFR 60, subpart Kb. In accordance with 40 CFR 60.112b(a), the storage vessel shall be equipped with a closed vent and control system. ET – No limits are applicable for this emissions unit from NSPS Kb. CAM is not applicable.
T153, T154, T155,	Requirements of 40 CFR 60 subpart QQQ for drains subject to this	N	Y	N	N	N	N	N	N	N	N	N	Basis 40 CFR Part 60, subpart QQQ The tank drains are subject to the requirements of 40 CFR 60 Subpart QQQ, specifically, 40 CFR Part 60 60.692-2

T156, T157, T161, T164, T166, T167, T170	regulation.												Standards: Individual Drain Systems and uses a water seal to comply. These requirements are included under the emission unit specific requirements for P025 – The Wastewater Treatment System. ET – no VOC limit to test but has work practice standards for compliance. CAM is not applicable
T170	1.42 tons per year volatile organic compounds (VOC)	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3) – Fixed roof tank with a closed vent system, Group 1 storage vessel for wastewater streams pursuant to 40 CFR 63.641 of the Refinery MACT. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart K. This emission unit shall be equipped with a closed vent system controlled by the SRU #1 Acid Gas Flare (P051) meeting the requirements of 40 CFR 60.18. OR, M, R, Rp – compliance is demonstrated by the requirements from 40 CFR 63, subpart CC and 40 CFR 61, subpart FF. ET – compliance is demonstrated using the latest version of "Tanks" computer software, or equivalent AP-42 methodology issued by U.S. EPA for calculating tank emissions; records required by section c) of the terms and conditions for unit; and an estimated flare control efficiency of 98 percent. CAM is not applicable
	4.9 tons per year sulfur dioxide (SO_2)	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-31-05(A)(3) – Fixed roof tank with a closed vent system, Group 1 storage vessel for wastewater streams pursuant to 40 CFR 63.641 of the Refinery MACT. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart K. This emission unit shall be equipped with a closed vent system controlled by the SRU #1 Acid Gas Flare (P051) meeting the requirements of 40 CFR 60.18. The SO_2 emission calculation was based on the assumption that VOC stream from the tank contains 5% H_2S by volume and 100% H_2S converts to SO_2 in the flare. ET – Divide the uncontrolled VOC emissions in tons per year by the molecular weight of VOC vapor (46.6 tons/ton-mole) and multiply by the hydrogen sulfide concentration of 5 mole percent. Multiply the previous product by the molecular weight of sulfur dioxide (64) and by the ratio of moles of sulfur dioxide to moles of hydrogen sulfide (1/1). CAM is not applicable

T170	Requirements of 40 CFR 60 subpart K	N	Y	N	N	N	N	N	N	N	N	N	Basis 40 CFR Part 60, subpart K In accordance with 40 CFR 60.112(a), the storage vessel with a true vapor pressure greater than 11.1 psia shall be equipped with a vapor recovery system or its equivalent. The requirements of this rule are less stringent than the requirements established by 40 CFR Part 63, subpart CC and 40 CFR Part 61, subpart FF. CAM is not applicable
T177	9.04 tons per year volatile organic compounds (VOC)	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3) – Internal Floating Roof tank with a primary mechanical shoe seal. It is a Group 1 storage vessel for wastewater streams pursuant to 40 CFR 63.641 of the Refinery MACT. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Ka. OR, M, R, Rp – compliance is demonstrated by the requirements from 40 CFR 63, subpart CC and 40 CFR 61, subpart FF. ET – compliance is demonstrated using the latest version of "Tanks" computer software, or equivalent AP-42 methodology issued by U.S. EPA for calculating tank emissions; records required by section c) of the terms and conditions for unit CAM is not applicable
T177	Requirements of 40 CFR 63 subpart CC for a storage tank storing Group 1 Wastewater streams and complies with the requirements of 40 CFR 61, subpart FF	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis 40 CFR Part 63, subparts A & CC - IFR storage vessel This tank is classified as a storage vessel storing Group 1 Wastewater streams that complies with the requirements of 40 CFR 61 subpart FF. OR – Work practice standards for the internal floating roof storage vessels. ET – Compliance is demonstrated using the latest version of "Tanks" computer software, or equivalent AP-42 methodology issued by U.S. EPA for calculating tank emissions; records required by section c) of the terms and conditions for unit. CAM is not applicable
T177	Requirements of 40 CFR 61, subpart FF	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis 40 CFR Part 61, subpart FF - IFR storage vessel. This tank is classified as a storage vessel storing Group 1 Wastewater streams (per 40 CFR 63, subpart CC) that complies with the requirements of 40 CFR 61 subpart FF. It is required to operate and maintain a fixed roof and internal floating roof. OR – Work practice standards for the internal floating roof

													which complies with the requirements of NSPS Kb. ET – Compliance is demonstrated using the latest version of "Tanks" computer software, or equivalent AP-42 methodology issued by U.S. EPA for calculating tank emissions; records required by section c) of the terms and conditions for unit. CAM is not applicable
T177	Requirements of 40 CFR 60 subpart Ka	N	Y	N	N	N	N	N	N	N	N	N	Basis 40 CFR Part 60, subpart Ka The requirements of 40 CFR 60, subpart Ka are less stringent than the requirements established by 40 CFR part 63, subpart CC and 40 CFR Part 61, subpart FF. CAM is not applicable
T175, T176	T175: VOC shall not exceed 17 tons per year. T176: VOC shall not exceed 17 tons per year T190: VOC shall not exceed 9.99 tons per year	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3) – FR, Grp 2 tank, operate this emissions unit in accordance with good engineering practices. Incorporates the requirements of PTI 04-01044 for T175, & T176 and PTI P0107114 for T190. M, R, Rp – compliance with the requirements of 40 CFR 63, subpart CC for FR Group 2 storage vessels. ET - Compliance shall be determined by estimating emissions using the most recent version of EPA's Tanks computer software or the most recent emission factors contained in AP-42 Chapter 7, using the actual annual throughput and annual average vapor pressure. CAM is not applicable
T190	T190: VOC shall not exceed 9.99 tons per year	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3) as effective 11/30/2001 – FR, Grp 2 tank, operate this emissions unit in accordance with good engineering practices. Incorporates the requirements of PTI P0107114 for T190. M, R, Rp – compliance with the requirements of 40 CFR 63, subpart CC for FR Group 2 storage vessels. ET - Compliance shall be determined by estimating emissions using the most recent version of EPA's Tanks computer software or the most recent emission factors contained in AP-42 Chapter 7, using the actual annual throughput and annual average vapor pressure. CAM is not applicable
T175, T176	Requirements of NSPS 40 CFR 60, subpart Kb	N	Y	Y	N	N	N	N	N	N	N	N	Basis: NSPS 40 CFR 60, subpart Kb ND - Exempt per 60.110b(b), This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure

													less than 3.5 kilopascals (kPa).
T190	BAT effective 12/1/2006 - No emission limit established	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3)(a)(ii) as effective 12/01/2006 – FR, Grp 2 tank, operate this emissions unit in accordance with good engineering practices. Incorporates the requirements of PTI P0107114 for T190. M, R, Rp – compliance with the requirements of 40 CFR 63, subpart CC for FR Group 2 storage vessels.
T113, T1`14, T115, T116	For T113: 21.21 tons per year volatile organic compounds (VOC) For T114: 26.22 tons per year VOC For T115: 38.93 tons per year VOC For T116: 36.54 tons per year VOC	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3) – FR, Grp 2 tank, BAT consists of the use of a submerged fill in the storage tanks. The submerged fill pipe(s) are to be installed within six (6) inches of the bottom of the storage tank. Incorporates the requirements of PTI 04-01066. M, R, Rp – compliance with the requirements of 40 CFR 63, subpart CC for FR Group 2 storage vessels. ET - Compliance shall be determined by estimating emissions using the most recent version of EPA's Tanks computer software or the most recent emission factors contained in AP-42 Chapter 7, using the actual annual throughput and annual average vapor pressure. CAM is not applicable
T045, T046, T113, T114, T115, T116	Requirements of 40 CFR 60 subpart K	N	Y	N	N	N	N	N	N	N	N	N	Basis 40 CFR Part 60, subpart K As specified under 40 CFR 63.640(n)(7) of 40 CFR Part 63, subpart CC, a Group 2 storage vessel that is subject to the provisions of 40 CFR Part 60, Subpart K, but not to the control requirements of K, is required to only comply with the provisions of 40 CFR Part 63, Subpart CC. ET – No emission limit from NSPS subpart K CAM is not applicable
T3 Group T154, T155, T156, T157, T161	For T153: 7.49 tons per year volatile organic compounds (VOC) For T154: 7.49 tons per year VOC For T155: 6.28 tons per year VOC For T156: 7.49 tons per year VOC For T157: 5.63 tons per year VOC For T161: 10.13 tons per year VOC	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3) – FR, Grp 2 tank, operate this emissions unit in accordance with good engineering practices. Incorporates the requirements of PTI P0110087 for T153, T154, T156 & T157 and PTI P0107416 for T155 & T161. M, R, Rp – compliance with the requirements of 40 CFR 63, subpart CC for FR Group 2 storage vessels. ET - Compliance shall be determined by estimating emissions using the most recent version of EPA's Tanks computer software or the most recent emission factors contained in AP-42 Chapter 7, using the actual annual throughput and annual average vapor pressure. CAM is not applicable

T3 Group T154, T155, T156, T157, T161	Requirements of 40 CFR 60 subpart Kb	N	Y	Y	N	N	N	N	N	N	N	N	Basis 40 CFR Part 60, subpart Kb ND - Exempt per 60.110b(b), This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m3 storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa). ET – No emission limit from NSPS subpart Kb CAM is not applicable
T045, T046	BAT – has no emission limitation	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-31-05(A)(3) – IFR, Grp 1 tank, operate this emissions unit in accordance with good engineering practices. Incorporates the requirements of PTI 04-029, issued in 1/16/1975 ET – no emission limit to test CAM is not applicable
T019, T174, T187, T188	T019: 14.29 TPY of VOC T174; 19 TPY of VOC; T187 10.73 TPY of VOC; T188: 10.73 TPY of VOC.	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-31-05(A)(3) – EFR, Grp 1 storage vessel, operate this emissions unit in accordance with good engineering practices. Incorporates the requirements of PTI 04-01492 for T019; PTI 04-1024 for T174' PTI 04-01329 for T187 and T188. M, R, Rp – NO specific BAT requirements from the PTI's for the emission limits, but compliance, in general, is through the requirements of 40 CFR 63, subpart CC for IFR Group 1 storage vessels. ET - Compliance shall be determined by estimating emissions using the most recent version of EPA's Tanks computer software or the most recent emission factors contained in AP-42 Chapter 7, using the actual annual throughput and annual average vapor pressure. CAM is not applicable
T084	6.95 tons per year of VOC	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3) as effective 11/30/2001 – IFR, Grp 1 tank Incorporates the requirements of PTI P0106190 for T084. M, R, Rp – NO specific BAT requirements from the PTI for the emission limit, but compliance, in general, is through the requirements of 40 CFR 63, subpart CC for IFR Group 1 storage vessels. ET - Compliance shall be determined by estimating emissions using the most recent version of EPA's Tanks computer software or the most recent emission factors contained in AP-42 Chapter 7, using the actual annual throughput and annual average vapor pressure. CAM is not applicable

T084	BAT effective 12/1/2006 - No emission limit established	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-31-05(A)(3)(a)(ii) as effective 12/01/2006 – IFR, Grp 1 tank Incorporates the requirements of PTI P0106190 for T084. -This paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan. The Best Available Technology requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the uncontrolled potential to emit for VOC is less than 10 tons per year. M, R, Rp – NO specific BAT requirements from the PTI and no emission limit, but compliance, in general, is through the requirements of 40 CFR 63, subpart CC for IFR Group 1 storage vessels. ET – once the above rule takes effect, no VOC emission limit applies to this source.
T6 Group T019, T084, T174, T187, T188	Requirements of 40 CFR 63 subpart CC for EFR Grp 1 Storage Vessel complying with 40 CFR 60 subpart Kb	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis 40 CFR Part 63, subparts A & CC - EFR Grp 1 Storage vessel This tank is classified as an EFR Group 1 storage vessel for 40 CFR 63 subpart CC which requires compliance with 40 40 CFR 60, subpart Kb. In accordance with 63.640(n)(1), the permittee of an existing Group 1 storage vessel subject that is also subject to the provisions of 40 CFR Part 60, Subpart Kb, is required to comply only with the requirements of 40 CFR Subpart Kb, except as provided in 63.640(n)(8). OR – Work practice standards for seals; rim vents and automatic bleeder vents. ET – no VOC limit to test CAM is not applicable
T6 Group T019, T084, T166, T167, T174, T187, T188	Requirements of NSPS 40 CFR 60, Kb	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis – 40 CFR 60, subpart Kb. In accordance with 60.112b(a), the permittee shall equip the storage vessel with an external floating roof meeting the specifications in 60.112b(a)(2). OR - Work practice standards for seals; rim vents and automatic bleeder vents. ET – No limits are applicable for this emissions unit from NSPS Kb. CAM is not applicable.
T8 Group T166,	T166: 3.9 tons per year VOC; T167: 3.9 tons per year	N	Y	N	N	N	N	N	N	N	N	N	Basis: OAC rule 3745-31-05(A)(3) – EFR, Grp 1 storage vessel, operate this emissions unit in accordance with good engineering practices.

T167	VOC												Incorporates the requirements of PTI 04-01267 for T166 & T167. M, R, Rp – NO specific BAT requirements from the PTI's for the emission limits, but compliance, in general, is through the requirements of 40 CFR 63, subpart CC for tanks storing Group 1 wastewater streams → 40 CFR 61, subpart FF → 40 CFR 60, subpart Kb. ET - Compliance shall be determined by estimating emissions using the most recent version of EPA's Tanks computer software or the most recent emission factors contained in AP-42 Chapter 7, using the actual annual throughput and annual average vapor pressure. CAM is not applicable
T9 Group T136, T137, T138	BAT is compliance with OAC 3745-21-09(L)	N	Y	N	N	N	N	Y	Y	N	N	N	Basis: OAC rule 3745-31-05(A)(3) – FR, Grp 2 storage vessel Incorporates the requirements of PTI 04-0379 for T136, T137 & T138 The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(L). Consistent with U.S. EPA streamlining policy, the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(L) by demonstrating compliance with the storage tank standards in 40 CFR Part 63, Subpart CC. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the requirements of OAC rule 3745-21-09(L) M, R, Rp –Compliance is through the requirements of 40 CFR 63, subpart CC for tanks storing Group 2 storage vessels. ET –no emission limit to test. CAM is not applicable.
T9 Group T136, T137, T138	Requirements of 40 CFR 63 subpart CC for EFR Grp 2 Storage Vessel complying with 40 CFR 60 subpart Kb	N	Y	N	N	N	N	Y	Y	N	N	N	Basis 40 CFR Part 63, subparts A & CC - FR Grp 2 Storage vessel per 63.641. -40 CFR 63, Subpart CC, establishes no emission limitation or control measures for Group 2 storage vessels -As specified under 40 CFR 63.640(n)(1), a Group 2 storage vessel that is part of an existing source and is also subject to the provisions of 40 CFR Part 60, subpart Kb, is required to comply only with the requirements of 40 CFR Part 60, subpart Kb. ET – no VOC limit to test CAM is not applicable

T9 Group T136, T137, T138	Requirements of NSPS 40 CFR 60, subpart Kb	N	Y	N	N	N	N	R	N	N	N	N	Basis: NSPS 40 CFR 60, subpart Kb -In accordance with 40 CFR 60.116b(d), this emissions unit is a fixed roof storage vessel which contains a petroleum liquid having a true vapor pressure equal to or greater than 3.5 kPa (0.5 psia) but not greater than 5.2 kPa (0.75 psia) subject to the emissions limitations/control measures specified in this section -The permittee is exempt from the control requirements of 40 CFR Part 60, subpart Kb, but shall keep the records required in 40 CFR 60.116b(a)-(d). ET – no emission limit to test CAM is not applicable.

DRAFT

Division of Air Pollution Control
Title V Permit
for
BP-Husky Refining LLC

Facility ID:	0448020007
Permit Number:	P0104782
Permit Type:	Renewal
Issued:	1/5/2016
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

Ohio Environmental Protection Agency

Division of Air Pollution Control
Title V Permit
for
BP-Husky Refining LLC

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Authorization

Facility ID:	0448020007
Facility Description:	Toledo Refinery
Application Number(s):	A0039191, A0054069, A0047967, A0047934, A0051594, A0044478, A0037896, A0044954, A0052251, A0049810, A0051117, A0039176, A0052135, A0043939, A0035671, A0051109, A0054407, A0044086, A0044178
Permit Number:	P0104782
Permit Description:	Title V renewal permit for a petroleum refinery.
Permit Type:	Renewal
Issue Date:	1/5/2016
Effective Date:	To be entered upon final issuance
Expiration Date:	To be entered upon final issuance
Superseded Permit Number:	P0088526

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

BP-Husky Refining LLC
4001 Cedar Point Road
P.O. Box 696
Oregon, OH 43697

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Toledo Department of Environmental Services
348 South Erie Street
Toledo, OH 43604
(419)936-3015

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Toledo Department of Environmental Services. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months and no later than 6 months prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions

(2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions

(3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting For State-Only Requirements

(4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(5) Standard Term and Condition A. 30.

(Authority for term: ORC 3704.036(A))

2. Monitoring and Related Record Keeping and Reporting Requirements

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordingsfor continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c) The permittee shall submit required reports in the following manner:

(1) All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any submittedscheduled maintenancerequests, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

(2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions of this Title V permit), all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the

probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be submitted promptly to the Toledo Department of Environmental Services. Except as provided below, the written reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this Standard Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this Standard Term and Condition.

See A.29 below if no deviations occurred during the quarter.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

(3) All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted to the Toledo Department of Environmental Services by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally

enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with Standard Term and Condition A.2.c)(2) above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))

(4) Each written report shall be signed by a Responsible Official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete." Signature by the Responsible Official may be represented by entry of the personal identification number (PIN) by the Responsible Official as part of the electronic submission process or by the scanned attestation document signed by the Responsible Official that is attached to the electronically submitted written report.

(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

(5) Consistent with A.2.c.1. above, reports of any required monitoring and/or record keeping information required to be submitted to Ohio EPA shall be submitted to Toledo Department of Environmental Services unless otherwise specified.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. Reporting of Any Exceedence of a Federally Enforceable Emission Limitation or Control Requirement Resulting From Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

4. Risk Management Plans

If applicable, the permittee shall develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. ("Act"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or

b) as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

5. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

(Authority for term: OAC rule 3745-77-07(A)(5))

6. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

(Authority for term: OAC rule 3745-77-07(A)(6))

7. General Requirements

a) Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.

b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permitexcept as provided pursuant to A.16 below.

c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.11 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d) This permit does not convey any property rights of any sort, or any exclusive privilege.

e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:

(1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

(2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or

(3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))

8. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.

(Authority for term: OAC rule 3745-77-07(A)(8))

9. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

(Authority for term: OAC rule 3745-77-07(A)(9))

10. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these standard terms and conditions shall apply to all operating scenarios authorized in this permit.

(Authority for term: OAC rule 3745-77-07(A)(10))

11. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.

c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.

d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

12. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

(Authority for term: OAC rule 3745-77-07(B))

13. Compliance Requirements

a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a Responsible Official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

(1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c) The permittee shall submit progress reports to the Toledo Department of Environmental Services concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the Toledo Department of Environmental Services) and the Administrator of the U.S. EPA in the following manner and with the following content:

(1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.

(2) Compliance certifications shall include the following:

a. Identification of each term or condition that is the basis of the certification. The identification may include a statement by the Responsible Official that every term

and condition that is federally enforceable has been reviewed, and such terms and conditions with which there has been continuous compliance throughout the year are not separately identified.

b. The permittee's current compliance status.

c. Whether compliance was continuous or intermittentconsistent with A.13.d.2.a above.

d. The method(s) used for determining the compliance status of the source currently and over the required reporting period consistent with A.13.d.2.a above.

e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.

(3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

14. Permit Shield

a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

b) This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

15. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the Toledo Department of Environmental Services with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the Toledo Department of Environmental Services as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

16. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

(Authority for term: OAC rule 3745-77-07(G))

17. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.

b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).

d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit-to-install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(Authority for term: OAC rule 3745-77-07(I))

18. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Federal Register 8314, Feb. 24, 1997), in the context of any future proceeding.

(This term is provided for informational purposes only.)

19. Insignificant Activities or Emissions Levels

Each IEU that is subject to one or more applicable requirements shall comply with those applicable requirements.

(Authority for term: OAC rule 3745-77-07(A)(1))

20. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

(Authority for term: OAC rule 3745-77-07(A)(1))

21. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

(Authority for term: OAC rule 3745-77-07(A)(1))

22. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the Responsible Official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the Responsible Official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

Unless otherwise exempted, noemissions unit identified in this permit that has beencertified by the Responsible Official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

(Authority for term: OAC rule 3745-77-01)

23. Title VI Provisions

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a) Persons operating appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.

b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.

c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(Authority for term: OAC rule 3745-77-01(H)(11)))

24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or record keeping information shall be submitted to theToledo Department of Environmental Services.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Toledo Department of Environmental Services. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

25. Records Retention Requirements Under State Law Only

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

26. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine

whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

(Authority for term: OAC rule 3745-77-07(C))

27. Scheduled Maintenance/Malfunction Reporting For State-Only Requirements

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the Toledo Department of Environmental Services in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

28. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Toledo Department of Environmental Services must be notified in writing of any transfer of this permit.

(Authority for term: OAC rule 3745-77-01(C))

29. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or

b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potential to emit; or

c) where the company's Responsible Official has certified that an emissions unit has been permanently shut down.

30. Submitting Documents Required by this Permit

All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event ofan alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the Toledo Department of Environmental Services, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the Responsible Official may be represented as provided through procedures established in Air Services.

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

   a) None.

2. FACILITY-WIDE LEAK DETECTION AND REPAIR PROGRAMS:

   a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

      (1) None.

   b) Applicable Emissions Limitations and/or Control Requirements

      (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-21-09(T) [This regulation applies to petroleum refinery equipment leaks of volatile organic compounds from pump seals, pipeline valves and pressure relief valves in gas service, process drains, compressor seals and pressure relief devices.]	See b)(2)a. and d)(1)
b.	OAC rule 3745-21-09(DD)(10)	The flare requirements are included and detailed in the terms and conditions for the East and West Hydrocarbon flares (P003 and P004)
c.	40 CFR Part 63, Subpart CC (40 CFR 63.640 – 656) [In accordance with 40 CFR 63.640 this emissions unit includes equipment leaks from petroleum refining process units that are located at an existing major source of HAP subject to the emission limitations and control measures specified in this section.]	See b)(2)b., b)(2)c. and b)(2)f.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	40 CFR Part 60, Subpart GGG (40 CFR 60.590 – 593) [In accordance with 40 CFR 60.590(a), this facility has a compressor or equipment within a process unit that is an affected facility in a petroleum refinery as defined in 60.591 subject to Subpart GGG of this part.	In accordance with 60.592(e), the permittee shall comply with the applicable provisions of 40 CFR 60.486 and 60.487 See b)(2)d., b)(2)e., b)(2)f. and d)(4)
e.	40 CFR Part 60, Subpart GGGa (40 CFR 60.590a – 593a) [In accordance with 40 CFR 60.590a(a), this facility has a compressor or equipment within a process unit that is an affected facility in a petroleum refinery as defined in 60.590a(e) and 60.591a subject to Subpart GGGa of this part.]	See b)(2)d., b)(2)e. and b)(2)f.

(2) Additional Terms and Conditions

a. In accordance with OAC rule 3745-21-09(T)(4), the Director has accepted an alternative monitoring, recordkeeping and reporting program for that required by 3745-21-09(T)(1) since the permittee has demonstrated to the satisfaction of the director that the alternative program is at least effective in identifying and reporting leaks from petroleum refinery equipment as the program outlined in 3745-21-09(T)(1). BP-Husky chose to comply with the requirements of 40 CFR Part 63, Subpart CC, 40 CFR 60, Subpart GGG or 40 CFR Part 60 or 40 CFR 60, Subpart GGGa as they apply to all the individual equipment components mentioned in this rule. See term B.2 of Section B. of the permit for the applicable leak detection and repair requirements.

b. [63.648(a)] - Equipment Leaks
In accordance with 40 CFR Part 63, Subpart CC, the permittee shall comply with the applicable provisions of 40 CFR Part 60, Subpart VV and 40 CFR 63.648(b) except as provided in (a)(1), and (c) through (i) of 40 CFR Part 63.648.

i. [63.648(a)(1)]
For purposes of compliance with 40 CFR Part 63.648, the provisions of 40 CFR Part 60, Subpart VV apply only to equipment in organic HAP service, as defined in 40 CFR Part 63.641, Subpart CC:

"In organic hazardous air pollutant service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP's as determined according to the provisions of 40 CFR 63.180(d) of Subpart H of this part and table 1 of this Subpart. The provisions of 63.180(d) of Subpart H also specify how to determine that a piece of equipment is not in organic HAP service."

ii. [63.648(a)(2)]
Calculation of percentage leaking equipment components for Subpart VV of 40 CFR Part 60 may be done on a process unit basis or source-wide basis. All subsequent calculations shall be on the same basis unless a permit change is made.

c. [63.640(p)(1)] - Equipment Leaks
After the compliance dates (existing sources – Aug. 18, 1998; new sources – upon startup), equipment leaks that are also subject to the provisions of 40 CFR parts 60 and 61 standards promulgated before September 4, 2007, are required to comply only with the provisions specified in 40 CFR 63, Subpart CC.

d. [40 CFR 63.640(p)(2)]
Equipment leaks that are also subject to the provisions of 40 CFR Part 60, Subpart GGGa, are required to comply only with the provisions specified in 40 CFR Part 60, Subpart GGGa.

e. [40 CFR 60.590(c) and 60.590a(c) of Subparts GGG and GGGa]
Addition or replacement of equipment (defined in 60.591 or 60.591a) for the purpose of process improvement which is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart, 40 CFR 60, Subpart GGG or 40 CFR 60, Subpart GGGa.

f. Each individual emission unit in Section C. of this permit includes the specific leak detection and repair (LDAR) applicable regulations for that emissions unit. The LDAR regulation requirements and applicability are also stated in "Table B.2-1: Unit LDAR Regulation Applicability" under the Miscellaneous section in g)(1).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart CC, including the following sections, briefly summarized:

63.648 – Equipment Leak Standards		
a.	63.648(c)	In lieu of complying with the existing source provisions in 63.648(a), the permittee may elect to comply with the requirements of 63.161 through 63.169, 63.171, 63.172, 63.175, 63.176, 63.177, 63.179, and 63.180 of 40 CFR 63 subpart H, except as provided in 63.648(c)(1) through (c)(10) and (e) through (i). [NOTE: At the time of the issuance of this permit, BPH complies with 40 CFR 60 Subpart VV as required in 63.648(a).]
b.	63.648(d)	New source requirements.
c.	63.648(e), (f), (g) and (i)	Exemptions for reciprocating pumps and agitators in heavy liquid service; pumps in light liquid service; compressors in hydrogen service and reciprocating compressors
d.	63.648(h)	Records must be maintained for a minimum of 5 years.
63.649 - Alternative means of emission limitation: Connectors in gas/vapor service and light liquid service		
e.	63.649(a)	If the permittee elects to monitor valves according to the provisions of 63.648(c)(2)(ii) (40 CFR 63 Subpart H option), the permittee shall implement one of the connector monitoring programs specified in 63.649(b), (c), or (d). [NOTE: At the time of issuance of this permit, BPH complies with the 63.648(a) and these conditions do not apply.]
63.654 – Heat Exchange Systems		
f.	63.654(a)	For heat exchange systems that meet the criteria in 63.640(c)(8), comply with the requirements in 63.654(c) through (g).
g.	63.654(b)	Exemptions for heat exchangers that operate with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side; or employ an intervening cooling fluid containing less than 5 percent by weight of total organic HAP
h.	63.654(c)	Heat exchange system monitoring requirements
i.	63.654(d)	Repair leaks no later than 45 days after identifying the leak.

j.	63.654(e)	Optional additional monitoring when a leak in a cooling tower return line is detected.
k.	63.654(f)	Conditions when a leaking heat exchanger repair may be delayed.
l.	63.654(g)	Heat exchanger delay of repair recordkeeping requirements
63.655 – Recordkeeping Requirements		
m.	63.655(d)	The permittee subject to the equipment leaks standards in 63.648 shall comply with the recordkeeping and reporting provisions in 63.655(d)(1) through (d)(6).
n.	63.655(i)(4)	The permittee of a heat exchange system subject to this subpart shall comply with the recordkeeping requirements in 63.655(i)(4)(i) through (v) and retain these records for 5 years.

(2) [40 CFR 60, Subpart VV] NSPS FOR EQUIPMENT LEAKS OF VOC IN THE SYNTHETIC ORGANIC CHEMICALS MANUFACTURING INDUSTRY

NOTE: BP-Husky is not subject to this regulation but it is referenced by 40 CFR 63, Subpart CC and 40 CFR 60, Subpart GGG.

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 60, Subpart VV, including the following sections briefly summarized:

a.	60.482-1(b)	*Standards-General*: Compliance is determined by review of records, reports, review of performance test results and inspections.
b.	60.482-1(c)	Equivalence of means of emissions limitation.
c.	60.482-1(d)	Equipment in vacuum service exemption
d.	60.482-1(e)	Exemption for equipment in VOC service. (<300 hrs/yr). NOTE: Per 63.648(a)(1), this requirement applies to equipment in HAP service for purposes regarding 40 CFR 63, subpart CC.
e.	60.482-1(f)	Alternate frequency for batch process units.
f.	60.482-1(g)	Assignments for storage vessels shared with multiple units.
g.	60.482-2(a), (b) and (c)	*Standards-Pumps in Light Liquid Service*: Visually check pumps weekly for indications of leaks. Monitor pumps monthly according to Method 21 for leaks of 10,000 ppm or greater. First attempt at repair shall be made within 5 days

		and repaired no later than 15 days. If indications of liquids dripping from pump, monitor according to Method 21 within 5 days or designate as a leak. Defines first attempt at repair.
h.	60.482-2(d) through (h)	Exemptions for certain types of pumps meeting specific requirements.
i.	60.482-3(a) through (g)	*Standards-Compressors*: Each compressor shall be equipped with a seal system that includes a barrier fluid system. Each barrier fluid system (see 60.482-3(b)&(c)) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid or both, checked daily or equipped with an audible alarm. Determine criterion that indicates failure of the seal system, barrier fluid, or both. If sensor indicates failure of the seal system, barrier system or both, a leak is detected. First attempt at repair shall be made within 5 days and repaired no later than 15 days.
j.	60.482-3(h), (i) and (j)	*Standards-Compressors*: Exemptions for certain types of compressors meeting specific requirements.
k.	60.482-4(a) and (b)	*Standards-Pressure Relief Devices in Gas/Vapor Service*: They shall be operated with no detectable emissions (<500 ppm above background). Within 5 days after a pressure release, the device must be remonitored to confirm conditions of no detectable emissions. First attempt at repair shall be made within 5 days and repaired no later than 15 days.
l.	60.482-4(c) and (d)	*Standards-Pressure Relief Devices in Gas/Vapor Service*: Exemptions for certain types of pressure relief devices meeting specific requirements.
m.	60.482-5(a) through (c)	*Standards-Sampling Connection Systems*: each sampling connection system shall be equipped with a closed- purged, closed-loop or closed-vent system and shall comply with the requirements of 60.482-5(b). In situ sampling systems and sampling systems without purges are exempt from the above.
n.	60.482-6(a) through (e)	*Standards-Open-Ended Valves or Lines*
o.	60.482-7(a) through (h)	*Standards-Valves in Gas/Vapor Service in Light Liquid Service*: Valves are monitored monthly to detect leaks (>10,000 ppm). First attempt at repair shall be made within 5 days and repaired no later than 15 days. If a leak is detected, the valve is monitored monthly until a leak is not detected for 2 successive months. See 60.482-7(f)-(h) for

		information regarding valves with no detectable emissions, unsafe-to-monitor or difficult-to-monitor valves.
p.	60.482-8(a) through (d)	*Standards-Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Connectors*: Evidence of a leak is found by visual, audible, olfactory or other detection methods. The equipment shall be monitored within 5 days using Method 21 for leaks (>10,000 ppm). First attempt at repair shall be made within 5 days and repaired no later than 15 days.
q.	60.482-9(a) through (f)	*Standards-Delay of Repair*: Delay of repair of equipment with leaks is allowed if repair within 15 days is infeasible without a process shutdown. Requirements for delay of repair of equipment not in VOC service; valves; pumps and beyond a process unit shutdown.
r.	60.482-10(a) through (h) and (m)	*Standards-Closed Vent Systems and Control Devices*: Vapor recovery systems shall have a VOC recovery efficiency of 95% or greater, or to an exit concentration of 20 ppmv; enclosed combustion devices shall have an efficiency of 95% or greater, or to an exit concentration of 20 ppmv, dry basis, corrected to 3% oxygen or provide a minimum residence time of 0.75 seconds at minimum temperature of 816ºC. Flares will comply with requirements of 60.18. Leaks (>500 ppmv above background) shall have a first attempt at repair made within 5 days and repaired no later than 15 days. Requirements for leaks, annual inspections, delay of repair.
s.	60.482-10(i) through (l)	*Standards-Closed Vent Systems and Control Devices*: Exemptions for certain types of vapor collection systems meeting specific requirements and the recordkeeping requirements for exempt closed vent systems.
t.	60.483-1 and 60.483-2	*Alternative Standards for Valves*: Allowable Percentage of Valves Leaking and for Valves-Skip Period Leak Detection and Repair
u.	60.486(a)	*Recordkeeping Requirements:* Combined records for affected facilities.
v.	60.486(b) and (c)	Identification and log for leaks from pumps, compressors, valves and connectors.
w.	60.486(d)	Records of design requirements for closed vent systems and control devices.
x.	60.486(e)	Log for equipment subject to 60.482-1 through 60.482-10.

y.	60.486(f)	Records for pumps and valves that are unsafe-to-monitor and valves that are difficult-to-monitor.
z.	60.486(g)	Records for valve skip period leak detection and repair.
aa.	60.486(h)	Log for pumps with dual mechanical seal systems and for compressor seal systems.
bb.	60.486(j)	Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

(3) [40 CFR 60, Subpart GGG] EQUIPMENT LEAKS OF VOC IN PETROLEUM REFINERIES for WHICH CONSTRUCTION, RECONSTRUCTION or MODIFICATION COMMENCED AFTER JANUARY 4, 1983, and on or BEFORE NOVEMBER 7, 2006

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 60, Subpart GGG, including the following sections briefly summarized:

a.	60.592(a)	*Standards*: Comply with the requirements of 40 CFR 60.482-1 to 60.482-10 of Subpart VV.
b.	60.592(b)	Alternative Requirements - the permittee may elect to comply with the requirements of 40 CFR 60.483-1 and 60.483-2.
c.	60.592(c)	Requirements if the permittee wants to apply for any means of emission limitation that is equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart. In doing so, the permittee shall comply with 60.484.
d.	60.592(d)	Comply with the test method and procedure provisions of 60.485 except as provided in 60.593.
e.	60.592(e)	Comply with the recordkeeping provisions of 40 CFR 60.486.
f.	60.593(a)	*Exemptions*: The permittee may comply with the following exceptions to the provisions of subpart VV of this part.
g.	63.593(b)	Exemptions for compressors demonstrated to be “in hydrogen service”.
h.	60.593(c)	Exemptions are listed for existing reciprocating compressors provided the permittee demonstrates that recasting the distance piece or replacing the compressor

		are the only options available to bring the compressor into compliance.
i.	60.539(d)	The permittee may use the following provision in addition to 60.485(e): Equipment is in light liquid service if the percent evaporated is greater than 10 percent at 150 °C as determined by ASTM Method D86–78, 82, 90, 95, or 96 (incorporated by reference as specified in 60.17).
j.	60.593(f)	Open-ended valves or lines containing asphalt as defined in 60.591 are exempt from the requirements of 60.482-6(a) through (c).

(4) [40 CFR 60, Subpart GGGa] EQUIPMENT LEAKS OF VOC IN PETROLEUM REFINERIES for WHICH CONSTRUCTION, RECONSTRUCTION or MODIFICATION COMMENCED AFTER NOVEMBER 7, 2006

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 60, Subpart GGGa, including the following sections briefly summarized:

a.	60.592a(a)	*Standards*: Comply with the requirements of 40 CFR 60.482-1a to 60.482-10a of Subpart VVa.
b.	60.592a(b)	Alternative Requirements - the permittee may elect to comply with the requirements of 40 CFR 60.483-1a and 60.483-2a.
c.	60.592a(c)	Requirements if the permittee wants to apply for any means of emission limitation that is equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart. In doing so, the permittee shall comply with 60.484a.
d.	60.592a(d)	Comply with the test methods and procedures of 60.485a except as provided in 60.593a.
e.	60.592a(e)	Comply with the recordkeeping provisions of 40 CFR 60.486a.
f.	60.593a(a)	*Exemptions*: The permittee may comply with the following exceptions to the provisions of subpart VVa of this part.
g.	63.593a(b)	Exemptions for compressors demonstrated to be “in hydrogen service”.
h.	60.593a(c)	Exemptions are listed for existing reciprocating compressors provided the permittee demonstrates that

		recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance.
i.	60.539a(d)	The permittee may use the following provision in addition to 60.485(e): Equipment is in light liquid service if the percent evaporated is greater than 10 percent at 150 °C as determined by ASTM Method D86–78, 82, 90, 95, or 96 (incorporated by reference as specified in 60.17).
j.	60.593a(f)	Open-ended valves or lines containing asphalt as defined in 60.591 are exempt from the requirements of 60.482-6a(a) through (c).
k.	60.593a(g)	Connectors in gas/vapor or light liquid service are exempt from the requirements in 60.482-11a, provided the permittee complies with 60.482-8a for all connectors, not just those in heavy liquid service.

(5) [40 CFR 60, Subpart VVa] NSPS FOR EQUIPMENT LEAKS OF VOC IN THE SYNTHETIC ORGANIC CHEMICALS MANUFACTURING INDUSTRY for WHICH CONSTRUCTION, RECONSTRUCTION, or MODIFICATION COMMENCED AFTER NOVEMBER 7, 2006.

NOTE: BP-Husky is not subject to this regulation but it is referenced by 40 CFR 60, subpart GGGa.

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 60, Subpart VVa, including the following sections briefly summarized:

a.	60.482-1a(b)	*Standards-General*: Compliance is determined by review of records, reports, review of performance test results and inspections.
b.	60.482-1a(c)	Equivalence of means of emissions limitation.
c.	60.482-1a(d)	Equipment in vacuum service exemption.
d.	60.482-1a(e)	Exemption for nominal usage (<300 hr/yr) equipment in VOC service.
e.	60.482-1a(f)	Alternate frequency for batch process units.
f.	60.482-1a(g)	Assignments for storage vessels shared with multiple units.
g.	60.482-2a(a), (b)	*Standards-Pumps in Light Liquid Service*: Visually check pumps weekly for indications of leaks. Monitor pumps

	and (c)	monthly according to Method 21 for leaks of 2,000 ppm or greater. First attempt at repair shall be made within 5 days and repaired no later than 15 days. If indications of liquids dripping from pump, monitor according to Method 21 within 5 days or designate as a leak. Defines first attempt at repair.
h.	60.482-2a(d) through (h)	Exemptions for certain types of pumps meeting specific requirements.
i.	60.482-3a(a) through (g)	*Standards-Compressors*: Each compressor shall be equipped with a seal system that includes a barrier fluid system. Each barrier fluid system (see 60.482-3a(b)&(c)) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid or both, checked daily or equipped with an audible alarm. Determine criterion that indicates failure of the seal system, barrier fluid, or both. If sensor indicates failure of the seal system, barrier system or both, a leak is detected. First attempt at repair shall be made within 5 days and repaired no later than 15 days.
j.	60.482-3a(h), (i) and (j)	*Standards-Compressors*: Exemptions for certain types of compressors meeting specific requirements.
k.	60.482-4a(a) and (b)	*Standards-Pressure Relief Devices in Gas/Vapor Service*: They shall be operated with no detectable emissions (<500 ppm above background). Within 5 days after a pressure release, the device must be remonitored to confirm conditions of no detectable emissions. First attempt at repair shall be made within 5 days and repaired no later than 15 days.
l.	60.482-4a(c) and (d)	*Standards-Pressure Relief Devices in Gas/Vapor Service*: Exemptions for certain types of pressure relief devices meeting specific requirements.
m.	60.482-5a(a) through (c)	*Standards-Sampling Connection Systems*: each sampling connection system shall be equipped with a closed- purged, closed-loop or closed-vent system and shall comply with the requirements of 60.482-5a(b)(1) through (4). In situ sampling systems and sampling systems without purges are exempt from the above.
n.	60.482-6a(a) through (e)	*Standards: Open-Ended Valves or Lines*
o.	60.482-7a(a) through (h)	*Standards-Valves in Gas/Vapor Service in Light Liquid Service*: Valves are monitored monthly to detect leaks (>500 ppm). First attempt at repair shall be made within 5 days and repaired no later than 15 days. If a leak is

		detected, the valve is monitored monthly until a leak is not detected for 2 successive months. Each new valve must be monitored within 30 days after the end of its startup period. See 60.482-7a(f)-(h) for information regarding valves with no detectable emissions, unsafe-to-monitor or difficult-to-monitor valves.
p.	60.482-8a(a) through (d)	*Standards-Pumps, Valves and Connectors in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service:* Evidence of a leak is found by visual, audible, olfactory or other detection methods. The equipment shall be monitored within 5 days using Method 21 for leaks (>10,000 ppm). First attempt at repair shall be made within 5 days and repaired no later than 15 days.
q.	60.482-9a(a) through (f)	*Standards-Delay of Repair*: Delay of repair of equipment with leaks is allowed if repair within 15 days is infeasible without a process shutdown. Requirements for delay of repair of equipment not in VOC service; valves, connectors; pumps and beyond a process unit shutdown. When delay of repair is allowed for leaking pumps, valves and connectors that remain in service, they may be considered to be repaired if 2 consecutive monthly monitoring readings are below the leak level.
r.	60.482-10a(a) through (h) and (m)	*Standards-Closed Vent Systems and Control Devices*: Vapor recovery systems shall have a VOC recovery efficiency of 95% or greater, or to an exit concentration of 20 ppmv; enclosed combustion devices shall have an efficiency of 95% or greater, or to an exit concentration of 20 ppmv, dry basis, corrected to 3% oxygen or provide a minimum residence time of 0.75 seconds at minimum temperature of 816ºC. Flares comply with the requirements of 60.18. Leaks (>500 ppmv above background) shall have a first attempt at repair made within 5 days and repaired no later than 15 days. Requirements for leaks, annual inspections, delay of repair.
s.	60.482-10a(i) through (l)	*Standards-Closed Vent Systems and Control Devices*: Exemptions for certain types of vapor collection systems meeting specific requirements and the recordkeeping requirements for exempt closed vent systems.
t.	60.483-1a and 2a	*Alternative Standards for Valves*: Allowable Percentage of Valves Leaking and for Valves-Skip Period Leak Detection and Repair
u.	60.486a(a)	*Recordkeeping Requirements:* Combined records for affected facilities and the required recordkeeping

		information for monitoring events required by 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a and 483-2a.
v.	60.486a(b) and (c)	Identification and log for leaks from pumps, compressors, valves and connectors.
w.	60.486a(d)	Records of design requirements for closed vent systems and control devices.
x.	60.486a(e)	Log for equipment subject to 60.482-1a through 60.482-11a. See 60.486a(e)(1) through (10).
y.	60.486a(f)	Records for pumps, valves and connectors that are unsafe-to-monitor and valves that are difficult-to-monitor.
z.	60.486a(g)	Records for valve complying with 60.482-2a - skip period leak detection and repair.
aa.	60.486a(h)	Log for pumps with dual mechanical seal systems and for compressor seal systems.
bb.	60.486a(j)	Log of Information and data used to demonstrate that a piece of equipment is not in VOC service.
cc.	60.486a(k)	The provisions of 60.7(b) and (d) do not apply to affected facilities subject to 40 CFR 60, Subpart VVa..

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES

The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections briefly summarized:

63.655 – Reporting Requirements		
a.	63.655(d)(1)	Submit reports as required by 40 CFR 60.487 of Subpart VV or submit reports as required by 40 CFR 63.182 of Subpart H, except as provided in 63.655(d)(1)(i).
b.	63.655(e)	The permittee shall submit the reports listed in 63.655(e)(1) through (e)(3) except as provided in 63.655(h)(5). (1) A Notification of Compliance Status report as described in 63.655(f) of this section; (2) Periodic Reports as described in 63.655(g) of this

		section; and (3) Other reports as described in 63.655(h) of this section
c.	63.655(f)(1)(vi)	The Notification of Compliance Status report shall identify the heat exchange systems that are subject to the requirements of 40 CFR Subpart CC. For heat exchange systems at existing sources, the permittee shall indicate whether monitoring will be conducted as specified in 63.654(c)(4)(i) or 63.654(c)(4)(ii).

(2) [40 CFR 60, Subpart VV] NSPS FOR EQUIPMENT LEAKS OF VOC IN THE SYNTHETIC ORGANIC CHEMICALS MANUFACTURING INDUSTRY

The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 60, Subpart VV, including the following sections briefly summarized:

NOTE: BP-Husky is not subject to this regulation but it is referenced by 40 CFR 63, Subpart CC and 40 CFR 60, Subpart GGG.

60.487 – Reporting Requirements		
a.	60.487(a)	Each permittee shall submit semiannual reports to the Administrator beginning six months after the initial startup date.
b.	60.487(c)	Submit semiannual reports that includes the content of 60.487(c) for equipment leaks (valves, pumps and compressors).
c.	60.487(d)	Notify the Administrator 90 days before implementation, if the permittee elects to comply with the alternative provisions of 60.483-1 or 60.483-2.
d.	60.487(e)	Submit the results of all performance tests in accordance with 60.8, if applicable.

(3) [40 CFR 60, Subpart GGG] EQUIPMENT LEAKS OF VOC IN PETROLEUM REFINERIES for WHICH CONSTRUCTION, RECONSTRUCTION or MODIFICATION COMMENCED AFTER JANUARY 4, 1983, and on or BEFORE NOVEMBER 7, 2006

The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 60, Subpart GGG, including the following sections briefly summarized:

60.592 - Standards		
a.	60.592(e)	Comply with the reporting provisions of 40 CFR 60.487

(4) [40 CFR 60, Subpart GGGa] EQUIPMENT LEAKS OF VOC IN PETROLEUM REFINERIES for WHICH CONSTRUCTION, RECONSTRUCTION or MODIFICATION COMMENCED AFTER NOVEMBER 7, 2006

The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 60, Subpart GGGa, including the following sections briefly summarized:

60.592a - Standards		
a.	60.592a(e)	Comply with the reporting provisions of 40 CFR 60.487a.

(5) [40 CFR 60, Subpart VVa] NSPS FOR EQUIPMENT LEAKS OF VOC IN THE SYNTHETIC ORGANIC CHEMICALS MANUFACTURING INDUSTRY for WHICH CONSTRUCTION, RECONSTRUCTION, or MODIFICATION COMMENCED AFTER NOVEMBER 7, 2006

The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 60, Subpart VVa, including the following sections briefly summarized:

NOTE: BP-Husky is not subject to this regulation but it is referenced by 40 CFR 60, Subpart GGGa.

60.487a – Reporting Requirements		
a.	60.487a(a)	Submit semiannual reports to the Administrator beginning 6 months after the initial startup date.
b.	60.487a(c)	Submit semiannual reports that includes the content of 60.487a(c) for equipment leaks (valves, pumps and compressors).
c.	60.487a(d)	Notify the Administrator 90 days before implementation, if the permittee elects to comply with the alternative provisions of 60.483-1a or 60.483-2a.
d.	60.487a(e)	Submit the results of all performance tests in accordance with 60.8, if applicable.

(6) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: none

(2) [40 CFR 60, Subpart VV] NSPS FOR EQUIPMENT LEAKS OF VOC IN THE SYNTHETIC ORGANIC CHEMICALS MANUFACTURING INDUSTRY

The permittee shall comply with the applicable testing requirements required in 40 CFR Part 60, Subpart VV, including the following sections briefly summarized:

NOTE: BP-Husky is not subject to this regulation but it is referenced by 40 CFR 63, Subpart CC and 40 CFR 60, Subpart GGG.

60.485 – Test Methods and Procedures		
a.	60.485(a)	For tests, use the reference methods and procedures in Appendix A of this part, except as provided in 40 CFR 60.8(b).
b.	60.485(b)	Determine compliance with the standards in 60.482, 60.483, and 60.484 by using Method 21.
c.	60.485(c)	Determining compliance with the no detectable emission standards in 60.482-2(e), 60.482-3(i), 60.482-4, 60.482-7(f) and 60.482-10(e).
d.	60.485(d)	Test each piece of equipment unless a demonstration is done using a method in 60.485(d)(1), (2) or (3) that shows that the VOC content in the equipment would never be reasonably expected to exceed 10 percent by weight.
e.	60.485(e)	Demonstration that equipment is in light liquid service.
f.	60.485(f)	Requirements for samples used in conjunction with 60.485(d), (e) and (g).
g.	60.485(g)	Requirements for determining compliance with the standards of flares are covered in the terms for the East & West Hydrocarbon flares (emissions units P003 & P004).
h.	60.485(h)	Requirements for determining compliance with the alternatives of 60.483-1 or 60.483-2.

(3) [40 CFR 60, Subpart VVa] NSPS FOR EQUIPMENT LEAKS OF VOC IN THE SYNTHETIC ORGANIC CHEMICALS MANUFACTURING INDUSTRY for WHICH CONSTRUCTION, RECONSTRUCTION, or MODIFICATION COMMENCED AFTER NOVEMBER 7, 2006

The permittee shall comply with the applicable testing requirements required in 40 CFR Part 60, Subpart VVa, including the following sections briefly summarized:

NOTE: BP-Husky is not subject to this regulation but it is referenced by 40 CFR 60, Subpart GGGa.

60.485a – Test Methods and Procedures		
a.	60.485a(a)	For tests, use the reference methods and procedures in Appendix A of this part, except as provided in 40 CFR 60.8(b).
b.	60.485a(b)	Determine compliance with the standards in 60.482-1a through 60.482-11a, 60.483a, and 60.484a by using Method 21.
c.	60.485a(c)	Determining compliance with the no detectable emission standards in 60.482-2a(e), 60.482-3a(i), 60.482-4a, 60.482-7a(f) and 60.482-10a(e).
d.	60.485a(d)	Test each piece of equipment unless a demonstration is done using a method in 60.485(d)(1), (2) or (3) that shows that the VOC content in the equipment would never be reasonably expected to exceed 10 percent by weight.
e.	60.485a(e)	Demonstration that equipment is in light liquid service.
f.	60.485a(f)	Requirements for samples used in conjunction with 60.485a(d), (e) and (g).
g.	60.485a(g)	Requirements for determining compliance with the standards of flares.
h.	60.485a(h)	Requirements for determining compliance with the alternatives of 60.483-1a or 60.483-2a.

g) Miscellaneous Requirements

(1) Table B.2-1: Unit LDAR Regulation Applicability

OEPA ID	BPH LDAR system #	BPH LDAR system name	Refinery MACT CC - NSPS Option	Ohio Rules	NSPS GGG & VV	NSPS GGGa & VVa	Comments
B034	30	East Alstom Boiler	X	X	X		
B035	33	West Alstom Boiler	X	X	X		
NA	12	Asphalt Plant Area (emissions reported under T114)	X	X			The asphalt plant is no longer in service but area has remaining common components still in use, including for Tank T114.
J004	27	Marine Dock	X	X			
J005	7	Asphalt Truck Loading Rack #2	X	X	X		
J008	11	Asphalt Loading Rack #1	X	X			
NA	13	Blender (emissions reported under T121)	X	X			
NA	36	E. Tank Farm (emissions reported under T025)	X	X	-	-	-
NA	37	N. Tank Farm (emissions reported under T187)	X	X	-	-	-
NA	38	W. Tank Farm (Emissions reported under T038)	X	X	-	-	-
P003	21	East Flare	X	X	-	X	-
P004	41	West Flare	X	X	-	X	-
P007	17 and 23	CO Boiler and FCC I & II	X	X	X	X	-
P009	35 and 22	Sulfur Plant	X	X	-	-	-
P010	19	Crude Vac II	X	X	X	-	-
P011	18	Crude Vac I	X	X	X	(see comment)	This unit is subject to GGG until the changes in TFO project (PTI P0119763 issued 10/30/2015) are made.
P017	15	Coker II / Wet Gas Treater	X	X	X	-	-
P021	8	Alky I	X	X		-	-

OEPA ID	BPH LDAR system #	BPH LDAR system name	Refinery MACT CC - NSPS Option	Ohio Rules	NSPS GGG & VV	NSPS GGGa & VVa	Comments
P022	9	Alky II	X	X	X	-	-
P023	10	Alky III	X	X	X	-	-
P025	5 and 40	WWTU (including Benzene Stripper)	X	X	X	(see comment)	Per PTI P0119763 issued 10/30/2015, upon start-up of a proposed third benzene stripper, all three benzene strippers would be subject to GGGa. Until that time, the two benzene strippers are subject to GGG.
P028	3	A-Train DHT	X	X	X	-	-
P029	2	B-Train DHT	X	X	X	X	The BGOT compressor is exempt from GGGa per 60.593a(b)(1) because its hydrogen content is greater than 50%.
P036	46	Coker 3	X	X	X	-	-
P037	45	TRP SRU 2 & 3	X	X	X	-	-
P038	44	TRP Amine	X	X	X	(see comment)	This unit is subject to GGG until the changes in TFO project (PTI P0119763 issued 10/30/2015) are made.
P041	42	Iso II	X	X	-	X	-
P043	14	Cat. Poly	X	X	X	X	Only the flare gas recovery compressor is subject to GGGa.
P059	47	NT / SGP	X	X	X	-	-
P060	39	Unsat Gas Plant	X	X	-	X	-
P063	26	L.P.G. Unit	X	X	-	X	-
P068		Coker Gas Plant	X	X	-	X	-
P803	50	Reformer 3	X	X	-	X	-
Z060	20	DIB Tower	X	X	-	-	-
Z062	28	Merox Jet Fuel Treater	X	X	X	-	-

3. The following Sections include the monitoring, record keeping, reporting and testing requirements for the total sulfur analyzers that will be used for compliance with SO_2 limits from combustion sources after the start-up and initial shakedown of the Coker Gas Plant (P068). [Emission units subject to these requirements are: B015, B019, B022, B029, B030 B031, B032, B033, B034, B035]

   a) Monitoring and/or Recordkeeping Requirements

(1) No later than the start-up of the Coker Gas Plant (P068), the permittee shall install, calibrate, operate, and maintain instrumentation to monitor and record the concentration by volume (dry basis) of total sulfur (expressed as SO_2) in the refinery fuel gas burned in each of the heaters and boilers listed in this permit (except for heaters firing fuel gas from the East Side Mix Drum). Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of total sulfur in the fuel gas being burned. Such continuous monitoring and recording equipment shall be installed operated and calibrated pursuant to the requirements specified in ASTM D7166-10, 40 CFR Part 60 Appendices A and F, the applicable performance specification test of 40 CFR Part 60 Appendix B, and the portions of 40 CFR 60.13 applicable to CEMs, except that the requirements of Section B.3.c)(1) of this permit shall apply in lieu of the requirements of 40 CFR Part 60 Appendix F 5.1.1, 5.1.3 and 5.1.4.

At least 45 days before commencing certification testing of the continuous total sulfur expressed as SO_2 monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of total sulfur expressed as SO_2 emissions from the continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F except that the requirements of Section B.3.c)(1) of this permit shall apply in lieu of the requirements of 40 CFR Part 60 Appendix F 5.1.1, 5.1.3 and 5.1.4. The quality assurance/quality control plan and a logbook dedicated to the continuous total sulfur (expressed as SO_2) monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits, relative accuracy audits (RAAs), and/or relative accuracy test audits (RATAs) in units of the standard(s), in accordance with and at the frequencies specified in c)(1).

Each continuous monitoring system consists of all the equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

The permittee shall maintain documentation from Ohio EPA that the continuous total sulfur monitoring system has been certified in accordance with test methods contained in 40 CFR Part 60, Appendix B, or other test methods as approved by Ohio EPA, Central Office. The letter of certification shall be made available to the Ohio EPA upon request.

The permittee shall maintain records of all data obtained by the continuous total sulfur monitoring system including, emissions of total sulfur in units of the applicable standards in the appropriate averaging period, results of daily zero/span calibration checks, and magnitudes of manual calibration adjustments.

(2) The permittee shall maintain records of all data obtained by the continuous total sulfur monitor expressed as SO_2, including, but not limited to:

a. concentration of SO_2 in parts per million for each cycle time of the analyzer;

b. results of quarterly cylinder gas audits;

c. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

d. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

e. hours of operation of the emissions unit, and continuous total sulfur monitoring system;

f. the date, time, and hours of operation of the emissions unit without the continuous total sulfur monitoring system;

g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous total sulfur monitoring system; as well as,

h. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

(3) The Permittee shall record and maintain records of:

a. the daily average total sulfur concentration (expressed as SO_2) in the fuel gas monitored.

[Authority for term: PTI

b) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

(2) The permittee shall comply with the following quarterly excess emissions report (EER) requirements for the emissions unit and its continuous SO_2 monitoring system:

a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of SO_2 emissions in excess of any applicable limit specified in this permit, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each excedence, as well as the reason (if known) and the corrective actions taken (if any) for each excedence. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous total sulfur monitor;

iii. a description of any change in the equipment that comprises the continuous monitoring system (CMS), including any change to the hardware, changes to the software that may affect CMS readings, and/or changes in the location of the CMS sample probe;

iv. the total operating time of the continuous total sulfur monitoring system;

v. results and dates of quarterly cylinder gas audits;

vi. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

vii. unless previously submitted, the results of any relative accuracy test audit showing the continuous total sulfur monitor out-of-control and the compliant results following any corrective actions;

viii. total duration** of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility [pursuant 40 CFR 60.7(d)(1)];

ix. total duration** of CMS downtime for the reporting period, and if the total period CMS downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime*** of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation [pursuant 40 CFR 60.7(d)(1)]; and

x. the reason (if known) and the corrective actions taken (if any) for each event in b.ix. and x.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* Where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report.

** Per OEPA request, the refinery agrees to include in each quarterly CEMS report the date, time, and duration of each excess emission event and the date, time and duration of each downtime event.

*** Downtime is time when the unit emission source is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

c) Testing Requirements

(1) Within 60 days of installation and at least once every three (3) years thereafter, the permittee shall conduct a RAA or RATA of each the continuous total sulfur (expressed as SO_2) monitoring system to demonstrate compliance with ORC section 3704.03(I). The Permittee shall also conduct cylinder gas audits each calendar quarter in which a RAA or RATA is not performed. For RAA and RATA reference method comparisons, the most current version of EPA Methods 15A or 16 C shall be used or other test method approved by Ohio EPA Central Office shall be used as the reference method. In addition, the principles of EPA Method 7E, section 8.3 may be used to dilute the fuel gas samples used for the reference method as necessary to render the samples safe for analysis.

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous total sulfur expressed as SO_2 monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements specified above, or other test method approved by Ohio EPA Central Office; and ORC section 3704.03(I).

[Authority for Term: PTI P0119763]

4. REQUIREMENTS for NSPS 40 CFR PART 60 Subpart J, HYDROGEN SULFIDE (H_2S) CONTINUOUS EMISSIONS MONITORING (CEM) SYSTEMS

The following emissions units contained in this permit are subject to 40 CFR 60 Subpart J and comply with the requirements of 40 CFR 60.105(a)(4), which requires an H_2S CEMs: B008, B009, B010, B015, B017, B019, B022, B024, B029, B030, B031, B032, B033, B034, B035, P009, and P037. The Monitoring, Record keeping and Reporting Requirements are included below.

a) H_2S CEM MONITORING and/or REPORITNG REQUIREMENTS

(1) The permittee shall maintain a written quality assurance/quality control plan for the continuous hydrogen sulfide monitoring system, designed to ensure continuous valid and representative readings of hydrogen sulfide (H_2S) emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix F]

(2) The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[Authority for term: 40 CFR 60.2 and/or 40 CFR 63.2 and Appendix F to 40 CFR Part 60]

(3) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendix B, the permittee shall maintain on site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous hydrogen sulfide monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

(4) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F, the permittee shall operate and maintain equipment to continuously monitor and record hydrogen sulfide content of the fuel burned in this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous hydrogen sulfide monitoring system including, but not limited to:

a. hydrogen sulfide content of the fuel burned in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f);

b. hydrogen sulfide content of the fuel burned, in units of the applicable standard(s) and in the appropriate averaging period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous hydrogen sulfide monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous hydrogen sulfide monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous hydrogen sulfide monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in g. and h. above.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F]

(5) [40 CFR 60, Subpart J] STANDARDS OF PERFORMANCE FOR PETROLEUM REFINERIES

The permittee shall comply with the applicable monitoring and recordkeeping requirements under this Subpart, including the following sections:

60.105 - Monitoring of Emissions and Operations		
a.	60.105(a)(3)	The permittee shall either install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration (dry basis, 0 percent excess air) of SO_2 emissions into the atmosphere, or monitoring H_2S in fuel gas as provided in 40 CFR 60.105(a)(4). The monitor must include an O_2 monitor for correcting the data for excess air. The permittee has chosen to comply using the H_2S monitoring system of 40 CFR 60.105(a)(4), therefore, the monitoring, recordkeeping and reporting requirements were written to reflect this monitoring option.
b.	60.105(a)(4)	The permittee shall install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration by volume (dry basis) of H_2S in the fuel gases before being burned in any fuel gas combustion device.
c.	60.105(a)(4)(i)	The span value for this instrument is 425 mg/dscm H_2S.
d.	60.105(a)(4)(ii)	Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H_2S in the fuel gas being burned.
e.	60.105(a)(4)(iii)	The permittee shall conduct performance evaluations for each H_2S monitor according to the requirements of §60.13(c) and Performance Specification 7 of appendix B to part 60. The permittee shall use Method 11, 15, or 15A of

60.105 - Monitoring of Emissions and Operations		
		appendix A–5 to part 60 or Method 16 of appendix A–6 to part 60 for conducting the relative accuracy evaluations.
f.	60.105(a)(4)(iv)	Monitoring is not required per 60.105(a)(3) or (a)(4) forfuel gas streams that are inherently low in sulfur content. Fuel gas streams meeting one of the following requirements in 60.105(a)(4)(iv)(A) through (D) will be considered inherently low in sulfur content.
g.	60.105(a)(4)(iv)(A)	Pilot gas for heaters and flares is exempt from the monitoring requirements specified in 60.105(a)(3) and (4).
h.	60.105(a)(4)(iv)(B)	Monitoring exemption for fuel gas streams meeting a sulfur content of 30 ppmv or less.
i.	60.105(a)(4)(iv)(C)	Monitoring exemption for fuel gas streams intolerant to sulfur contamination.
j.	60.105(a)(4)(iv)(D)	Monitoring exemption for fuel gas streams the permittee demonstrates are low sulfur according to 40 CFR 60.105(b).
k.	60.105(b)	Procedure for submitting an application for an exemption from monitoring for a low-sulfur fuel gas stream not specifically exempted in 40 CFR 60.105(a)(4)(iv)
l.	60.105(e)	For the purpose of reports required under 40 CFR 60.7(c), all averages for reporting of periods of excess emissions shall be determined as the arithmetic average of the applicable 1-hour averages, e.g., the rolling 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages; and all rolling 3-hour periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system under 60.105(a)(4) exceeds 230 mg/dscm (0.10 gr/dscf).
60.107 – Recordkeeping Requirements		
m.	60.107(e)	Maintain records of the specific exemption determined to apply for each fuel stream where the permittee determines an exemption listed in 40 CFR 60.105(a)(4)(iv) applies. Maintain a copy of the application as well as the letter granting approval of the application when applying for the low-sulfur fuel exemption described in 40 CFR 60.105(a)(4)(iv)(D).

b) H_2S CEM REPORTING REQUIREMENTS - 40 CFR 60 Subpart J

(1) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous hydrogen sulfide monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of hydrogen sulfide content in excess of any applicable limit specified in this permit, 40 CFR Part 60, and any other applicable rules or regulations. The report shall include the following:

i. the date, commencement and completion times, duration, and magnitude of each exceedance;

ii. the reason (if known) and the corrective actions taken (if any) for each exceedance;

iii. whether the excedence was concurrent with a startup, shutdown, or malfunction of an affected facility or control system; and

iv. a written statement, signed by the responsible official, certifying the accuracy and completeness of the information contained in the report.

Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted within 30 days following the end of each calendar quarter and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous hydrogen sulfide and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation;

vii. results and dates of quarterly cylinder gas audits;

viii. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

ix. unless previously submitted, the results of any relative accuracy test audit showing the continuous hydrogen sulfide (H_2S) monitor out-of-control and the compliant results following any corrective actions;

x. total duration** of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility [pursuant 40 CFR 60.7(d)(1)];

xi. total duration** of CEM downtime for the reporting period, and if the total period CEM downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime*** of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation [pursuant 40 CFR 60.7(d)(1)]; and

xii. the reason (if known) and the corrective actions taken (if any) for each event in b.x. and xi.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* Where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report.

** Per OEPA request, the refinery agrees to include in each quarterly CEMS report the date, time, and duration of each excess emission event and the date, time and duration of each downtime event.

*** Downtime is time when the unit emission source is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

[Authority for term: 40 CFR 60.7]

5. REQUIREMENTS for NSPS 40 CFR PART 60 Subpart Ja, HYDROGEN SULFIDE (H_2S) and NITROGEN OXIDE (NOx) CONTINUOUS EMISSIONS MONITORING (CEM) SYSTEMS

The following emissions units contained in this permit are subject to 40 CFR 60 Subpart Ja as a fuel gas combustion device that complies with the requirements of 40 CFR 60.102a(g)(1)(ii), which requires an H_2S CEM and with 40 CFR 60.102a(g)(2), which requires a NOx CEM (>40 mmBtu/hr): B036. The Monitoring, Record keeping and Reporting Requirements are included below.D

a) H_2S and NOx CEM MONITORING and/or RECORDKEEPING REQUIREMENTS

(1) The permittee shall maintain a written quality assurance/quality control plan for the continuous hydrogen sulfide monitoring system, designed to ensure continuous valid and representative readings of hydrogen sulfide (H_2S) emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix F]

(2) The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[Authority for term: 40 CFR 60.2 and/or 40 CFR 63.2 and Appendix F to 40 CFR Part 60]

(3) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendix B, the permittee shall maintain on site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous hydrogen sulfide monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

(4) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F, the permittee shall operate and maintain equipment to continuously monitor and record hydrogen sulfide (H_2S) content of the fuel burned in this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous hydrogen sulfide monitoring system including, but not limited to:

a. hydrogen sulfide content of the fuel burned in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f);

b. hydrogen sulfide content of the fuel burned, in units of the applicable standard(s) and in the appropriate averaging period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous hydrogen sulfide monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous hydrogen sulfide monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous hydrogen sulfide monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in g. and h. above.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F]

(5) The permittee shall comply with the following requirements for the NO_x continuous Monitoring Systems.

a. Each continuous NO_x monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2. At least 45 days before commencing certification testing of the continuous NO_x monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NO_x emissions from the continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60. [40 CFR 60.13 and Part 60, Appendix F]

b. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software. [40 CFR 60.2 and Part 60, Appendix F]

c. Prior to the performance test of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous NO_x monitoring system meets the requirements of Performance Specification~~s~~ 2. Once received, the letter(s)/document(s) of certification shall be maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software. [40 CFR 60.13 and Part 60, Appendix B]

d. The permittee shall install, operate, and maintain equipment to continuously monitor and record NO_x emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous NO_x monitoring system including, but not limited to:

i. At least one valid record of the emissions of NO_x in parts per million (excluding system breakdowns, repairs, calibration checks, and zero and span adjustments) for each successive 15-minute period [40 CFR 60.13(e)(2)];

ii. results of quarterly cylinder gas audits;

iii. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

iv. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

v. hours of operation of the emissions unit, continuous NO_x monitoring system, and control equipment;

vi. total duration** of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility [pursuant 40 CFR 60.7(d)(1)];

vii. total duration** of CEM downtime for the reporting period, and if the total period CEM downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and

duration of any downtime*** of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation [pursuant 40 CFR 60.7(d)(1)]; and

viii. the reason (if known) and the corrective actions taken (if any) for each event in b.vi. and b.vii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* Where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report.

** Per OEPA request, the refinery agrees to include in each quarterly CEMS report the date, time, and duration of each excess emission event and the date, time and duration of each downtime event.

*** Downtime is time when the unit emission source is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F]

(6) [40 CFR 60, Subpart Ja] STANDARDS OF PERFORMANCE FOR PETROLEUM REFINERIES FOR WHICH CONSTRUCTION, RECONSTRUCTION, OR MODIFICATION COMMENCED AFTER MAY 14, 2007

The permittee shall comply with the applicable monitoring and recordkeeping requirements under this Subpart, including the following sections:

60.103a – Design, equipment, work practice or operational standards		
a.	60.103a(c)(2)	The permittee shall conduct a root cause analysis and a corrective action analysis for the condition specified in 60.103 a(c)(2). (c)(2) For a fuel gas combustion device, each exceedance of an applicable short-term emissions limit in 60.102a(g)(1) if the SO_2 discharge to the atmosphere is 227 kg (500 lb) greater than the amount that would have been emitted if the emissions limits had been met during one or more consecutive periods of excess emissions or any 24-hour period, whichever is shorter.
b.	60.103a(d)(1) & (d)(5)	A root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a discharge meeting the condition specified in 60.103a(c)(2), above. Special circumstances affecting the number of root cause analyses and/or corrective action

60.103a – Design, equipment, work practice or operational standards		
		analyses are provided in 60.103a(d)(1) and (d)(5). (d)(1) If a single continuous discharge meets the conditions specified 60.103a(c)(2) for 2 or more consecutive 24-hour periods, a single root cause analysis and corrective action analysis may be conducted. (d)(5) If discharges occur that meets the condition in 60.103a(c)(2) for more than one affected facility in the same 24-hour period, initial root cause analyses shall be conducted for each affected facility. If the initial root cause analyses indicate that the discharges have the same root cause(s), the initial root cause analyses can be recorded as a single root cause analysis and a single corrective action analysis may be conducted.
c.	60.103a(e)	The permittee shall implement the corrective action(s) identified in the corrective action analysis conducted pursuant to 60.103a(d) in accordance with the applicable requirements in 60.103a(e)(1) through (3) of this section. (e)(1) All corrective action(s) must be implemented within 45 days of the discharge for which the root cause and corrective action analyses were required or as soon thereafter as practicable. If the permittee concludes that corrective action should not be conducted, the permittee shall record and explain the basis for that conclusion no later than 45 days following the discharge as specified in 60.108a(c)(6)(ix). (e)(2) For corrective actions that cannot be fully implemented within 45 days following the discharge for which the root cause and corrective action analyses were required, the permittee shall develop an implementation schedule to complete the corrective action(s) as soon as practicable. (e)(3) No later than 45 days following the discharge for which a root cause and corrective action analyses were required, the permittee shall record the corrective action(s) completed to date, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates as specified in 60.108a(c)(6)(x).
60.107a Monitoring of Emission and Operations for Fuel Gas Combustion Devices		

60.103a – Design, equipment, work practice or operational standards		
d.	60.107a(a) and (a)((2)	*Fuel gas combustion devices subject to H_2S limit*. The permittee subject to 60.102a(g)(1) and elects to comply with the H_2S concentration limits in 60.102a(g)(1)(ii) shall comply with 60.107a(a)(2). (a)(2) The permittee shall install, operate, calibrate and maintain an instrument for continuously monitoring and recording the concentration by volume (dry basis) of H_2S in the fuel gases before being burned in any fuel gas combustion device or flare.
e.	60.107a(a)(2)(i)	The permittee shall install, operate and maintain each H_2S monitor according to Performance Specification 7 of appendix B to part 60. The span value for this instrument is 300 ppmv H_2S.
f.	60.107a(a)(2)(ii)	The permittee shall conduct performance evaluations for each H_2S monitor according to the requirements of 60.13(c) and Performance Specification 7 of appendix B to part 60. The owner or operator shall use Method 11, 15, or 15A of appendix A-5 to part 60 or Method 16 of appendix A-6 to part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see 60.17) is an acceptable alternative to EPA Method 15A of appendix A-5 to part 60.
g.	60.107a(a)(2)(iii)	The permittee shall comply with the applicable quality assurance procedures in appendix F to part 60 for each H_2S monitor.
h.	60.107a(a)(2)(iv)	Fuel gas combustion devices or flares having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H_2S in the fuel gas being burned in the respective fuel gas combustion devices or flares.
i.	60.107a(a)(3)	The permittee is not required to comply with 60.107a(a)(2) for fuel gas streams that are exempt under 60.102a(g)(1)(iii) or 60.103a(h) or, for fuel gas streams combusted in a process heater, other fuel gas combustion device or flare that are inherently low in sulfur content. Fuel gas streams meeting one of the requirements in 60.107a(a)(3)(i) through (iv) of this section will be considered inherently low in sulfur content.
j.	60.107a(b)	Exemption from H_2S monitoring requirements for low-sulfur fuel gas streams. The permittee of a fuel gas combustion

60.103a – Design, equipment, work practice or operational standards		
		device or flare may apply for an exemption from the H_2S monitoring requirements in 60.107a(a)(2) for a fuel gas stream that is inherently low in sulfur content. A fuel gas stream that is demonstrated to be low-sulfur is exempt from the monitoring requirements of 60.107a(a)(1) and (2) until there are changes in operating conditions or stream composition. If applicable, refer to 40 CFR Part 60.107a(b)(1) through (b)(3).
k.	60.107a(c)	*Process heaters complying with the NOx concentration-based limit.* The permittee of a process heater subject to the NOx emissions limit in 60.102a(g)(2) and electing to comply with the applicable emissions limit in 60.102a(g)(2)(i)(A), shall install, operate, calibrate and maintain an instrument for continuously monitoring and recording the concentration (dry basis, 0-percent excess air) of NOx emissions into the atmosphere according to the requirements in paragraphs (c)(1) through (5) of this section, except as provided in paragraph (c)(6) of this section. The monitor must include an O_2 monitor for correcting the data for excess air.
l.	60.107a(c)(1)	Except as provided in 60.107a(c)(6), the permittee shall install, operate and maintain each NOx monitor according to Performance Specification 2 of appendix B to part 60. The span value of this NOx monitor must be between 2 and 3 times the applicable emissions limit, inclusive.
m.	60.107a(c)(2)	The permittee shall conduct performance evaluations of each NOx monitor according to the requirements in 60.13(c) and Performance Specification 2 of appendix B to part 60. The permittee shall use Methods 7, 7A, 7C, 7D, or 7E of appendix A-4 to part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see 60.17) is an acceptable alternative to EPA Method 7 or 7C of appendix A-4 to part 60.
n.	60.107a(c)(3)	The permittee shall install, operate, and maintain each O_2 monitor according to Performance Specification 3 of appendix B to part 60. The span value of this O_2 monitor must be selected between 10 and 25 percent, inclusive.
o.	60.107a(c)(4)	The permittee shall conduct performance evaluations of each O_2 monitor according to the requirements in 60.13(c) and Performance Specification 3 of appendix B to part 60. Method 3, 3A, or 3B of appendix A-2 to part 60 shall be

60.103a – Design, equipment, work practice or operational standards		
		used for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see 60.17) is an acceptable alternative to EPA Method 3B of appendix A-2 to part 60.
p.	60.107a(c)(5)	The permittee shall comply with the quality assurance requirements in Procedure 1 of appendix F to part 60 for each NOx and O_2 monitor, including quarterly accuracy determinations for NOx monitors, annual accuracy determinations for O_2 monitors, and daily calibration drift tests.
60.108a Recordkeeping Requirements		
q.	60.108a(a)	The permittee shall comply with the recordkeeping requirements in 60.7 and other requirements as specified in 60.108a.
r.	60.108a(c)(5)	For each fuel gas stream to which one of the exemptions listed in 60.107a(a)(3) applies, records of the specific exemption determined to apply for each fuel stream. If the permittee applies for the exemption described in 60.107a(a)(3)(iv), the permittee must keep a copy of the application as well as the letter from the Administrator granting approval of the application.
s.	60.108a(c)(6)	The permittee shall maintain the records of discharges greater than 500 lb SO_2 in excess of the allowable limits from a fuel gas combustion device. The information in 60.108a(c)(6)(i) through (c)(6)(xi) (as applicable) shall be recorded no later than 45 days following the end of a discharge exceeding the thresholds. These records shall include. i. [40 CFR 60.108a(c)(6)(i)] A description of the discharge. ii. [40 CFR 60.108a(c)(6)(ii)] For discharges greater than 500 lb in excess of the allowable limits SO_2, the date and time the discharge was first identified and the duration of the discharge. iii. [40 CFR 60.108a(c)(6)(iii)] The measured or calculated cumulative quantity of gas discharged over the discharge duration. If the discharge duration exceeds 24 hours, record the discharge quantity for each 24-hour period. Engineering calculations are

60.103a – Design, equipment, work practice or operational standards		
		allowed for fuel gas combustion devices other than flares. iv. [40 CFR 60.108a(c)(6)(v)] For discharges greater than 500 lb in excess of the allowable limits SO_2, the measured or estimated concentration of H_2S, TRS and SO_2 of the stream discharged. Process knowledge can be used to make these estimates for fuel gas combustion devices other than flares. v. [40 CFR 60.108a(c)(6)(vii)] For discharges greater than 500 lb in excess of the allowable limits SO_2, the cumulative quantity of H_2S and SO_2 released into the atmosphere. For fuel gas combustion devices, assume 99 percent conversion of H_2S to SO_2. vi. Results of any root-cause analysis conducted as required in 60.103a(c)(6)(viii) through (6)(x).

b) H_2S and NOx CEM REPORTING REQUIREMENTS - 40 CFR 60 Subpart Ja

(1) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous hydrogen sulfide monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of hydrogen sulfide emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, and any other applicable rules or regulations. The report shall include the following:

i. the date, commencement and completion times, duration, and magnitude of each exceedance,

ii. the reason (if known) and the corrective actions taken (if any) for each exceedance.

iii. Whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system; and

iv. A root-cause summary report that provides the information described in 60.103a(c) for all discharges for which a root-cause analysis was required by 60.103a(c)2.

v. For any periods for which monitoring data are not available, any changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

vi. A written statement, signed by a responsible official, certifying the accuracy and completeness of the information contained in the report.

Excess emissions shall be reported in units of the applicable standard(s).

b. the date, time, and duration of any/each malfunction** of the continuous hydrogen sulfide monitoring system, emissions unit, and/or control equipment; These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous hydrogen sulfide and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous monitoring system (CMS), including any change to the hardware, changes to the software that may affect CMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation;

vii. unless previously submitted in the Quarterly Data Assessment Report (DAR), results and dates of quarterly cylinder gas audits;

viii. unless previously submitted in the Quarterly Data Assessment Report (DAR), results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

ix. unless previously submitted in the Quarterly Data Assessment Report (DAR), the results of any relative accuracy test audit showing the continuous hydrogen sulfide monitor out-of-control and the compliant results following any corrective actions;

x. total duration** of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1%

of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility [pursuant 40 CFR 60.7(d)(1)];

xi. total duration** of CEM downtime for the reporting period, and if the total period CEM downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime*** of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation [pursuant 40 CFR 60.7(d)(1)]; and

xii. the reason (if known) and the corrective actions taken (if any) for each event in b.x. and b.xi.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* Where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report.

** Per OEPA request, the refinery agrees to include in each quarterly CEMS report the date, time, and duration of each excess emission event and the date, time and duration of each downtime event.

*** Downtime is time when the unit emission source is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

[Authority for term: 40 CFR 60.7]

(2) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NO_x emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall include the following:

i. the date, commencement and completion times, duration, and magnitude of each exceedance,

ii. the reason (if known) and the corrective actions taken (if any) for each exceedance.

iii. Whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system; and

iv. For any periods for which monitoring data are not available, any changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

v. A written statement, signed by a responsible official, certifying the accuracy and completeness of the information contained in the report.

Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous NO_x and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total NO_x emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous NO_x monitoring system while the emissions unit was in operation;

viii. unless previously submitted in the Quarterly Data Assessment Report (DAR) results and date of quarterly cylinder gas audits;

ix. unless previously submitted in the Quarterly Data Assessment Report (DAR), results and date of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted in the Quarterly Data Assessment Report (DAR), the results of any relative accuracy test audit showing the continuous NO_x monitor out-of-control and the compliant results following any corrective actions;

xi. total duration** of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility [pursuant 40 CFR 60.7(d)(1)];

xii. total duration** of CEM downtime for the reporting period, and if the total period CEM downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime*** of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation [pursuant 40 CFR 60.7(d)(1)]; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in b.xi. and b.xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* Where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report.

** Per OEPA request, the refinery agrees to include in each quarterly CEMS report the date, time, and duration of each excess emission event and the date, time and duration of each downtime event.

*** Downtime is time when the unit emission source is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

[Authority for term: 40 CFR 60.7]

(3) [40 CFR 60, Subpart Ja] STANDARDS OF PERFORMANCE FOR PETROLEUM REFINERIES FOR WHICH CONSTRUCTION, RECONSTRUCTION, OR MODIFICATION COMMENCED AFTER MAY 14, 2007

The permittee shall comply with the applicable reporting requirements under this Subpart, including the following sections:

60.107a Reports		
a.	60.107a(i)	*Excess emissions.* For the purpose of reports required by 60.7(c), periods of excess emissions for fuel gas combustion devices subject to the emissions limitations in 60.102a(g) are defined as specified in paragraphs (i)(1) through (5) of this section. Determine a rolling 3-hour or a rolling daily average as the arithmetic average of the

60.107a Reports		
		applicable 1-hour averages (e.g., a rolling 3-hour average is the arithmetic average of three contiguous 1-hour averages). Determine a rolling 365-day average as the arithmetic average of the applicable daily averages (e.g., a rolling 30-day average is the arithmetic average of 30 contiguous daily averages).
b.	60.107a(i)(1)(ii)	*H_2S limits for fuel gas combustion devices* If the permittee of a fuel gas combustion device elects to comply with the H_2S concentration limits in 60.102a(g)(1)(ii), each rolling 3-hour period during which the average concentration of H_2S as measured by the H_2S continuous monitoring system required under paragraph 60.107a(a)(2) exceeds 162 ppmv and each rolling 365-day period during which the average concentration as measured by the H_2S continuous monitoring system under 60.107a(a)(2) exceeds 60 ppmv
c.	60.107a(i)(3)	*Rolling 30-day average NOx limits for fuel gas combustion devices*. Each rolling 30-day period during which the average concentration of NOx as measured by the NOx continuous monitoring system required under paragraph (c) or (d) of this section exceeds: (i)(3)(i) For a natural draft process heater, 40 ppmv.
d.	60.107a(i)(5)	*Daily O_2 limits for fuel gas combustion devices*. Each day during which the concentration of O_2 as measured by the O_2 continuous monitoring system required under 60.107a(c)(6) of this section exceeds the O_2 operating limit or operating curve determined during the most recent biennial performance test.
60.108a Reporting Requirements		
e.	60.108a(a)	Each permittee subject to the emissions limitations in 60.102a shall comply with the notification and reporting requirements in 60.7 and other requirements as specified in t60.108a.
f.	60.108a(d)	The permittee shall submit an excess emissions report for all periods of excess emissions according to the requirements of 60.7(c) except that the report shall contain the information specified in 60.108a(d)(1) through (7). (d)(1) The date that the exceedance occurred;

60.107a Reports		
		(d)(2) An explanation of the exceedance; (d)(3) Whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system; and (d)(4) A description of the action taken, if any. (d)(5) The information described in 60.108a(c)(6) for all discharges listed in 60.108a(c)(6). (d)(6) For any periods for which monitoring data are not available, any changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability. (d)(7) A written statement, signed by a responsible official, certifying the accuracy and completeness of the information contained in the report.

c) H_2S and NOx CEM TESTING REQUIREMENTS - 40 CFR 60 Subpart Ja

(1) [40 CFR 60, Subpart Ja] STANDARDS OF PERFOMRANCE FOR PETROLEUM REFINERIES FOR WHICH CONSTRUCTION, RECONSTRUCTION, OR MODIFICATION COMMENCED AFTER MAY 14, 2007

The permittee shall comply with the applicable testing requirements under this Subpart, including the following sections:

60.104a – Performance Tests		
a.	60.104a(a)	The permittee shall conduct a performance test for each fuel gas combustion device to demonstrate initial compliance with each applicable emissions limit in 60.102a according to the requirements of 60.8.
b.	60.104a(i)	The permittee shall determine compliance with the NOx emissions limits in 60.102a(g) for a fuel gas combustion device according to the following test methods and procedures: (1) Method 1 of appendix A-1 to part 60 for sample and

60.104a – Performance Tests		
		velocity traverses; (2) Method 2 of appendix A-1 to part 60 for velocity and volumetric flow rate; (3) Method 3, 3A, or 3B of appendix A-2 to part 60 for gas analysis. The method ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see 60.17) is an acceptable alternative to EPA Method 3B of appendix A-2 to part 60; (5) Method 7, 7A, 7C, 7D, or 7E of appendix A-4 to part 60 for moisture content and for the concentration of NOX calculated as NO2; the duration of each test run must be no less than 4 hours. The method ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see 60.17) is an acceptable alternative to EPA Method 7 or 7C of appendix A-4 to part 60.
c.	60.104a(j)	The permittee shall determine compliance with the applicable H_2S emissions limit in 60.102a(g)(1) for a fuel gas combustion device according to the following test methods and procedures: (1) Method 1 of appendix A-1 to part 60 for sample and velocity traverses; (2) Method 2 of appendix A-1 to part 60 for velocity and volumetric flow rate; (3) Method 3, 3A, or 3B of appendix A-2 to part 60 for gas analysis. The method ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see 60.17) is an acceptable alternative to EPA Method 3B of appendix A-2 to part 60; (4) EPA Method 11, 15 or 15A of appendix A-5 to part 60 or EPA Method 16 of appendix A-6 to part 60 for determining the H2S concentration for affected facilities using an H2S monitor as specified in 60.107a(a)(2). The method ANSI/ASME PTC 19.10-1981 (incorporated by reference—see 60.17) is an acceptable alternative to EPA Method 15A of appendix A-5 to part 60. The owner or operator may demonstrate compliance based on the mixture used in the fuel gas combustion device or flare or for each individual fuel gas stream used in the fuel gas combustion device or flare.

60.104a – Performance Tests		
		(4)(i) For Method 11 of appendix A-5 to part 60, the sampling time and sample volume must be at least 10 minutes and 0.010 dscm (0.35 dscf). Two samples of equal sampling times must be taken at about 1-hour intervals. The arithmetic average of these two samples constitutes a run. For most fuel gases, sampling times exceeding 20 minutes may result in depletion of the collection solution, although fuel gases containing low concentrations of H_2S may necessitate sampling for longer periods of time. (4)(ii) For Method 15 of appendix A-5 to part 60, at least three injects over a 1-hour period constitutes a run. (4)(iii) For Method 15A of appendix A-5 to part 60, a 1-hour sample constitutes a run. The method ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see 60.17) is an acceptable alternative to EPA Method 15A of appendix A-5 to part 60. (4)(iv) If monitoring is conducted at a single point in a common source of fuel gas as allowed under 60.107a(a)(2)(iv), only one performance test is required. That is, performance tests are not required when a new affected fuel gas combustion device is added to a common source of fuel gas that previously demonstrated compliance.

6. REQUIREMENTS for BOILER MACT 40 CFR Part 63, Subpart DDDDD

The following emissions units contained in this permit are subject to 40 CFR Part 63, Subpart DDDDD: B008, B009, B010, B015, B017, B019, B022, B024, B029, B030, B031, B032, B033, B034, B035, and B036.

a) The permittee shall comply with the applicable monitoring and recordkeeping requirements required under 40 CFR Part 63, Subpart DDDDD, including the following sections:

63.7500 - Emission Limitations and Work Practice Standards – Boiler MACT		
i.	63.7500(a)(1)	Meet the requirements of Table 3 to this subpart, which requires a tune-up to be conducted every 5 years as specified in 63.7540 if the boiler or process heater has a continuous oxygen trim system, or annually as specified in 63.7540 if the boiler or process heater does not have a continuous oxygen trim system. A one-time energy assessment must also be conducted.

ii.	63.7500(a)(3)	Operate the affected source and monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions.
iii.	63.7500(e)	Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to 40 CFR Part 63, Subpart DDDDD, or the operating limits in Table 4 to 40 CFR Part 63, Subpart DDDDD.
iv.	63.7500(f)	These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with Table 3 to 40 CFR 63 Subpart DDDDD
63.7501 - Affirmative Defense for Violation of Emission Standards During Malfunction		
v.	63.7501, 63.7501(a)	These paragraphs outline the procedure and allowance for the assertion of affirmative defense to claim for civil penalties for violations of standards that are caused by malfunctions, as defined in §63.2.
63.7510 -Initial Compliance Requirements		
vi.	63.7510(e)	By no later than January 31, 2016, complete the initial tune-up described in 63.7540(a)(10)(i) through (vi) and complete the one-time energy assessment specified in Table 3 to 40 CFR Part 63 Subpart DDDDD.
63.7515 – When to Conduct Subsequent Tune-ups		
vii.	63.7515(d)	Each annual tune-up specified in 63.7540(a)(10) must be conducted no more than 13 months after the previous tune-up. Each 5-year tune-up specified in 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up.
63.7540 - Demonstrating Continuous Compliance With The Work Practice Standards		
viii.	63.7540(a)	Demonstrate continuous compliance with the periodic tune-up work practice standards in Table 3 to 40 CFR Part 63, Subpart DDDDD according to 63.7540(a)(10) if a continuous oxygen trim system is not used, or according to 63.7540(a)(12) if a continuous oxygen trim system is used. Pursuant to 63.7540(a)(13), if the unit is not operating on the

		required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.
ix.	63.7540(a)(10)	If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (iv) of 63.7540. This frequency does not apply to limited-use boilers and process heaters, as defined in 63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio. The annual burner inspection may be delayed until the next scheduled unit shutdown.
x.	63.7540(a)(12)	If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in 63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.
xi.	63.7540(a)(13)	If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.
63.7555 – Recordkeeping Requirements- Boiler MACT		
xii.	63.7555(a)	Keep a copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status report submitted according to 63.10(b)(2)(xiv).
63.7560 - What form and How Long Must I Keep My Records		
xiii.	63.7560(a) – (c)	Keep records in a form suitable for expeditious review according to 63.10(b)(1) for 5 years. The

		records shall be maintained on site, or accessible from onsite (for example through a computer network) for at least 2 years and may be maintained off site for the remaining 3 years.
63.7565 – Applicable General Provisions of Subpart A		
xiv.	63.7565	Table 10 to 40 CFR Part 63, Subpart DDDDD shows which parts of the General Provisions in 63.1 through 63.15 apply.

a) The permittee shall comply with the applicable reporting requirements required under 40 CFR Part 63, Subpart DDDDD, including the following sections:

63.7530 – Initial Compliance Requirements		
i.	63.7530(d)	Submit a signed statement in the Notification of Compliance Status report that indicates you conducted a tune-up of the unit.
ii.	63.7530(e)	Include with the Notification of Compliance Status a signed certification that the energy assessment was completed according to Table 3 to this subpart and is an accurate depiction of your facility at the time of the assessment.
63.7545 – Notification Requirements- Boiler MACT		
iii.	63.7545(a), (e)	Submit to the Administrator of U.S. EPA and a copy to Ohio EPA the Notification of Compliance Status specified in 63.9(h) before the close of business on the 60th day following completion of the one-time energy assessment and the initial tune-up for all boilers and process heaters at the facility. The Notification of Compliance Status report must contain the information specified in 63.7545(e)(1) through (8), as applicable.
iv.	63.7545(f)	Submit a notification containing the information specified in 63.7545(f)(1) through (5) within 48 hours of declaration of alternative fuel use due to natural gas curtailment or supply interruption as defined in 63.7575 when the alternative gaseous fuel is subject to another subpart of 40 CFR 63, 40 CFR Part 60, 40 CFR Part 61, 40 CFR Part 65, or is “other gas 1 fuel”.

63.7550 – Reporting Requirements- Boiler MACT		
v.	63.7550(a)	Submit a 5-year compliance report according to 63.7550(b)(1) through (4).
vi.	63.7550(c)	The 5-year compliance report shall include the information specified in 63.7550(c)(5)(i) through (iv) and (xiv).
vii.	63.7550(h)(3)	Submit the 5-year compliance report electronically using CEDRI that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). If the reporting format specific to this subpart is not available in CEDRI at the time the report is due, the report must be submitted to the Administrator at the appropriate address specified in 63.13.

7. The following emissions units contained in this permit are subject to 40 CFR, Part 63, Subpart CC, National Emission Standards for Hazardous Air Pollutants - Petroleum Refineries: J004, P003, P004, P007, P009, P010, P011, P014, P017, P021, P022, P023, P025, P037, P041, P043, P055, P056, P057, P058, P059, P060, P063, P803, T010, T011, T012, T013, T014, T016, T017, T018, T019, T020, T021, T024, T025, T026, T027, T028, T029, T030, T031, T032, T033, T034, T035, T036, T037, T038, T039, T040, T041, T044, T045, T046, T047, T051, T059, T060, T073, T078, T080, T081, T082, T084, T085, T086, T087, T088, T089, T090, T091, T092, T096, T097, T100, T102, T107, T108, , T109, T110, T111, T113, T114, T115, T116, T120, T136, T137, T138, T139, T153, T154, T155, T156, T157, T161, T164, T166, T167, T170, T174, T175, T176, T177, T182, T183, T184, T187, T188 and T190. The complete MACT requirements, including the MACT General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

   [40 CFR, Part 63, Subpart CC]

8. The following emissions units contained in this permit are subject to 40 CFR, Part 63, Subpart UUU, National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units: P003, P004, P007, P009, P037, P803. The complete MACT requirements, including the MACT General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

   [40 CFR, Part 63, Subpart UUU]

6. The following emissions units contained in this permit are subject to 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters: B008, B009, B010, B015, B017, B019, B022, B024, B029, B030, B031, B032, B033, B034, B035, B036 and P007. The complete NESHAP requirements, including the NESHAP General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://www.ecfr.gov or by contacting the Toledo Division of Environmental Services.

   [40 CFR Part 63, Subpart DDDDD]

7. The following emissions units contained in this permit are subject to 40 CFR, Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines: P044, P045, P048, P053. The complete MACT requirements, including the MACT General Provisions may be accessed via the internet from the Electronic Code of federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

   [40 CFR, Part 63, Subpart ZZZZ]

8. The following emissions units contained in this permit are subject to 40 CFR, Part 61, Subpart FF, National Emission Standard for Benzene Waste Operations: P003, P004, P025, T010, T073, T011, T164, T166, T167, T170, and T177. The complete NESHAP requirements, including the NESHAP General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

   [40 CFR, Part 61, Subpart FF]

9. The following emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units: B034 and B035. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

   [40 CFR, Part 60, Subpart Db]

10. The following emissions units contained in this permit are subject to 40 CFR Part 60, Subpart J, Standards of Performance for Petroleum Refineries: B008, B009, B010, B015, B017, B019, B022, B024, B029, B030, B031, B032, B033, B034, B035, P009, P037. The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://www.ecfr.gov or by contacting the Toledo Division of Environmental Services.

    [40 CFR Part 60, Subpart J]

11. The following emissions units contained in this permit are subject to 40 CFR Part 60, Subpart Ja, Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007: B036, P003, P004, P803. The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://www.ecfr.gov or by contacting the Toledo Division of Environmental Services.

    [40 CFR Part 60, Subpart Ja]

12. The following emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart K, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978: T045, T046, T113, T114, T115, T116, T170. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

    [40 CFR, Part 60, Subpart K]

13. The following emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart Ka, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984: T047, T120 and T177. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

    [40 CFR, Part 60, Subpart Ka]

14. The following emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart Kb, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984: T019, T073, T084, T136, T137, T138, T166, T164, T167, T174, T187, T188. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

    [40 CFR, Part 60, Subpart Kb]

15. The following emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006: P003, P004. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

    [40 CFR Part 60, Subpart VV]

16. The following emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart GGG, Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After January 4, 1983, and on or Before November 7, 2006: B034, B035, J005, P010, P017, P037, P041, P043, P059. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

    [40 CFR, Part 60, Subpart GGG]

17. The following emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart GGGa, Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After November 7, 2006: P007, P011, P022, P023, P025, P041, P043, P060, P063, P803. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

    [40 CFR, Part 60, Subpart GGGa]

21. The following emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations: P803. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency

    [40 CFR, Part 60, Subpart NNN]

22. The following emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart QQQ, Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems: P025, T164. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

    [40 CFR, Part 60, Subpart QQQ]

23. The following insignificant emission units at this facility must comply with all applicable State and Federal regulations, as well as any emission limitations and/or control requirements contained within the identified permit to install for the emission unit. The insignificant emission units listed below are subject to one or more applicable requirements contained in a permit-to-install or in the SIP-approved versions of OAC Chapters 3745-17, 3745-18 and 3745-21.

    J008 - decanted oil/asphalt railcar and tank truck loading – ORC 3704.036

    G001 – PBR10298

    P030 – Foul Condensate Stripper #2 – ORC 3704.036

    P052 – Foul Condensate Stripper #1 – ORC 3704.036

T121 – FR Tank (PR-500160), 23,100 gallons – PTI 04-170

T145 – FR tank (PR-500022), 37,044 gallons – PTI 04-780

T148 – FR tank (PR-500019), 2,205 gallons – PTI 04-780

T149 - FR tank (PR-500021), 23,793 gallons – PTI 04-780

T151 - Storage tank (PR-500020), 21,168 gallons – PTI 04-780

T159 - FR tank (PR-500001), 3,385,200 gallons – PTI 04-780

T163 - FR tank (PR-500648), 110,000 gallons – PTI 04-780

T191 – FR tank (Tank 161), 23,100 gallons – ORC3704.036

[Authority for term: OAC rule 3745-77-07(A)(13)]

C. Emissions Unit Terms and Conditions

1. B015, Crude 1 Furnace

Operations, Property and/or Equipment Description:

B015 - Crude 1 Furnace (PR-562954): 428 mmBtu/hr (HHV) process heater fired with refinery fuel gas, natural gas, and/or LP gas vents out Crude Convection Heater Stack.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) (PTI 04-01290 issued 7/25/2002, modified PTI P0119763 issued 10/30/2015)	See b)(2)a. through b)(2)d. See terms B.3. and B.4. of Section B.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.
c.	OAC rule 3745-17-10(B)	Particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input
d.	OAC rule 3745-18-54(W)(1)	Sulfur dioxide (SO_2) emissions shall not exceed 0.29 pounds per million Btu of heat input. See b)(2)e.
e.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	See b)(2)f.
f.	40 CFR Part 60, Subpart J	The emission limitation specified by this rule is equivalent to the limitation established under OAC rule 3745-31-

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(40 CFR 60.100 – 60.109) [This emissions unit is an affected facility under the requirements of this rule as a result of Permit to Install 04-01290 issued 7/25/2002 and not due to the emissions unit being installed, modified, or reconstructed after June 11, 1973 and prior to May 14, 2007]	05(D). See b)(2)a. and term B.4. of Section B.
g.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 63.16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
h.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480 – 63.7575) [In accordance with 40 CFR 63.7575, this emissions unit is an existing process heater that is in the "units designed to burn gas 1 fuels" subcategory and subject to the applicable emissions limitations/control requirements specified in this section.]	See b)(2)g. See term B.6. of Section B. for tune-up requirements. [63.7500(a) Table 3 requirements]

(2) Additional Terms and Conditions

a. Pursuant to Permit to Install 04-01290 issued 7/25/2002, this emissions unit is subject to the requirements of 40 CFR Part 60, Subpart J.

b. The permittee shall not burn in this emissions unit any refinery fuel gas that has a volume-weighted, rolling 3-hour average H_2S concentration greater than 0.10 grain per dry standard cubic foot, except during periods of startup, shutdown or malfunction of the refinery fuel gas amine systems provided that BPH shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions.

c. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

d. Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), this source shall comply with the sulfur dioxide (SO_2) emissions limit of 34.53 tons SO_2 per rolling 12-month period and demonstrate compliance using the monitoring, record keeping and reporting requirements of Section B.3.a) through 3.c) of this permit.

e. The emission limitation specified by OAC rule 3745-18-54(W)(1) is less stringent than the emission limitation specified by 40 CFR 60.104(a)(1).

f. 40 CFR Part 60 subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

g. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans of this Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A). This emissions unit is required to comply with the applicable periodic tune-up and one-time energy assessment requirements specified in Table 3 to this Subpart no later than January 31, 2016.

c) Operational Restrictions

(1) The permittee shall only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(2) The quality of natural gas, LP gas, and/or refinery fuel gas burned in this emissions unit shall meet, on an "as burned" basis, a sulfur content that is sufficient to comply with the allowable hydrogen sulfide emission limitation of 0.10 grain per dry standard cubic foot as a volume-weighted, rolling 3-hour average.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(3) [40 CFR 63.7500(a) – Table 3]
An existing process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than refinery fuel gas, LP gas, or natural gas, the permittee shall maintain a record of the type, quantity, and heating value in Btu/dscf of the fuel burned.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(4) Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), this source shall monitor and record the monthly average volumetric firing rate in units of standard cubic feet per month. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total SO_2 emission rates in units of tons using the methodology described in section f).

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

e) Reporting Requirements

(5) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas, LP gas, and/or natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(1) Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), the permittee shall submit quarterly deviation (excursion) reports that identify each month all exceedances of the following allowable emission limitations:

a. 34.53 tons SO_2 per rolling, 12-month period.

The quarterly deviation (excursion) reports may be submitted as part of the quarterly compliance reports required in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

The permittee shall not burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf) determined hourly on a 3-hour rolling average basis.

Applicable Compliance Method:

Ongoing compliance with the hydrogen sulfide (H_2S) emission limitation shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping Section in Section B.4. of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, the permittee shall demonstrate compliance with the H_2S standard according to 40 CFR 60.106(e).

a. Emission Limitation:

Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitation:

Particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input.

Applicable Compliance Method:

Compliance with this limit is demonstrated through burning only refinery fuel gas, natural gas or LP gas in this emissions unit.

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9).

c. Emission Limitation:

34.53 tons SO_2 per rolling, 12-month period

Applicable Compliance Method:

Compliance shall begin after the completion of construction and the initial shakedown of the Coker Gas Plant (P068), and shall be demonstrated as follows:

i. multiply the monthly average total sulfur concentration (ppmv) by the molecular weight* of SO_2 (64 lbs/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in the units of lb/mmSCF.

ii. Multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and

iii. add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.

*this calculation assumes that 1 mole of total sulfur is equal to one mole of SO_2

[OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

2. B019, Crude/Vac 2 Furnace

Operations, Property and/or Equipment Description:

B019 - Crude Vac 2 Heater PR-562945: 258 mmBtu/hr (HHV rated) process heater fired with refinery fuel gas, natural gas, and/or LP gas

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) (PTI 04-01290 issued 7/25/2002, modified PTI P0119763 issued 10/30/2015)	Nitrogen oxides (NO_x) emissions shall not exceed 262.8 tons per rolling, 12-month period. Sulfur dioxide (SO_2) emissions shall not exceed 21.02 tons per rolling, 12-month period. See b)(2)a. and b)(2)b. See terms B.3.a)(2) and B.3.a)(3), and B.4. of Section B.
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.
c.	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input
d.	OAC rule 3745-18-54(W)(1)	Sulfur dioxide (SO_2) emissions shall not exceed 0.29 pounds of SO_2 per million Btu of actual heat input. See b)(2)c.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	See b)(2)d.
f.	40 CFR Part 60, Subpart J (40 CFR 60.100 – 60.109) [[This emissions unit is an affected facility under the requirements of this rule as a result of Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CV095 RL), and is not due to the emissions unit being installed, modified, or reconstructed after June 11, 1973 and prior to May 14, 2007]]	See b)(2)e. and b)(2)f. The emission limitation specified by this rule for fuel gas combustion devices is equivalent to the limitation established under OAC rule 3745-31-05(D). See term B.4. of Section B.
g.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 63.16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
h.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480 – 63.7575) [In accordance with 40 CFR 63.7575, this emissions unit is an existing process heater that is in the "units designed to burn gas 1 fuels" subcategory and subject to the applicable emissions limitations/control requirements specified in this section.]	See b)(2)g. and term B.6. of Section B. [63.7500(a) Table 3 requirements]

(2) Additional Terms and Conditions

a. Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), terms B.3.a) through B.3.c) of Section B. of this permit outlines the monitoring, record keeping, reporting, required to maintain compliance with the SO_2 limit.

b. Permit to Install 04-01290 issued 7/25/2002 incorporated the requirement that this emissions unit be subject to the requirements of 40 CFR 60 Subpart J.

c. The emission limitation specified by OAC rule 3745-18-54(W)(1) is less stringent than the emission limitation specified pursuant to 40 CFR 60.104(a)(1).

d. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to this emissions unit.

e. The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis. Pursuant to the fuel gas definition in 40 CFR 60.101(d), this standard is also applicable if the permittee combines and combusts natural gas or liquefied petroleum (LP) gas in any proportion with refinery fuel gas in this emissions unit.

f. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

g. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans of this Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A). This emissions unit is required to comply with the applicable periodic tune-up and one-time energy assessment requirements specified in Table 3 to this Subpart no later than January 31, 2016.

c) Operational Restrictions

(1) The permittee shall burn only refinery fuel gas, natural gas, or LP gas in this emissions unit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(2) The quality of the natural gas, LP gas and/or refinery fuel gas burned in this emissions unit shall meet, on an “as burned” basis, a sulfur content that is sufficient to comply with the allowable hydrogen sulfide emission limitation of 0.10 grain per dry standard cubic foot as a volume-weighted, rolling 3-hour average.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(3) [40 CFR 63.7500(a) – Table 3]
An existing process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in § 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than refinery fuel gas, natural gas, or LP gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

(2) Each month, the permittee shall monitor and record the daily average volumetric firing rate in units of standard cubic feet per hour. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total NO_x emission rates in units of tons in accordance with the procedure outlined in section f) Testing Requirements.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

(3) In order to demonstrate compliance with the 21.02 tons SO_2 per rolling, 12-month period emission limitation, the permittee shall monitor and record the monthly average volumetric firing rate in units of standard cubic feet per month. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total SO_2 emission rates in units of tons in accordance with the procedure outlined in section f) Testing Requirements.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas, natural gas, or LP gas was burned in this emissions unit. Each report shall be submitted within in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit..

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify each month all exceedances of the following allowable emission limitations:

a. 262.8 tons NO_x per rolling, 12-month period; and

b. 21.02 tons SO_2 per rolling, 12-month period.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

262.8 tons NO_x per rolling, 12-month period

Applicable Compliance Method:

The NO_x emission limitation above shall be demonstrated as follows:

i. multiply the monthly total gas flow (mmscf) by the monthly average fuel gas heating value (Btu/scf) and then multiply by the most recent NO_x emission factor (lb/mmBtu) determined by stack testing; and

ii. add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total NO_x emissions.

If required, the permittee shall establish a new NO_x emission factor in units of pounds NO_x per million Btu of heat input using Methods 3A, 7E and 19 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitation:

21.02 tons SO_2 per rolling, 12-month period

Applicable Compliance Method:

The SO_2 emission limitation above shall be demonstrated as follows:

i. multiply the monthly average H_2S concentration (ppmv) by the molecular weight* of SO_2 (64 lbs/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in the units of lb/MMSCF.

ii. multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month;

iii. add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.

Beginning after the completion of construction and the initial shakedown of the Coker Gas Plant (P068), compliance with this emissions limit shall be demonstrated by using the total sulfur value recorded in accordance with the terms and conditions of term B.3.b. of Section B.).

*this formula assumes that 1 mole H_2S converts to 1 mole SO_2.

c. Emission Limitation:

The permittee shall burn no fuel gas in this emissions unit that has a volume weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230

mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis.

Applicable Compliance Method:

Ongoing compliance with the hydrogen sulfide emission limitation(s) contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping requirements in term B.4. of Section B. of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, the permittee shall demonstrate compliance with the H_2S standard according to 40 CFR 60.106(e).

d. Emission Limitation:

Visible particulate emissions shall not exceed 20% opacity, unless otherwise specified by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using Method 9 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

e. Emission Limitation:

PE shall not exceed 0.020 pound per million Btu of heat input.

Applicable Compliance Method:

Compliance with this limit is demonstrated through the Operational Restrictions permit condition c)(1), which requires the permittee to burn only refinery fuel gas, natural gas, or LP gas in this emissions unit.

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months prior to the permit expiration.

b. The emission testing shall be conducted to determine a NO_x emissions factor in pounds per million Btu of actual heat input.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A.
Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

3. B029, ADHT Furnace

Operations, Property and/or Equipment Description:

B029 - Process Heater (PR-560002) for A-Train Diesel Hydrotreaer: 22.8 mmBtu/hr (HHV rated) fired with refinery fuel gas, natural gas, and/or LP Gas

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01346 issued 7/20/2004, modified PTI P0119763 issued 10/30/2015)	Carbon monoxide (CO) emissions shall not exceed 1.88 pounds per hour. Nitrogen oxides (NO_x) emissions shall not exceed 1.60 pounds per hour. Particulate matter emissions less than or equal to 10 microns in diameter (PM_{10}) shall not exceed 0.17 pound per hour. Volatile organic compound (VOC) emissions shall not exceed 0.12 pound per hour. See b)(2)a., b)(2)b. and b)(2)e.
b.	OAC rule 3745-31-05(D) (PTI 04-01346 issued 7/20/2004, modified PTI P0119763 issued 10/30/2015)	CO emissions shall not exceed 7.21 tons per rolling, 12-month period. NO_x emissions shall not exceed 6.13 tons per rolling, 12-month period. PM_{10} emissions shall not exceed 0.65 ton per rolling, 12-month period. SO_2 emissions shall not exceed 2.32 tons per rolling, 12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		VOC emissions shall not exceed 0.47 ton per rolling, 12-month period. See b)(2)b., b)(2)c. and b)(2)e.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.
d.	OAC rule 3745-17-10(B)	Particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input
e.	OAC rule 3745-18-54(W)(1)	Sulfur dioxide (SO_2) emissions shall not exceed 0.29 pounds of SO_2 per million Btu of actual heat input. See b)(2)c.
f.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	See b)(2)d.
g.	40 CFR Part 60, Subpart J (40 CFR 60.100 – 60.109) [In accordance with 40 CFR 60.101, this emissions unit is a fuel gas combustion device where construction or modification commenced after June 11, 1973 and prior to May 14, 2007 and subject to the emissions limitations/control requirements specified in this section.]	See b)(2)e., b)(2)f. and term B.4. of Section B.
h.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 63.16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
i.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480 – 63.7575)	See b)(2)g. and term B.6. of Section B. [63.7500(a) Table 3 requirements]

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 40 CFR 63.7575, this emissions unit is an existing process heater in the "units designed to burn gas 1 fuels" subcategory and subject to the applicable emissions limitations/ control requirements specified in this section.]	

(2) Additional Terms and Conditions

a. The requirements of this rule include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-17-10(B)(1), OAC rule 3745-31-05(D), and 40 CFR Part 60, Subpart J.

b. The A-DHT Furnace (B029) shall be limited to a maximum firing rate of 175,200 mmBtu per rolling, 12-month period.

c. The emission limitation specified by OAC rule 3745-18-54(W)(1) is less stringent than the emission limitation specified pursuant to 40 CFR 60.104(a)(1).

d. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to this emissions unit.

e. The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis. Pursuant to the fuel gas definition in 40 CFR 60.101(d), this standard is also applicable if the permittee combines and combusts natural gas or liquefied petroleum (LP) gas in any proportion with refinery fuel gas in this emissions unit.

f. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

g. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans of this Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A). This emissions unit is required to comply with the applicable periodic tune-up and one-time energy assessment requirements specified in Table 3 to this Subpart no later than January 31, 2016.

c) Operational Restrictions

(1) The permittee shall burn only refinery fuel gas, natural gas, or LP gas in this emissions unit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(2) [40 CFR 63.7500(a) - Table 3]
An existing process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in § 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than refinery fuel gas, natural gas, or LP gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(2) The permittee shall monitor and record the daily firing rate in terms of million standard cubic feet per day, mmscf/day. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total CO, NO_x, PM_{10}, SO_2, and VOC emission rates in units of tons in accordance with the procedure outlined in permit condition f) Testing Requirements for this emissions unit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas, natural gas, or LP gas was burned in this emissions unit. Each report shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify each month when:

a. the firing rate of this emissions unit exceeded 175,200 mmBtu per rolling, 12-month period; and

b. SO_2 emissions from this emissions unit exceeded 2.32 tons per rolling, 12-month period.

The quarterly deviation (excursion) reports may be submitted as part of the quarterly compliance reports in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

CO emissions shall not exceed 1.88 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate (22.8 mmBtu/hr) by the CO emission factor from AP-42 Table 1.4-1 dated 7/98 (84 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf).

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitation:

CO emissions shall not exceed 7.21 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum allowable annual firing rate (175,200 mmBtu/yr) by the CO emission factor from AP-42 Table 1.4-1 dated 7/98 (84 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf) and divided by 2,000 pounds per ton. Therefore, as long as compliance with the annual firing rate restriction is maintained, compliance with the annual limitation shall be demonstrated.

c. Emission Limitation:

NO_x emissions shall not exceed 1.60 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate (22.8 mmBtu/hr) by the manufacturer's NO_x emission factor (0.07 lb/mmBtu).

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 7 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. Emission Limitation:

NO_x emissions shall not exceed 6.13 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum allowable annual firing rate (175,200 mmBtu/yr) by the manufacturer's NO_x emission factor (0.07 lb/mmBtu) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emissions limitation is assumed if the permittee maintains compliance with the annual firing rate restriction.

e. Emission Limitation:

PM_{10} emissions shall not exceed 0.17 pound per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate (22.8 mmBtu/hr) by the PM_{10} emission factor from AP-42 Table 1.4-2 dated 7/98 (7.6 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf).

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

f. Emission Limitation:

PM_{10} emissions shall not exceed 0.65 ton per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum allowable annual firing rate (175,200 mmBtu/yr) by the PM10 emission factor from AP-42 Table 1.4-2 dated 7/98 (7.6 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf) and divided by 2,000 pounds per ton. Therefore, as long as compliance with the annual firing rate restriction is maintained, compliance with the annual limitation shall be demonstrated.

g. Emission Limitation:

SO_2 emissions shall not exceed 2.32 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum allowable annual firing rate (175,200 mmBtu/yr) by the NSPS subpart J allowable concentration of H_2S in fuel gas (160 ppm) divided by 1 million, multiplied by the molecular weight of SO_2 (64 lb/lb-mole), divided by the ideal gas volume (387 ft^3/lb-mole), divided by the conservative heating value for refinery fuel gas (1000 Btu/scf) and multiplied by ($1x10^6$ Btu/mmBtu), and divided by 2,000 pounds per ton.

Prior to the start-up of the Coker Gas Plant (P068), the SO_2 emission limitation above, shall be demonstrated as follows:

i. Multiply the monthly average H_2S concentration by the molecular weight* of SO_2 (64 lbs/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in the units of lb/mmscf.

ii. Multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and

iii. add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.

*this formula assumes that 1 mole of H_2S or total Sulfur converts to 1 mole of SO_2

Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), compliance with this emissions limit shall be demonstrated by replacing the monthly average H_2S concentration referenced in f)(1)g.i. above, with the total sulfur value recorded in accordance with the terms and conditions of term B.3. of Section B., when not firing fuel gas from the East Side Mix Drum.

Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), whenever this heater is fired using fuel gas from the East Side Mix Drum, the compliance with this emissions limit shall be demonstrated by replacing the monthly average H_2S concentration referenced in f)(1)g.i above, with the monthly average H_2S concentration in the fuel gas plus 35 ppm sulfur to account for the non-H_2S sulfur in the fuel gas, based on testing at the refinery, or other more recent measured value.

h. Emission Limitation:

VOC emissions shall not exceed 0.12 pound per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate (22.8 mmBtu/hr) by the VOC emission factor from AP-42 Table 1.4-2 dated

7/98 (5.5 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf).

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

i. Emission Limitation:

VOC emissions shall not exceed 0.47 ton per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum allowable annual heat input (175,200 mmBtu/yr) by the VOC emission factor from AP-42 Table 1.4-2 dated 7/98 (5.5 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf) and divided by 2,000 pounds per ton. Therefore, as long as compliance with the hourly emission limitation and the annual firing rate restriction is maintained, compliance with the annual emission limitation shall be demonstrated.

j. Emission Limitation:

The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis.

Applicable Compliance Method:

Ongoing compliance shall be demonstrated based upon the data collected as required in the Monitoring and/or Recordkeeping Requirements in term B.4. of Section B. of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, the permittee shall demonstrate compliance with the H_2S standard according to 40 CFR 60.106(e).

k. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, unless otherwise specified by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in Method 9 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

l. Emission Limitation:

PE shall not exceed 0.020 pound per million Btu of heat input.

Applicable Compliance Method:

Compliance with this emission limitation is demonstrated through the Operational Restrictions permit condition c)(1), which requires this permittee to burn only refinery fuel gas, natural gas, or LP gas in this emissions unit.

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

[Authority for term: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

4. B031, Vac 1 Furnace

Operations, Property and/or Equipment Description:

B031 - Vacuum 1 process heater (PR-560003): 144 mmBtu/hr high heating value (HHV) rated (130 mmBtu/hr LHV rated) heater. Heater vents out Crude convection heater stack.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI P0119763 issued 10/30/2015, modified PTI 0119763 issued 10/30/2015)	Carbon monoxide (CO) emissions shall not exceed 12.45 pounds per hour. Nitrogen oxides (NOx) emissions shall not exceed 10.6 pounds per hour. Particulate matter emissions less than or equal to 10 microns in diameter (PM_{10}) shall not exceed 0.28 pound per hour. Volatile organic compound (VOC) emissions shall not exceed 1.29 pounds per hour.
b.	OAC rule 3745-31-05(D) (PTI P0119763 issued 10/30/2015, modified PTI 0119763 issued 10/30/2015)	See b)(2)a. See term B.3.a)(2) and B.3.a)(3) of Section B.
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input See c)(1)
d.	OAC rule 3745-18-54(W)(1)	Sulfur dioxide (SO_2) emissions shall not exceed 0.29 pounds of SO_2 per million Btu of actual heat input. See b)(2)b.
e.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	See b)(2)c.
f.	40 CFR Part 60, Subpart J (40 CFR 60.100 – 60.109) [In accordance with 40 CFR 60.101, this emissions unit is a fuel gas combustion device where construction commenced after June 11, 1973 and prior to May 14, 2007 and subject to the emissions limitations/control requirements specified in this section.]	See b)(2)d., b)(2)e. and term B.4. of Section B.
g.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 63.16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
h.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480 – 63.7575) [In accordance with 40 CFR 63.7575, this emissions unit is an existing industrial boiler or process heater that is in the "units designed to burn gas 1 fuels" subcategory and subject to the applicable emissions limitations/control requirements specified in this section.]	See b)(2)f. and term B.6. of Section B. [63.7500(a) Table 3 requirements]

(2) Additional Terms and Conditions

a. Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), this source shall comply with the sulfur dioxide (SO_2) emissions limit of 11.62 tons SO_2 per rolling 12-months and demonstrate compliance using the monitoring, record keeping and reporting requirements of term B.3.a) through 3.c) of Section B. of this permit.

b. The emission limitation specified by OAC rule 3745-18-54(W)(1) is less stringent than the emission limitation specified pursuant to 40 CFR 60.104(a)(1).

c. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to this emissions unit.

d. The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis. Pursuant to the fuel gas definition in 40 CFR 60.101(d), this standard is also applicable if the permittee combines and combusts natural gas or liquefied petroleum (LP) gas in any proportion with refinery fuel gas in this emissions unit.

e. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

f. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans of this Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A). This emissions unit is required to comply with the applicable periodic tune-up and one-time energy assessment requirements specified in Table 3 to this Subpart no later than January 31, 2016.

c) Operational Restrictions

(1) The permittee shall burn only refinery fuel gas, natural gas, or LP gas in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(1)]

(2) The quality of the natural gas, LP gas and/or refinery fuel gas burned in this emissions unit shall meet, on an “as burned” basis, a sulfur content that is sufficient to comply with the allowable hydrogen sulfide emission limitation of 0.10 grain per dry standard cubic foot as a volume-weighted, rolling 3-hour average.

[Authority for term: OAC rule 3745-77-07(A)(1)]

(3) [40 CFR 63.7500(a) – Table 3]

An existing process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in § 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than refinery fuel gas, natural gas, or LP gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(2) Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), this source shall monitor and record the monthly average volumetric firing rate in units of standard cubic feet per month. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total SO_2 emission rates in units of tons using the methodology described in section f). Testing Requirements.

[Authority for term: PTI 0117988 and OAC rule 3745-77-07(A)(3)]

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas, natural gas, or LP gas was burned in this emissions unit. Each report shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

[Authority for term: OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, unless otherwise specified by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using Method 9 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitation:

CO emissions shall not exceed 12.45 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate on an hourly basis (151 mmBtu/hr (HHV)) by the CO emission factor from AP-42 Table 1.4-1 dated 7/98 (84 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf).

NOTE: BPH requested that the BAT limits have an additional 5% for short term design capacity, 144 mmBtu/hr/0.95 = 151 mmBtu/hr.

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

c. Emission Limitation:

NO_x emissions shall not exceed 10.6 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate on an hourly basis (151 mmBtu/hr (HHV)) by the NO_x emission factor for this emissions unit specified in PTI 04-959 issued 5/30/2006 of 0.07 lb NO_x/mmBtu.

NOTE: BPH requested that the BAT limits have an additional 5% for short term design capacity, 144 mmBtu/hr/0.95 = 151 mmBtu/hr.

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 7E of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. Emission Limitation:

PM_{10} emissions shall not exceed 0.28 pound per hour.

The hourly emission limitation was developed by multiplying the maximum hourly firing rate (151 mmBtu/hr (HHV)) by the PM (Filterable) emission factor from AP-42 Table 1.4-2 dated 7/98 (1.9 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf).

NOTE: BPH requested that the BAT limits have an additional 5% for short term design capacity, 144 mmBtu/hr/0.95 = 151 mmBtu/hr.

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 201 and 202 of 40 CFR Part 51, Appendix M.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

e. Emission Limitation

VOC emissions shall not exceed 1.29 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum hourly firing rate (151 mmBtu/hr) by the TOC emission factor (11 lb/mmscf) minus the Methane emission factor (2.3 lb/mmscf) from AP-42 Table 1.4-2 dated 7/98, (which equals 8.7 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf).

NOTE: BPH requested that the BAT limits have an additional 5% for short term design capacity, 144 mmBtu/hr/0.95 = 151 mmBtu/hr.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

f. Emission Limitation:

The permittee shall burn no fuel gas in this emissions unit that has a volume weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis.

Applicable Compliance Method:

Ongoing compliance with the hydrogen sulfide emission limitation(s) contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping requirements in term B.4. of Section B. of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, the permittee shall demonstrate compliance with the H_2S standard according to 40 CFR 60.106(e).

g. Emission Limitation:

PE shall not exceed 0.020 pound per million Btu of heat input.

Applicable Compliance Method:

Compliance with this limit is demonstrated through condition c)(1), which requires the permittee to burn only refinery fuel gas, natural gas, or LP gas in this emissions unit.

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

h. Emission Limitation:

11.62 tons SO_2 per rolling, 12-month period

Applicable Compliance Method:

Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), this source shall demonstrate compliance with this emissions limit by using the following method:

i. Multiply the monthly average total sulfur concentration recorded in accordance with the terms and conditions of term B.3.a) of Section B. by the molecular weight* of SO_2 (64 lbs/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in the units of lb/MMSCF.

ii. Multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and

iii. add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.

*this formula assumes that 1 mole of total Sulfur converts to 1 mole of SO_2

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(C)(1)]

(1) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

b. The emission testing shall be conducted within 6 months of the effective date of the permit.

c. The emission testing shall be conducted to determine a CO emissions factor in pounds per million Btu of actual heat input.

d. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A.
Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

e. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

g. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

i. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

5. B032, Coker 3 Furnace

Operations, Property and/or Equipment Description:

B032 - Coker 3 Furnace (PR-560004): 256 mmBtu/hr (HHV) process heater, (230 mmBtu/hr LHV), fired with refinery fuel gas, natural gas, and/or LP Gas

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01471 issued 7/17/2007, modified PTI P0119763 issued 10/30/2015)	Carbon monoxide (CO) emissions shall not exceed 18.94 pounds per hour and 82.96 tons per rolling, 12-month period. Nitrogen oxides (NO_x) emissions shall not exceed 14.95 pounds per hour and 65.48 tons per rolling, 12-month period. Particulate matter emissions less than or equal to 10 microns in diameter (PM10) shall not exceed 1.71 pounds per hour and 7.51 tons per rolling, 12-month period. Sulfur dioxide (SO_2) emissions shall not exceed 20.46 tons per rolling, 12-month period. Volatile organic compound (VOC) emissions shall not exceed 1.24 pounds per hour and 5.43 tons per rolling, 12-month period. See b)(2)a. and b)(2)d.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.
c.	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input See c)(1)
d.	OAC rule 3745-18-54(W)(1)	Sulfur dioxide (SO_2) emissions shall not exceed 0.29 pounds of SO_2 per million Btu of actual heat input. See b)(2)b.
e.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	See b)(2)c.
f.	40 CFR Part 60, Subpart J (40 CFR 60.100 – 60.109) [In accordance with 40 CFR 60.101, this emissions unit is a fuel gas combustion device where construction commenced after June 11, 1973 and prior to May 14, 2007 and subject to the emissions limitations/control requirements specified in this section.]	See b)(2)d., b)(2)e. and term B.4. of section B.
g.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 63.16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
h.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480 – 63.7575) [In accordance with 40 CFR 63.7575, this emissions unit is an existing process heater in the "units designed to burn gas 1 fuels"	See b)(2)f. and term B.6. of Section B. [63.7500(a) Table 3 requirements]

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	subcategory and subject to the applicable emissions limitations/control requirements specified in this section.]	

(2) Additional Terms and Conditions

a. The requirements of this rule include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-17-10(B)(1), 40 CFR Part 60, Subpart J, and OAC rule 3745-31-05(D).

b. The emission limitation specified by OAC rule 3745-18-54(W)(1) is less stringent than the emission limitation specified pursuant to 40 CFR 60.104(a)(1).

c. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to this emissions unit.

d. The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis. Pursuant to the fuel gas definition in 40 CFR 60.101(d), this standard is also applicable if the permittee combines and combusts natural gas or liquefied petroleum (LP) gas in any proportion with refinery fuel gas in this emissions unit.

e. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

f. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans of this Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A). This emissions unit is required to comply with the applicable periodic tune-up and one-time energy assessment requirements specified in Table 3 to this Subpart no later than January 31, 2016.

c) Operational Restrictions

(1) The permittee shall burn only refinery fuel gas, natural gas, or LP gas in this emissions unit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(2) The quality of the natural gas, LP gas and/or refinery fuel gas burned in this emissions unit shall meet, on an “as burned” basis, a sulfur content that is sufficient to comply with

the allowable hydrogen sulfide emission limitation of 0.10 grain per dry standard cubic foot as a volume-weighted, rolling 3-hour average.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(3) [40 CFR 63.7500(a) – Table 3]
An existing process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in § 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), if the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than refinery fuel gas, natural gas, or LP gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

(2) The permittee shall monitor and record the daily average firing rate in terms of standard cubic feet per hour. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total SO_2, CO, NO_x, PE, and VOC emission rates in units of tons per month and tons per year in accordance with the procedure outlined in permit condition f) Testing Requirements for this emissions unit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas, natural gas, or LP gas was burned in this emissions unit. Each report shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

(2) The permittee shall submit deviation (excursion) reports that identify each day when the CO, NO_x, PE, SO_2, and/or VOC pound per hour and/or rolling, 12-month emission limitations specified under b)(1)a. were exceeded, in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

CO emissions shall not exceed 18.94 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate (230 mmBtu/hr, on a Lower Heating Value (LHV) basis) by the CO emission factor from AP-42 Table 1.4-1 dated 7/98 (84 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf).

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitation:

CO emissions shall not exceed 82.96 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the hourly emission limitation (18.94 lbs/hr) by the maximum annual hours of operation (8,760 hrs/yr) and divided by 2,000 pounds per ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual limitation shall be demonstrated.

c. Emission Limitation:

NO_x emissions shall not exceed 14.95 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing (230 mmBtu/hr, on a Lower Heating Value (LHV) basis) by the NO_x emission factor for this emissions unit as determined using Method 7E of 40 CFR Part 60, Appendix A on August 17, 1999 (0.065 lb/mmBtu). On August 17, 1999, the permittee conducted a Method 7E compliance test demonstrating an average NO_x emission rate of 0.065 lb/mmBtu

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 7E of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. Emission Limitation:

NO_x emissions shall not exceed 65.48 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the rolling, 12-month firing rate in mmBtu by the NO_x emission factor determined during the most recent emissions test that demonstrated compliance divided by 2,000 pounds per ton. On August 17, 1999, the permittee conducted a Method 7E compliance test demonstrating an average NO_x emission rate of 0.065 lb/mmBtu.

e. Emission Limitation:

PM_{10} emissions shall not exceed 1.71 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing (230 mmBtu/hr, on a Lower Heating Value (LHV) basis) by the PM_{10} emission factor from AP-42 Table 1.4-2 dated 7/98 (7.6 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf).

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

f. Emission Limitation:

PM_{10} emissions shall not exceed 7.51 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the allowable hourly emission rate (1.71 lbs/hr) by the maximum annual hours of operation (8,760 hrs/yr) and divided by 2,000 pounds per ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual limitation shall be demonstrated.

g. Emission Limitation:

SO_2 emissions shall not exceed 20.46 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum firing rate (230 mmBtu/hr on a LHV basis) by the NSPS subpart J allowable concentration of H_2S in fuel gas (162 ppmv) divided by 1 million, multiplied by the molecular weight of SO_2 (64 lb/lb-mole), divided by the ideal gas volume (379

ft^3/lb-mole), divided by an annual average heating value of fuel burned (1347 Btu per standard cubic foot), and multiplied by ($1x10^6$ Btu/mmBtu), multiplying by the maximum hours of usage (8760 hr/yr) and divided by 2,000 pounds per ton.

i. Prior to the start-up of the Coker Gas Plant (P068), the SO_2 emission limitation above, shall be demonstrated as follows: Multiply the monthly average H_2S concentration by the molecular weight of SO_2 (64 lb/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in units of lb/MMSCF
ii. Multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and
iii. Add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.
*this formula assumes that 1 mole of H_2S or total sulfur converts to 1 mole of SO_2

Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), compliance with this emissions limit shall be demonstrated by replacing the monthly average H_2S concentration referenced in f)(1)g.i above, with the total sulfur value recorded in term B.3. of Section B.

h. Emission Limitation:

VOC emissions shall not exceed 1.24 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing (230 mmBtu/hr, on a Lower Heating Value (LHV) basis) by the VOC emission factor from AP-42 Table 1.4-2 dated 7/98 (5.5 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf).

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

i. Emission Limitation:

VOC emissions shall not exceed 5.43 ton per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the allowable hourly emission rate (1.24 lbs/hr) by the maximum annual hours of operation (8,760 hrs/yr) and divided by 2,000 pounds per ton. Therefore, as long as compliance

with the hourly allowable emission limitation is maintained, compliance with the annual limitation shall be demonstrated.

j. Emission Limitation:

The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis.

Applicable Compliance Method:

Ongoing compliance with the hydrogen sulfide emission limitation(s) contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping in term B.4. of Section B. of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, the permittee shall demonstrate compliance according to 40 CFR 60.106(f).

k. Emission Limitation:

Visible PE shall not exceed 20% opacity, unless otherwise specified by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in Method 9 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

l. Emission Limitation:

PE shall not exceed 0.020 pound per million Btu of heat input.

Applicable Compliance Method:

Compliance with this emission limitation is demonstrated through compliance with the Operational Restrictions in permit condition c)(1), which requires this permittee to burn only refinery fuel gas, natural gas, or LP gas in this emissions unit.

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

h. The emission testing shall be conducted on an annual basis by December 31 of each year.

i. The emission testing shall be conducted to demonstrate compliance with the allowable mass emissions rate for NO_x, in pounds per hour.

j. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A.
Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

k. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

l. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

m. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

n. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

6. B036, Reformer 3 Heater

Operations, Property and/or Equipment Description:

B036 - Reformer 3 Heater 519 mmBtu/hr (LHV) (charge and interheater) fired with refinery fuel gas

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b)(1)j., d)(5) through d)(8), and e)(3).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T) (PTI P0119763 issued 10/30//2015)	Carbon monoxide (CO) emissions shall not exceed 18.6 pounds per hour and 81.61 tons per rolling, 12-month period. Nitrogen oxides (NO_x) emissions shall not exceed 0.045 pound per million British thermal unit (lb/MMBtu) on a daily, average basis and 79.56 tons per rolling, 12-month period. Sulfur dioxide (SO_2) emissions shall not exceed 30.00 tons per rolling, 12-month period. Volatile organic compounds (VOC) emissions shall not exceed 2.8 pounds per hour and 12.28 tons per rolling, 12-month period. See b)(2)a., b)(2)b. and b)(2)e.
b.	OAC rule 3745-31-10 to 20 (PTI P0119763 issued 10/30/2015)	Particulate matter emissions less than or equal to 10 microns in diameter (PM_{10}) / particulate matter emissions less than or equal to 2.5 microns in diameter ($PM_{2.5}$) shall not exceed 7.6 pounds per million standard cubic feet of fuel gas burned, 3.9 pounds per hour, and 16.94 tons per

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		rolling, 12-month period. All PM_{10} particulate emissions are assumed to be $PM_{2.5}$.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.
d.	OAC rule 3745-17-10(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through 20
e.	OAC rule 3745-18-54(W)(1)	The emission limitation specified by OAC rule 3745-18-54(W)(1) of 0.29 lb SO_2/mmBtu is less stringent than the limitation established by ORC 3704.03(T).
f.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	40 CFR Part 60 subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.
g.	40 CFR Part 60, Subpart Ja (40 CFR 60.100a – 60.109a) [In accordance with 40 CFR 60.101a, this emissions unit is a natural draft process heater where construction commenced after May 14, 2007 and subject to the emissions limitations/control requirements specified in this section.]	See b)(2)b., b)(2)c. and term B.5. of Section B.
h.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 63.16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
i.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480 – 63.7575) [In accordance with 40 CFR 63.7490(d), this emissions unit is an existing industrial boiler or process heater that is designed to burn gas 1 subcategory fuel and subject to the applicable emissions limitations/control requirements specified in this section.]	This emissions unit is subject to the requirement of 40 CFR 63 Subpart DDDDD (Boiler MACT) and the permittee shall comply with its applicable requirements. The primary requirement is to conduct a one-time energy assessment and begin periodic tune-ups by January 31, 2016. See b)(2)d., c)(2) and term B.6. of Section B.
j.	ORC 3704.03(F)(4)(c) (Air Toxics)	See d)(5) through d)(8), and e)(3).

(2) Additional Terms and Conditions

a. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Ja.

b. In accordance with 40 CFR 60.102a(g)(1), the permittee shall comply with either 40 CFR 60.102a(g)(1)(i) or 40 CFR 60.102a(g)(1)(ii). BPH has chosen to comply with 60.102a(g)(1)(ii); therefore, the remaining monitoring and record keeping requirements in this permit are reflective of that option. If the permittee decides to revise the compliance option at a later date as allowed by 40 CFR 60.102a(g)(1), this will be allowed upon notification to OEPA.

i. The permittee shall not burn in any fuel gas combustion device any fuel gas that contains H_2S in excess of 162 ppmv determined hourly on 3-hour rolling average basis and H_2S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis [*40 CFR 60.102a(g)(1)(ii)*].

ii. The permittee plans to comply with SO_2 limits in permit condition c.ii. per 60.102a(g)(1)(ii). Therefore, the remaining monitoring and recordkeeping requirements in this permit are reflective of that compliance option. If the permittee decides to revise the compliance option at a later date as allowed by 40 CFR 60.102a(g)(1), this will be allowed upon notification to OEPA.

c. [40 CFR 60.102a(g)(2)]

The permittee shall not discharge to the atmosphere any emissions of NO_x in excess of 40 ppmv (dry basis, corrected to 0 percent excess air) on a 30-day rolling average basis.

d. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans of this Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A). This emissions unit is required to comply with the applicable periodic tune-up and one-time energy assessment requirements specified in Table 3 to this Subpart no later than January 31, 2016.

e. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-10 through 20.

c) Operational Restrictions

(1) The permittee shall only burn natural gas and/or refinery fuel gas in this emissions unit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(2) [40 CFR 63.7500(a) – Table 3 of 40 CFR 63, Subpart DDDDD]
A new process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), if the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than refinery fuel gas or natural gas, the permittee shall maintain a record of the type, quantity, and heating value in Btu/dscf of the fuel burned.

(2) The permittee shall operate and maintain equipment to continuously monitor and record the actual fuel flow to this emissions unit when the emissions unit is in operation.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

(3) The permittee shall measure and record the gross calorific value ("GCV") of the fuel being fired in this emissions unit on an hourly basis. The GCV shall be used in conjunction with the records required in d(5) above to calculate and record the hourly heat input to the emissions unit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

(4) The permittee shall calculate and maintain record of the rolling 12-month total NO_x, and SO_2 emission rates in units of tons per year in accordance with the procedures outlined in Section f), Testing Requirements.

[Authority for term: PTI 04-01346 and OAC rule 3745-77-07(A)(3)]

AIR TOXICS

(5) The Permit to Install application for this emission unit, B036, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "**X**" hours per day and "**Y**" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4\ TLV/XY = MAGLC$$

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or worst case toxic contaminant(s):

Toxic Contaminant: **Hexane**

TLV (mg/m3): 175.9

Maximum Hourly Emission Rate (lbs/hr): 0.92

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m3): 0.29

MAGLC (µg/m3): **4188**

The permittee, has demonstrated that emissions of hexane, from emissions unit(s) B036, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[Authority for Term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(6) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final Permit to Install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in

greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[Authority for Term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(7) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[Authority for Term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(8) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[Authority for Term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas and/or natural gas was burned in this emissions unit. Each report shall be submitted to the Toledo Division of Environmental Services in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(2) The permittee shall submit deviation (excursion) reports that identify each day when the NO_x, and/or SO_2 emission limitations specified under b)(1)a. were exceeded. The reports shall be submitted (i.e., postmarked) to the Toledo Division of Environmental Servicesquarterly, by January 30, April 30, July 30, and October 30 of each year and shall cover the previous calendar quarters. These reports may be combined with the quarterly deviation reports submitted by the facility.

[Authority for term: PTI P0117988 and OAC rule 3745-77-07(A)(1)]

(3) AIR TOXICS REPORTING: The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the quarterly deviation (excursion) reports. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

162 ppmv fuel gas H_2S, determined hourly on a 3-hour rolling average basis.

Applicable Compliance Method:

Ongoing compliance shall be demonstrated based upon the monitoring and record keeping requirements contained in the Monitoring and Record Keeping Section d) of this permit; term B.5 of Section B., and through demonstration of compliance with the quality assurance/ quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, compliance shall also be demonstrated based upon the methods and procedures of 40 CFR 60.104a(j).

c. Emission Limitation:

60 ppmv fuel gas H_2S, determined daily on a 365 successive calendar day rolling average basis.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements of d) and term B.5 of Section B.

d. Emission Limitation:

30.00 tons SO_2 per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be demonstrated as follows:

i. Add the monthly average H_2S concentration in the fuel gas plus 35 ppm sulfur to account for the non-H_2S sulfur in fuel gas, based on testing at the refinery, or other more recent measured value to obtain the total sulfur concentration.
ii. Multiply the concentration of total sulfur by the molecular weight of SO_2, 64 lb SO_2/lb-mole SO_2 and divide 379 mmscf/lb-mole gas conversion to obtain the lb SO_2/mmscf emission factor.
iii. Multiply the SO_2 emission factor by the monthly total gas flow, divide by 2000 lb/ton and add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.

*this calculation assumes that mole of total sulfur equals one mole of SO_2

e. Emission Limitation:

18.6 pounds per hour CO

Applicable Compliance Method:

Multiply the vendor provided emission factor of 0.0359 lb/mmBtu times the average daily fuel gas burned in mmscf/hr times the daily average heating value in Btu/scf.

If required, the permittee shall demonstrate compliance using Methods 1 through 4 and 10 of 40 CFR part 60, Appendix A. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

f. Emission Limitation:

81.61 tons CO per rolling, 12-month period

Applicable Compliance Method:

Compliance may be demonstrated by calculating annual emissions in tons based on the sum of the hourly emissions of CO over a 12-month rolling period.

g. Emission Limitation:

3.9 pounds per hour $PM_{10}/PM_{2.5}$ emissions

Applicable Compliance Method:

Multiply the AP-42 section 1.4 $PM_{10}/PM_{2.5}$ emission factor dated July 1998 of7.6 lb/mmscf of fuel gas burned times the daily average fuel gas burned per hour times the fuel gas heating value correction factor. The heating value correction factor is equal to the ratio of the daily average fuel gas heat content to the AP-42 natural gas heat content of 1,020 Btu/scf. Initial compliance shall be demonstrated based upon the procedures specified in Other Test Method 27. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

h. Emission Limitation:

16.94 tons PM_{10} per rolling, 12-month period

Applicable Compliance Method:

Compliance may be demonstrated by calculating annual emissions in tons based on the sum of the hourly emissions of PM_{10} over a 12-month rolling period.

i. Emission Limitation:

0.045 lb/mmBtu NO_x on a daily average basis

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements in Section d) of this permit.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 7 or 7e.

j. Emission Limitation:

40 ppmv NO_x (dry basis, corrected to 0 percent excess air) on a 30-day rolling average basis

Applicable Compliance Method:

Ongoing compliance shall be demonstrated based upon the monitoring and record keeping requirements contained in the Monitoring and Record Keeping

Section d) of this permit; term B.5 of Section B., and through demonstration of compliance with the quality assurance/ quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, compliance shall also be demonstrated based upon the methods and procedures outlined in 40 CFR 60.104a(i).

k. Emission Limitation:

79.56 tons NO_x per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be determined by multiplying the annual average emission factor of 0.035 lb/mmBtu for Ultra Low NO_x burners by the sum of the heat inputs in mmBtu (over a rolling 12-month period), and then dividing it by 2000.

l. Emission Limitation:

2.8 pound per hour VOC

Applicable Compliance Method:

Multiply the AP-42 section 1.4 VOC emission factor dated July 1998 of 5.5 lb/mmcf of fuel gas burned corrected for heating value by the daily average fuel gas burned. The heating value correction factor is equal to the ratio of the daily average fuel gas heat content to the AP-42 natural gas heat content of 1,020 Btu/scf.

If required, the permittee shall demonstrate compliance using Methods 1 through 4 and 25 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

m. Emission Limitation:

12.28 tons VOC per rolling, 12-month period

Applicable Compliance Method:

Compliance may be demonstrated by calculating annual emissions based on the sum of the daily average hourly emissions of VOC over a 12-month rolling period.

(3) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

n. The emission testing shall be conducted within 6 months of the effective date of this permit.

o. The emission testing shall be conducted to demonstrate compliance with the allowable pound per hour emissions rate for CO.

p. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A.
Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

q. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

r. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

s. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

a. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

7. F001, Plant Roadways

Operations, Property and/or Equipment Description:

F001 - Paved and unpaved roadways and parking areas

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(B)(4)	no visible particulate emissions from any paved roadway or parking area except for a period of time not to exceed six minutes during any sixty-minute observation period
b.	OAC rule 3745-17-07(B)(5)	no visible particulate emissions from any unpaved roadway or parking area except for a period of time not to exceed thirteen minutes during any sixty-minute observation period
c.	OAC rule 3745-17-08(B), (B)(2), (B)(8), (B)(9)	reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust See b)(2)c. through b)(2)j.

(2) Additional Terms and Conditions

a. All paved roadways and parking areas in the refinery are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08. The permittee will maintain a list of the paved roadways and parking areas on-site.

b. All unpaved roadways and parking areas in the refinery are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08. The permittee will maintain a list of the unpaved roadways and parking areas on-site.

c. The permittee shall employ reasonably available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's Title V permit application, the permittee has committed to treat the paved roadways and parking areas by sweeping and watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

d. The permittee shall employ reasonably available control measures on the unpaved shoulders of all paved roadways for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to pave the unpaved shoulders of all paved roadways at sufficient frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing additional control measures to ensure compliance.

e. The permittee shall employ reasonably available control measures on all unpaved roadways and parking areas for the purpose of ensuring compliance with the abovementioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to paving the unpaved roadways and parking areas as needed to ensure compliance, based on observations performed in accordance with the requirements in condition d)(1). Nothing in this paragraph shall prohibit the permittee from employing additional control measures to ensure compliance.

f. The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for a paved or unpaved roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

g. Any unpaved roadway or parking area, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled with the control measure(s) specified above for paved surfaces. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to the visible emission limitation for paved roadways and parking areas.

h. The permittee shall promptly remove, in such a manner as to minimize or prevent re-suspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.

i. Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.

j. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain a list of the names of all paved and unpaved roadways and parking areas on-site and available for inspection. Except as otherwise provided in section d), the permittee shall perform visual inspections of the roadways and parking areas in accordance with the following frequencies:

<u>Paved Roadways and Parking Areas:</u> weekly minimum inspection frequency

<u>Unpaved Roadways and Parking Areas:</u> weekly minimum inspection frequency

[Authority for rule: OAC rule 3745-77-07(C)(1)]

(2) For paved and unpaved roadways and parking areas designated as limited access areas, the permittee shall perform visual inspections at a minimum frequency of once per week whenever access restrictions are relaxed (e.g., during maintenance, turnarounds, etc.).

[Authority for rule: OAC rule 3745-77-07(C)(1)]

(3) The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week (7 days).

[Authority for rule: OAC rule 3745-77-07(C)(1)]

(4) The permittee may, upon receipt of written approval from the appropriate Ohio EPA District Office or local air agency, modify the above-mentioned inspection frequencies if

operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.

[Authority for rule: OAC rule 3745-77-07(C)(1)]

(5) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and

d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in section d)(5)d. shall be kept separately for (i) the paved roadways and parking areas and (ii) the unpaved roadways and parking areas, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

[Authority for rule: OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit deviation reports in accordance with the reporting requirements of the General Terms and Conditions of this permit that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

[Authority for rule: OAC rule 3745-77-07(C)(1)]

(2) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for rule: OAC rule 3745-77-07(C)(1)].

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

For paved roadways and parking areas, no visible particulate emissions except for a period of time not to exceed six minutes during any sixty-minute observation period. For unpaved roadways and parking areas, no visible particulate emissions except for a period of time not to exceed thirteen minutes during any sixty-minute observation period.

Applicable Compliance Method:

If required, compliance with the emission limitation for the paved and unpaved roadways and parking areas identified above shall be determined in accordance with Test Method 22 as set forth in “Appendix on Test Methods” in 40 CFR, Part 60 (“Standards of Performance for New Stationary Sources,” as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

[Authority for rule: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

8. F005, Coke Handling

Operations, Property and/or Equipment Description:

F005 - Coker 3 coke handling - petroleum coke from Coker 3 drops into the coke pit where coke is transferred to the coke crusher by a self-propelled crane with clamshell bucket. Crushed coke is transferred from the crusher to a conveyor owned and operated by a different facility.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC Rule 3745-31-05(A)(3) June 30, 2008 (PTI P0119999)	Compliance with the requirements of this rule includes compliance with the requirements established pursuant to OAC rule 3745-31-05(D). See b)(2)a.
b.	OAC rule 3745-31-05(D) (PTI P0119999)	Particulate matter less than or equal to 10 microns in diameter (PM_{10}) emissions shall not exceed 6.31 tons per rolling, 12-month period. Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust The permittee shall maintain a partial enclosure on the coke pit. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(B)(1) and 3745-17-08(B).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective June 30, 2008 (PTI P0119999)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM_{10} emissions from this air contaminant source since the potential to emit is less than 10 tons/year. See b)(2)g.
d.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed twenty percent opacity as a three-minute average. See b)(2)f.
e.	OAC rule 34745-17-08(B)	See b)(2)b. through b)(2)e.

(2) Additional Terms and Conditions

a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

b. The material handling operation(s) that are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08 are listed below:

coke transfer within pit and to crusher hopper by crane;

transfer coke from hopper to crusher;

crane travel in coke pit;

transfer coke from crusher to third party conveyor; and

conveying.

c. The permittee shall employ reasonably available control measures for the above-identified material handling operation(s), when in operation, for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to perform the following control measure(s) to ensure compliance:

material handling operation(s)	control measure(s)
Coke transfer within pit and to crusher hopper by crane	process inherently wet
Transfer coke from hopper to crusher	enclosure
Crane travel in coke pit	process inherently wet
Transfer coke from crusher to third party conveyor	partial enclosure
Conveying	partial enclosure

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

d. For each material handling operation that is not fully enclosed, additional control measure(s) shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the additional control measure(s) shall continue during the operation of the material handling operation(s) until further observation confirms that use of the additional control measure(s) is unnecessary.

e. Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.

f. It shall be deemed not to be a violation of this rule where the presence of uncombined water or steam is the only reason for failure of a fugitive dust emission to meet the requirements of this rule. [OAC rule 3745-17-07(B)(12)]

g. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, for material handling operations that are not adequately enclosed, the permittee shall perform visual inspections of such operations, when in operation, in accordance with the following minimum frequencies:

material handling operation(s)	visual inspection frequency
Coke transfer within pit and to crusher hopper by crane	Daily
Transfer coke from hopper to crusher	Daily
Crane travel in coke pit	Daily
Transfer coke from crusher to third party conveyor	Daily
Conveying	Daily

The above-mentioned visual inspections shall be performed during representative, normal operating conditions.

[Authority for rule: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall maintain records of the following information:

a. The date and reason any required inspection was not performed;

b. The date of each inspection where it was determined by the permittee that it was necessary to implement the control measure(s);

c. The additional control measure(s) employed;

d. The dates the additional control measure(s) was (were) implemented; and

e. On a calendar quarter basis, the total number of days the additional control measure(s) was (were) implemented.

The information in section d)(2)d. shall be kept separately for each material handling operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

[Authority for rule: OAC rule 3745-77-07(C)(1)]

(3) The permittee shall maintain monthly records of the amount of coke handled. From this data, the permittee shall calculate and record the total PM_{10} emissions for that month and the rolling, 12-month summation of the monthly emissions in accordance with the procedures specified in section f)(1)a.

[Authority for rule: OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports in accordance with the reporting requirements of the Standard Terms and Conditions of this permit that identify the following:

a. Each day during which an inspection was not performed by the required frequency; and

b. Each instance when an additional control measure, that was to be performed as a result of an inspection, was not implemented.

c. Each month that the PM_{10} emissions exceeded 6.31 tons per rolling, 12-month period.

[Authority for rule: OAC rule 3745-77-07(C)(1)]

(2) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for rule: OAC rule 3745-77-07(C)(1)].

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

PM_{10} emissions shall not exceed 6.31 tons per rolling, 12-month period.

Applicable Compliance Method:

This emission limitation was developed based on the maximum capacity of Coker 3. Compliance with this emissions limitation shall be determined by calculating PM_{10} emissions using the following emission factors along with the actual tons of coke handled.

Coke transfer within pit and to crusher hopper by crane: AP-42 5th Edition Chapter 13.2.4 for drop operations.

Transfer coke from hopper to crusher: AP-42 5th Edition, Chapter 13.2.4 for drop operations.

Crane travel in coke pit: AP-42 5th Edition, Chapter 13.2.2.

Transfer coke from crusher to third party conveyor: AP-42 5th Edition Chapter 13.2.4 for drop operations.

Conveying: AP-42 5th Edition, Chapter 13.2.4 for drop operations.

b. Emission Limitation:

Visible emissions of fugitive dust shall not exceed twenty percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance with the limitation for visible emissions of fugitive dust shall be determined through visible emissions observations performed in accordance U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

[Authority for rule: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

9. F006, Coke Crushing

Operations, Property and/or Equipment Description:

F006 - Coker 3 petroleum coke crusher

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC Rule 3745-31-05(A)(3) June 30, 2008 (PTI P0119999)	Compliance with the requirements of this rule includes compliance with the requirements established pursuant to OAC rule 3745-31-05(D). See b)(2)a.
b.	OAC rule 3745-31-05(D) (PTI 04-01471 issued 7/17/2007, modified PTI P0119999)	Particulate (PE) emissions shall not exceed 2.52 tons per rolling, 12-month period. reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust The permittee shall maintain a partial enclosure on the coke crusher. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(B)(1) and 3745-17-08(B).
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective June 30, 2008 (PTI 04-01471 issued 7/17/2007, modified PTI P0119999)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM_{10} emissions from this air contaminant source since the potential to emit for PM_{10} is less than 10 tons per year taking into

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		account the federally enforceable limitation of 2.52 tons PE per rolling, 12-month period established under OAC rule 3745-31-05(D). See b)(2)f.
d.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed twenty percent opacity as a three-minute average.
e.	OAC rule 34745-17-08(B)	See b)(2)b. through b)(2)e.

(2) Additional Terms and Conditions

a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

b. The material handling operation(s) that are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08 are listed below:

Coke crusher

c. The permittee shall employ reasonably available control measures for the above-identified material handling operation(s) for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to perform the following control measure(s) to ensure compliance:

material handling operation(s)	control measure(s)
Coke crusher	partial enclosure

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

d. For each material handling operation that is not fully enclosed, the additional control measure(s) or equipment maintenance shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the additional control measure(s) shall continue during the operation of the material handling operation(s) until further observation confirms that use of the control measure(s) is unnecessary.

e. Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.

f. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, for material handling operations that are not adequately enclosed, the permittee shall perform visual inspections of such operations, when in operation, in accordance with the following minimum frequencies:

material handling operation(s)	minimum inspection frequency
Coke crushing	daily

The above-mentioned inspections shall be performed during representative, normal operating conditions.

[Authority for rule: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall maintain records of the following information:

a. The date and reason any required inspection was not performed;

b. The date of each inspection where it was determined by the permittee that it was necessary to implement additional control measure(s) and/or equipment maintenance:

c. The equipment maintenance and/or additional control measure(s) employed;

d. The dates the equipment maintenance and/or additional control measure(s) was (were) implemented; and

e. On a calendar quarter basis, the total number of days the equipment maintenance or additional control measure(s) was (were) implemented.

The information in section d)(2)d. shall be kept separately for each material handling operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

[Authority for rule: OAC rule 3745-77-07(C)(1)]

(3) The permittee shall maintain monthly records of the amount of coke crushed. From this data, the permittee shall calculate and record the total PE emissions for that month and the rolling, 12-month summation of the monthly emissions in accordance with the procedures specified in section f)(1)a.

[Authority for rule: OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports in accordance with the reporting requirements of the Standard Terms and Conditions of this permit that identify the following:

a. Each day during which an inspection was not performed by the required frequency; and

b. Each instance when equipment maintenance and/or an additional control measure, that was to be performed as a result of an inspection, was not implemented.

c. Each month that the PE emissions exceeded 2.52 tons per rolling, 12-month period.

[Authority for rule: OAC rule 3745-77-07(C)(1)]

(2) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for rule: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Particulate emissions shall not exceed 2.52 tons per rolling, 12-month period.

Applicable Compliance Method:

The allowable emissions rate was established based on the maximum coke production rate at Coker 3.

If required, the permittee shall demonstrate compliance using the particulate emission factor of 0.02 lb/ton from the Ohio EPA Reasonably Available Control Measures Guide dated August, 1983 along with the actual coke production and using an estimated control efficiency of 70% for a partial enclosure.

b. Emission Limitation:

Visible emissions of fugitive dust shall not exceed twenty percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance with the limitation for visible emissions of fugitive dust shall be determined through visible emissions observations performed in accordance U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

[Authority for rule: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

10. J004, Marine Loading

Operations, Property and/or Equipment Description:

J004 - Marine tank vessel loading and unloading operation with no control

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-21-09(T)	Refer to term B.2. of Section B. for applicable leak detection and repair requirements.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-63.16)	Table 1 to 40 CFR Part 63, Subpart Y specifies the provisions of subpart A of 40 CFR Part 63 that apply. Table 6 to 40 CFR Part 63, Subpart CC specifies the provisions of subpart A of 40 CFR Part 63 that apply.
c.	40 CFR Part 63, Subpart Y (40 CFR 63.560-63.568) [In accordance with 40 CFR 63.561, this emissions unit is: an existing Group 2 marine tank vessel loading operation; a “source with emissions less than 10 and 25 tons”; and a “source with throughput less than 10 M barrels and 200 M barrels” and subject to the recordkeeping and emission estimation requirements specified in this section.]	Comply with the recordkeeping requirements of 40 CFR 63.567(j)(4) and the emission estimation requirements of 63.565(l). (40 CFR 63.560(a)(3)) See b)(2)a. and b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	40 CFR Part 63, Subpart CC (40 CFR 63.640-63.679) [In accordance with 40 CFR 63.641, this emissions unit is a marine tank vessel loading operation that is located at an existing petroleum refinery that is a major source of HAP emissions, and has equipment subject to equipment leak requirements specified in this section.]	See b)(2)c. Refer to term B.2. of Section B. for applicable leak detection and repair requirements.

(2) Additional Terms and Conditions

a. Per 40 CFR 63.560(a)(2), this emissions unit is not subject to the standards under 40 CFR 63.562(b) and (d) because this emissions is an existing "source with emissions less than 10 and 25 tons" as defined in 40 CFR 63.561.

Per 40 CFR 63.560(b)(2), "sources with throughput less than 10 M barrels and 200 M barrels", as defined in 40 CFR 63.561, are not subject to the emissions standards in 40 CFR 63.562(c) and (d).

b. Per 40 CFR 63.560(e)(1)(iii) and 63.560(e)(2)(iv), if HAP emissions at this emissions unit are increased such that it becomes a "source with emissions of 10 or 25 tons" or throughput increases at this emissions unit such that it becomes a "source with throughput of 10 M barrels or 200 M barrels", then the permittee shall comply with the additional applicable provisions of 40 CFR Part 60, Subpart Y as made applicable by 40 CFR Part 63, Subpart CC within 3 years following the excedence of the threshold level.

c. Per 40 CFR 63.651(a), the permittee shall comply with the applicable requirements of 40 CFR 63.560 through 63.568 (40 CFR Part 63, Subpart Y).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the applicable monitoring and recordkeeping requirements required under 40 CFR Part 63, Subpart Y, including the following sections:

a.	63.561	On September 30 of each year, the permittee shall calculate the annual gasoline and crude oil throughput, and annual individual and combined HAP emissions at this emissions unit for purposes of determining whether this emissions unit continues to meet the definition of "source with throughput less than 10 M barrels and 200 M barrels" and the definition of "source with emissions less than 10 and 25 tons." (September 30 annual reporting date from U.S. EPA Applicability Determination M030036 related to 63.561.)
b.	63.567(j)(4)	The permittee shall retain records of the emissions estimates determined in 40 CFR 65.565(l) and records of their actual throughputs by commodity, for 5 years.

e) Reporting Requirements

(1) The permittee shall notify the Toledo Division of Environmental Services in writing of any annual record showing that the actual HAP emissions of 9.1 Mg (10 tons) or more calculated annually of any individual HAP or of 22.7 Mg (25 tons) or more of all HAP combined calculated annually as determined by 40 CFR 63.565(l). The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days after the excedence occurs.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(2) The permittee shall notify the Toledo Division of Environmental Services in writing of any annual record showing a throughput of 1.6 billion liters (10 million barrels) or more of gasoline annually or of 32 billion liters (200 million barrels) or more of crude oil annually. The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days after the excedence occurs.

[Authority for term: OAC rule 3745-77-07(A)(3).

(3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for rule: OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Emissions less than 10 and 25 tons

Applicable Compliance Method:

For sources with emissions less than 10 or 25 tons, the owner or operator shall calculate an annual estimate of HAP emissions, excluding commodities exempted by 40 CFR 63.560(d) from marine tank vessel loading operations. Emission estimates and emission factors shall be based on test data, or if test data is not available, shall be based on measurement or estimating techniques generally accepted in industry practice for operating conditions at the source.

[Authority for term: 40 CFR 63.565(l)]

g) Miscellaneous Requirements

(1) The permittee shall comply with the applicable construction and reconstruction requirements required under 40 CFR Part 63, Subpart Y, including the following sections:

a.	63.566(a)	The permittee shall fulfill all requirements for construction or reconstruction of a source in 40 CFR 63.5 in accordance with the provisions of applicability of 40 CFR Part 63, Subpart A in Table 1 of 40 CFR 63.560.
b.	63.566(b)	The permittee shall submit an application to the Administrator for approval to construct a new source or reconstruction of a source, or the reconstruction of a source not subject to the emissions standards in 40 CFR 63.562 such that the source becomes an affected source. The application shall be submitted as soon as practicable before the construction or reconstruction is planned to commence. It is recommended that the application be submitted well in advance of the date of construction or reconstruction is planned to commence in order to ensure timely review by the Administrator and that the planned commencement date will not be delayed.

c.	63.566(c)	The permittee shall submit to the Administrator the request for approval of construction or reconstruction under 40 CFR 63.566 and 63.5(f)(1) no later than the application deadline specified in 63.566(b)(2).

11. J005, Asphalt Loading

Operations, Property and/or Equipment Description:

J005 - Asphalt splash fill truck loading rack with no control

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01460 as modified 12/26/2006)	Volatile organic compound (VOC) emissions shall not exceed 0.123 pound per 1,000 gallons loaded
b.	OAC rule 3745-31-05(D) (PTI 04-01460 issued 12/26/2006)	VOC emissions shall not exceed 5.61 tons per rolling, 12-month period
c.	OAC rule 3745-21-09(T)	Refer to term B.2. of Section B. for applicable leak detection and repair requirements
d.	40 CFR Part 60, Subpart A (40 CFR 60.1-60.19)	See b)(2)a.
e.	40 CFR Part 60, Subpart GGG (40 CFR 60.590 – 60.593) [In accordance with 40 CFR 60.590(a), this facility has equipment within a process unit that is an affected facility in a petroleum refinery as defined in 60.591 subject to Subpart GGG of this part.]	Refer to term B.2. of Section B. for applicable leak detection and repair requirements

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR Part 63, Subpart A (40 CFR 63.1-63.16)	Table 6 to 40 CFR Part 63, Subpart CC specifies the provisions of subpart A of 40 CFR Part 63 that apply
g.	40 CFR Part 63, Subpart CC	Emissions from non-gasoline loading racks are not subject to 40 CFR Part 63, Subpart CC loading rack standards
h.	40 CFR Part 63, Subpart LLLLL	Exempt, see section b)(2)b.

(2) Additional Terms and Conditions

a. 40 CFR Part 60 subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

b. This emissions unit does not meet the definition of asphalt processing facility as defined under 40 CFR 63.8698. This loading rack is not used for loading oxidized asphalt.

c) Operational Restrictions

(1) The maximum annual throughput for the asphalt loading rack J005 shall not exceed 91,200,000 gallons, based upon a rolling, 12 month summation of the gallons of the asphalt loaded.

[Authority for term: PTI 04-01460 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for this emissions unit:

a. the loading rate for each month; and

b. the rolling, 12-month summation of the loading rates.

[Authority for term: PTI 04-01460 and OAC rule 3745-77-07(A)(3)]

e) Reporting Requirements

(1) The permittee shall submit semi-annual deviation (excursion) reports that identify all exceedances of the rolling, 12-month loading rate limitation.

The semi-annual deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: PTI 04-01460 and OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

VOC emissions shall not exceed 0.123 pound per 1,000 gallons loaded.

Applicable Compliance Method:

Calculate the loading loss by use of the following equation from AP-42 5th Edition, June, 2008, Chapter 5.2

L = [12.46 * S * P * M] / T

where:

L = the loading loss in pounds of VOC per thousand gallons loaded;

S = saturation factor = 1.45 for splash loading tank trucks;

P = true vapor pressure of liquid loaded (psia) = 0.028 (for asphalt at 320 degrees F);

M = molecular weight of vapors (lb/lbmole) = 190 (assuming residual no. 6 oil); and

T = temperature of bulk liquid loaded, degrees R = 780.

b. Emission Limitation:

5.61 tons of VOC per rolling, 12-month period

Applicable Compliance Method:

Multiply the VOC loading loss emission factor of 0.123 lb/1000 gallons of asphalt loaded by the actual asphalt loading rate per rolling, 12-month period. The loading loss emission factor was obtained by the equation specified in section f)(1)a. above.

[Authority for term: PTI 04-01460 and OAC rule 3745-77-07(A)(3)]

g) Miscellaneous Requirements

(1) None.

12. P007, FCC & CO Boiler

Operations, Property and/or Equipment Description:

P007- Fluidized Catalytic Cracking Unit (FCCU) consisting of an FCC Reactor, Catalyst Regenerator, Fractionator, Strippers and Absorbers with an average processing capacity of 55,000 barrels per day of fresh feed. Control includes a CO steam Boiler (669 mmBtu.hr), SNCR control system, Electrostatic Precipitator (ESP). The unit has a bypass line from the FCC Regenerator used during rare start-up, shutdowns and emergencies. All fugitive emissions from the FCCU and CO Boiler are included with this emissions unit.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b)(1)n., d)(14) – d)(16) and e)(12)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI P0108887 as modified on 5/4/2012)	Ammonia emissions shall not exceed 20 parts per million by volume dry basis or 41.61 tons per year. Volatile organic compound (VOC) emissions (PTE from equipment leaks) shall not exceed 9.7 tons per year. See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(D)(PTI P0108887 as modified on 5/4/2012)	See b)(2)c. through b)(2)m.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.
d.	OAC rule 3745-17-10(B)(1)	0.020 pound of particulate emissions per million Btu of actual heat input from fuel burned in the CO boiler See b)(2)n.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-17-11(B)(1)	91.7 pounds per hour particulate emissions See b)(2)o.
f.	OAC rule 3745-18-54(W)(6)	See b)(2)p.
g.	OAC rule 3745-18-54(W)(1)	See b)(2)p.
h.	OAC rule 3745-21-09(T)	See b)(2)q.
i.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 60.16)	Table 44 to 40 CFR 63 Subpart UUU shows which parts of the General Provisions in CFR 63.1 – 16 apply. Table 10 to 40 CFR Part 63 Subpart DDDDD shows which parts of the General Provisions in 63.1 – 16 apply.
j.	40 CFR Part 63, Subpart CC (63.640 through 63.656) [In accordance with 40 CFR 63.640 this emissions unit includes equipment leaks from petroleum refining process units that are located at an existing major source of HAP subject to the emission limitations and control measures specified in this section.]	See b)(2)q.
k.	40 CFR Part 63 , Subpart UUU (63.1560 through 63.1579) [In accordance with 40 CFR 63.1561, this emissions unit is part of a petroleum refinery that is located at a major source of HAP emissions subject to the emission limitations/control measures specified in this section.]	See b)(2)r.
l.	40 CFR Part 63, Subpart DDDDD (63.7480 through 63.7575) [In accordance with 40 CFR	Applicable Emission Limits in Tables 1 and 2; Work Practice Standards in Table 3 and Operating Limits in Table 4 to Subpart DDDDD of 40 CFR Part 63

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	63.7575, this emissions unit is in the "unit designed to fire gas 1 fuel's subcategory that is located at a major source of HAP emissions and subject to the applicable limitations/control measures specified in this section.]	See b)(2)s.
m.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	See b)(2)t.
j.	40 CFR Part 60, Subpart GGGa (60.590a through 60.593a) [In accordance with 40 CFR 60.593a, this emissions unit is an affected facility in a refinery subject to the emission limitations/control measures specified in this section.]	See b)(2)q. and b)(2)u.
m.	40 CFR Part 64 (Compliance Assurance Monitoring)	Maximum opacity of 10% (one hour average) See b)(2)v.
n.	ORC 3745.03(F)(4)(d)	Air Toxics for ammonia

(2) Additional Terms and Conditions

a. Based on the ammonia slip analysis, the permittee shall minimize ammonia slip while maintaining SNCR effectiveness in a manner consistent with good engineering practices. These emission limitations are the potential to emit based on vendor's design data, therefore, monitoring, recordkeeping and reporting are not required.

b. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

c. The permittee shall limit CO emissions from the FCCU to 500 parts per million by volume dry basis (ppmvd) as a 1-hour average as demonstrated by using a CEM certified, calibrated, maintained, and operated in accordance with the applicable requirements of 40 CFR 60.11, 60.13, and Part 60 Appendix F. The CO limit shall not apply during periods of startup, shutdown or malfunction of the FCCU or

the CO control equipment, if any, provided that during startup, shutdown or malfunction the permittee shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions.

Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the USEPA and the Toledo Division of Environmental Services which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the emissions unit.

This requirement is due to (Project Sunshine PTI 04-01290 issued 7/25/2002), which incorporated the requirements from the Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CV095 RL, Date of Entry 8/29/2001).

d. The permittee shall reduce total particulate emissions at the FCCU to 1 pound per 1,000 pounds of coke burned. The permittee shall achieve these reductions through the operation of the electrostatic precipitator.

This requirement is due to (Project Sunshine PTI 04-01290 issued 7/25/2002), which incorporated the requirements from the Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CV095 RL, Date of Entry 8/29/2001).

e. The permittee shall not burn in the CO Boiler any refinery fuel gas that has a volume-weighted, rolling, 3-hour average hydrogen sulfide (H_2S) concentration greater than 0.10 grain per dry standard cubic foot, or the U.S. EPA- recognized equivalent concentration of 162 parts per million by volume on a dry basis, except during periods of startup, shutdown or malfunction of the refinery fuel gas amine systems provided that the permittee shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions per 40 CFR Part 60 Subpart J.

f. The CO Boiler (not the FCCU) shall be considered an affected facility for purposes of 40 CFR Part 60, Subpart J, and shall comply with all requirements of 40 CFR Part 60, Subparts A and J as those subparts apply to fuel gas combustion devices. The applicability of 40 CFR 60 Subpart J is due to PTI 04-01290 (Project Sunshine PTI), which incorporates the requirements from the Consent Decree (United States of America, et al., v. BP Exploration & Oil CO., et al., Civil Action No. 2:96CF095 RL, Date of Entry 8/29/2001) not because the heater was modified or installed after the applicability date.

g. SO_2 emissions from the FCCU shall not exceed 260 ppmvd at 0% oxygen as a rolling 7-day average or 160 ppmvd at 0% oxygen as a 365-day rolling average as demonstrated by using a CEM certified, calibrated, maintained, and operated in accordance with the applicable requirements of 40 CFR 60.11, 60.13, and Part 60 Appendix F. [Based on 12-month demonstration of SO_2 absorbing catalyst

and approved by EPA as required by Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CF095 RL, Date of Entry 8/29/2001) set forth in PTI 04-01290 (Project Sunshine PTI), and finally approved in PTI 04-1330 (6/27/06)].

h. The permittee shall limit emissions of sulfur dioxide from the FCCU to 1,020 tons per rolling 12-month period to obtain a net decrease of 80 tons/yr $SO_2$for PTI P0108887 as modified on 5/3/2012.

i. Final Long-Term NOx Limit: The permittee shall comply with a long-term limit of 58.1 ppmvd NO_x at 0% O_2 on a 365-day rolling average basis as demonstrated by using a CEM certified, calibrated, maintained, and operated in accordance with the applicable requirements of 40 CFR 60.11, 60.13, and Part 60 Appendix F. This long-term limit shall apply at all times when the FCCU is operating, including during periods of startup, shutdown, and malfunction. The limit also shall apply during periods of scheduled maintenance of equipment other than the FCCU. These NOx requirements are due to (PTI P0105902 issued 5/18/2011), which incorporated the requirements from the Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CV095 RL, Date of Entry 8/29/2001).

j. Alternative Operating Scenario:

i. For no more than 20 days over a rolling two year (730-day) period, when the CO boiler is operating and the FCCU is down, the long-term limit shall not apply if permittee retires NO_x allowance to account for NO_x emissions (in tons or portion thereof) that occur on any such days. The permittee must retire said NO_x allowances at a rate of not less than 1.5 to 1.

ii. A "NO_x Allowance" means an authorization or credit to emit a specified amount of NO_x that is allocated or issued under an emissions trading or marketable permit program that has been established under the Clean Air Act.

iii. For all NO_x Allowances to be surrendered pursuant to 2)(b)j.i., the permittee shall first submit a NO_x Allowance transfer request form to U.S. EPA's Office of Air and Radiation's Clean Air Markets Division directing the transfer of such NO_x Allowances to the U.S. EPA Enforcement Surrender Account. As part of submitting this transfer request, BP-Husky shall irrevocably authorize the transfer of these NO_x Allowances and identify – by name of account and any applicable serial or other identification numbers or station names – the source and location of the NO_x Allowances being surrendered.

iv. Mitigation. To qualify for the alternate operating scenario, the permittee shall surrender all NO_x allowances that are required pursuant to this Paragraph by no later than March 15th of the year following the calendar year in which the long-term emissions limit is exceeded.

k. Final Short Term NO_x Limit: Except as provided in b)(2)l. below, the permittee shall comply with a short-term limit of 93.4 ppmvd NO_x at 0% O_2 on a 7-day rolling average basis. This short-term limit shall apply at all times when the FCCU is operating except during periods of startup, shutdown, and malfunction.

l. Emissions During Periods of FCCU Shutdown and CO Boiler Operation: The short-term (7-day) emission limit established in b)(2)k. above shall not apply during periods when the CO boiler is operating but the FCCU is shut down. During such periods, the permittee shall minimize NO_x emissions from the CO boiler to the extent practicable consistent with good air pollution control practices for minimizing emissions by continuing to treat the off gases in the selective non-catalytic reduction equipment installed pursuant to the Consent Decree. In addition, the permittee shall monitor NO_x emissions from the CO boiler using a continuous emissions monitor (CEM). The CEM shall be installed, certified, calibrated, maintained, and operated in accordance with the applicable requirements of 40 C.F.R. 60.11, 60.13, and Part 60 Appendix F. This CEM shall be used to demonstrate compliance with emission limits.

m. General Provisions for NO_x Limit: Determination of compliance with the limits established in b)(2)i. and b)(2)k. above shall be based on data generated after the limits go into effect. December 1, 2009 is the first day used in the 365-day rolling average subject to the 58.1 ppmvd emission limit with the first complete 365-day average being on November 30, 2010. December 1, 2009 is the first day used in the 7-day rolling average subject to the 93.4 ppmvd limit with the first complete 7-day average being on December 7, 2009.

n. The particulate emission limitation specified by OAC rule 3745-17-10(B)(1) is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).

o. The particulate emission limitation of 91.7 pounds per hour particulate emissions, specified by OAC rule 3745-17-11(B)(1) is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).

p. The SO_2 emission limitation specified by OAC rule 3745-18-54(W)(1) and OAC rule 3745-18-54(W)(6) is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).

q. The permittee shall comply with all applicable equipment leak terms and conditions for: 40 CFR Part 63, Subpart CC which references 40 CFR Part 60, Subpart VV; and, OAC rule 3745-21-09(T). See term B.2 of Section B. of the permit for the applicable leak detection and repair requirements.

Consistent with the U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with the equipment leak standards in 40 CFR Part 63, Subpart CC for both equipment in organic HAP service and equipment not in organic HAP service. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T).

Equipment leaks that are subject to the provisions of both 40 CFR Part 60, Subpart GGGa and 40 CFR Part 63, Subpart CC are required to comply only with the provisions specified in 40 CFR Part 60, Subpart GGGa.

The Leak Detection and Repair (LDAR) requirements stated in 40 CFR Part 63, subpart CC applicable to this emissions unit are subsumed into the facility-wide LDAR requirements stated in term B.2. of Section B. of this permit.

r. The permittee shall comply with the applicable emission limitations and operational restrictions of 40 CFR Part 63, Subpart UUU including the following sections: [63.1564(a)(1)(iv) and 63.1564(a)(2).

i.	63.1564(a)(1)(iv) and Table 1	Ni emissions must not exceed 1.0 mg/kg (0.001 lb/1,000 lbs) of coke burn-off in the catalyst regenerator. Note that the permittee may elect a different compliance option after revising the OMMP and obtaining approval of the revised plan per 63.1574(f)(1).
ii.	63.1565(a)(1)(ii) and Table 8	CO emissions from the catalyst regenerator vent or CO boiler serving the catalytic cracking unit must not exceed 500 ppmv (dry basis). Note that the permittee may elect a different compliance option after revising the OMMP and obtaining approval of the revised plan per 63.1574(f)(1).
iii.	63.1564(a)(4), 63.1570(a), (c), and (g)	General Duty Clause, Maintenance, and Startup, Shutdown, Malfunction Requirements
iv.	63.1565(a)(4)	The emission limitations and operating limits for organic HAP emissions from catalytic cracking units required in paragraphs (a)(1) and (2) of 63.1565 do not apply during periods of planned maintenance preapproved by the applicable permitting authority according to the requirements in 63.1575(j).
v.	63.1569(a)(1)(i), 63.1569(a)(2), and Table 36	Monitor flow in the bypass line. Per an alternative monitoring request submitted October 30, 2006, the permittee monitors bypass stack temperature continuously.

s. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans requirements of Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A).

t. 40 CFR Part 60, Subpart A Provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

u. The FCCU Wet Gas Compressor shall be considered an affected facility for the purposes of 40 CFR Part 60 Subpart GGGa. The permittee shall comply with all the requirements of 40 CFR Part 60, Subpart GGGa as this subpart applies to compressors.

v. This process unit is subject to the terms and conditions of 40 CFR Part 64. The monitoring, record keeping, and reporting outlined in the following sections, assures compliance with these requirements.

c) Operational Restrictions

(1) The permittee shall only burn FCCU regenerator off-gas, natural gas, and/or refinery fuel gas in the CO Boiler. Note: These are the only fuels that the CO Boiler is physically capable of firing. Therefore, there are no additional monitoring, recordkeeping, and/or reporting requirements related to this operational restriction is required.

[Authority for term: OAC rule 3745-77-07(A)(1)]

(2) The continuous opacity monitor shall be located in stack on the outlet of the CO Boiler/ESP and/or in the outlet of any other stack prior to the discharge of the FCCU gases to the atmosphere such that representative measurements of opacity are obtained (40 CFR Part 64 Plan; and per 63.1564(b)(1) and Table 3, item 5.a. (option 4)).

[Authority for term: OAC rule 3745-77-07(A)(1)]

(3) [40 CFR 63, Subpart UUU]] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES: CATALYTIC CRACKING UNITS

The permittee shall comply with the applicable restrictions under 40 CFR Part 63, Subpart UUU, including the following sections:

a.	63.1564(a)(2) and Table 2 (item 5.a for Option 4)	Maintain the daily average Ni operating value no higher than the Ni operating limit established during the performance test.
b.	63.1564(a)(3)	Operate at all times according to the procedures in the operation, maintenance, and monitoring plan
c.	63.1564(b)(1) and Table 3, item 5.a for Option 4)	Install, operate and maintain a continuous opacity monitoring system to measure and record the opacity of emissions from the FCCU and continuous parameter monitoring system to measure and record the gas flow rate entering or exiting the control device according to the requirements in 63.1572. Note: BPH uses the EPA Region 5 approved alternative monitoring plan to estimate the gas flow rate instead of a continuous parameter monitoring system for gas flow rate

		as allowed in 63.1573(e).
d.	63.1564(b)(3)	Establish each site-specific operating limit in Table 2 to 40 CFR 63 Subpart UUU that applies according to the procedures in Table 4 to 40 CFR 63 Subpart UUU. Note: BPH has chosen Option 4 in item 5 of Table 1 of Subpart UUU as of the issuance of this Title V permit.

(4) [40 CFR 63.7500(a) – Table 3, Row 2]
An existing process heater in the gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler as specified in 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

CEM REQUIREMENTS

(1) The permittee shall maintain a written quality assurance/quality control plan for the continuous opacity monitoring system(s), designed to ensure continuous valid and representative readings of opacity and compliance with 40 CFR Part 60, Appendix B, Performance Specification 1. The plan shall include, at a minimum, procedures for conducting and recording daily automatic zero/span checks, provisions for conducting a quarterly audit of the continuous opacity monitoring system(s), and a description of preventive maintenance activities. The plan shall describe step by step procedures for ensuring accurate operation of the continuous opacity monitoring system(s) on a continuous basis. The quality assurance/quality control plan and a logbook or computer based database dedicated to the continuous opacity monitoring system(s) must be kept on site and available for inspection during regular office hours.

The continuous opacity monitoring system consists of all the equipment used to acquire data and record opacity.

[Authority for term: 40 CFR 63.8(d), 63.1572(b), 40 CFR 63 Subpart UUU, Table 40 and Performance Specification 1, 40 CFR Part 60, Appendix B]

(2) The permittee shall maintain a written quality assurance/quality control plan for the continuous SO_2 monitoring system, designed to ensure continuous valid and representative readings of SO_2 emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook or computer based database dedicated to the continuous SO_2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test

audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix F]

(3) The permittee shall maintain a written quality assurance/quality control plan for the continuous hydrogen sulfide (H_2S) monitoring system, designed to ensure continuous valid and representative readings of hydrogen sulfide emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook or computer based database dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix F]

(4) The permittee shall maintain a written quality assurance/quality control plan for the continuous NOx monitoring system, designed to ensure continuous valid and representative readings of NOx emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook or computer based database dedicated to the continuous NOx monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix F]

(5) Continuous Opacity Monitoring Requirements.

a. The permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office verifying that the continuous opacity monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

[Authority for term: 63.8(d), 63.1572(b), 40 CFR 63 Subpart UUU, Table 40 and 40 CFR Part 60, Appendix B, Performance Specification 1]

b. Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments) the permittee shall operate and maintain the continuous opacity monitoring system to continuously monitor and record the opacity of the particulate at all times the affected source is operating pursuant to 63.1572(d)(1). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60 Appendix B Performance Specification 1.

The permittee shall maintain records of data obtained by the continuous opacity monitoring system including, but not limited to:

i. percent opacity for each cycle time of the analyzer (one cycle of data recording for each successive 6-minute period) per 40 CFR 63.1572(b)(3) and §63.8(c)(4)(i) and data retained for the duration required per §63.10(b)(2)(vii).

ii. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

iii. hours of operation of the emissions unit, continuous opacity monitoring system, and control equipment;

iv. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous opacity monitoring system;

v. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous opacity monitoring system; as well as,

vi. the reason (if known) and the corrective actions taken (if any) for each such event in iv. and v.

[Authority for term: 40 CFR 63.1572(b) and 63.8 and 40 CFR Part 60, Appendix B]

(6) Continuous SO_2 Emissions Monitoring Requirements

a. The permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous SO_2 monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

b. The permittee shall operate and maintain equipment to continuously monitor and record SO_2 emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous SO_2 monitoring system including, but not limited to:

i. emissions of SO_2 in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f);

ii. emissions of SO_2 in units of the applicable standard(s) in the appropriate averaging period;

iii. results of quarterly cylinder gas audits;

iv. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

v. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

vi. hours of operation of the emissions unit, continuous SO_2 monitoring system, and control equipment;

vii. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous SO_2 monitoring system;

viii. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO_2 monitoring system; as well as,

ix. the reason (if known) and the corrective actions taken (if any) for each such event in vii. and viii.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F]

(7) Continuous H_2S Monitoring and Record Keeping Requirements

a. The permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous hydrogen sulfide monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

b. The permittee shall operate and maintain equipment to continuously monitor and record hydrogen sulfide emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous hydrogen sulfide monitoring system including, but not limited to:

i. emissions of hydrogen sulfide in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f);

ii. emissions of hydrogen sulfide, in units of the applicable standard(s) and in the appropriate averaging period;

iii. results of quarterly cylinder gas audits;

iv. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

v. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

vi. hours of operation of the emissions unit, continuous hydrogen sulfide monitoring system, and control equipment;

vii. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous hydrogen sulfide monitoring system;

viii. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous hydrogen sulfide monitoring system; as well as,

ix. the reason (if known) and the corrective actions taken (if any) for each such event in vii. and viii.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F]

(8) Common Monitoring and Record Keeping Requirements for SO_2 and H_2S continuous emissions monitoring systems

a. The permittee shall automatically check the zero (or low level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts of the H_2S and SO_2 monitors at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever either the 24-hour zero drift or the 24-hour span drift exceeds two times the limit of the applicable performance specification in Appendix B of 40 CFR Part 60. The system shall allow the amount of the excess zero and span drift to be recorded and quantified whenever specified.

b. Monitors that automatically adjust the data to the corrected calibration values (e.g., microprocessor control) shall be programmed to record the unadjusted concentration measured in the calibration drift (CD) prior to resetting the calibration, if performed, or record the amount of adjustment.

c. If either the zero (or low-level) or high-level CD result exceeds twice the applicable drift specification in Appendix B for five, consecutive, daily periods, the CEMS is out-of-control. If either the zero (or low-level) or high-level CD result exceeds four times the applicable drift specification in 40 CFR Part 60, Appendix B during any CD check, the CEMS is out-of-control. If the CEMS is out-of-control, take necessary corrective action. Following corrective action, repeat the CD checks.

d. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required in 40 CFR 60.13(d), all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows: the continuous monitoring system for measuring emissions shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15- minute period.

e. One-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non-reduced form (e.g., ppm pollutant and percent O_2 or ng/J of pollutant). All excess emissions shall be converted into units of the standard. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit.

f. The permittee shall implement a quality control program for the H_2S and SO_2 continuous emissions monitoring systems. As a minimum, each quality control program shall include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities:

i. calibration of CEMS;

ii. CD determination and adjustment of CEMS;

iii. preventive maintenance of CEMS (including spare parts inventory);

iv. data recording, calculations, and reporting;

v. accuracy audit procedures including sampling and analysis methods; and

vi. program of corrective action for malfunctioning CEMS.

As described in Section 5.2 of 40 CFR Part 60, Appendix F Procedure 1, whenever excessive inaccuracies occur for two consecutive quarters, the permittee shall revise the current written procedures or modify or replace the CEMS to correct the deficiency causing the excessive inaccuracies.

g. The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports, and records.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(9) Continuous NO_x Emissions Monitoring Requirements

a. The permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous NOx monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

b. The permittee shall operate and maintain equipment to continuously monitor and record NOx emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous NOx monitoring system including, but not limited to:

i. emissions of NOx in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f);

ii. emissions of NOx in units of the applicable standard(s) in the appropriate averaging period;

iii. results of quarterly cylinder gas audits;

iv. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

v. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

vi. hours of operation of the emissions unit, continuous NOx monitoring system, and control equipment;

vii. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NOx monitoring system;

viii. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous NOx monitoring system; as well as,

ix. the reason (if known) and the corrective actions taken (if any) for each such event in vii. and viii.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F]

(10) FCC/CO Boiler Monitoring and Record Keeping Requirements

a. The permittee shall measure and record hourly average CO concentrations from the FCCU. Process analyzers calibrated in accordance with manufacturer's recommendations may be used for this purpose. This requirement is due to the PTI 04-01290(Project Sunshine) issued 7/25/2002, which incorporated the requirements from the Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CV095 RL, Date of Entry 8/29/2001),

b. The permittee shall maintain a record of the operating time of the FCCU, the CO Boiler, and a record of all periods when the emissions from the FCCU bypass the CO Boiler.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(11) Except as otherwise specified in this section, all records required under Section d) of this permit shall be maintained in accordance with the Monitoring and Related Record Keeping Requirements of Part A - General Terms and Conditions.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(12) The permittee shall maintain records of the monthly SO_2 emissions for P007 in units of tons SO_2 per month and tons SO_2 per rolling 12-month period. For each month, the permittee shall add the monthly total SO_2 emissions to the total SO_2 emissions for the previous 11 months to determine the rolling, 12-month summation of SO_2 emissions.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(13) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install P0108887, modified on 5/4/2012: d)(5), d)(6), d)(7), d)(8), and d)(9). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

AIR TOXICS

(14) The Permit-to-install application for this/these emissions unit(s), P007, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "24" hours per day and "7" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4\ TLV/XY = MAGLC$$

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: Ammonia covered under the worst-case toxic modeled.

TLV (mg/m^3): 17

Maximum Hourly Emission Rate (lbs/hr): 9.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 4.5

MAGLC (ug/m^3): 400

The permittee, has demonstrated that emissions of Ammonia, from emissions unit(s) P007, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(15) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(16) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

PE and NOx CAM PLANS

(17) The CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicator for visible particulate emissions is the opacity of the visible emissions from the Electrostatic Precipitator (ESP) exhaust stack as measured and recorded by the certified continuous opacity monitoring (COM) system. The visible particulate emissions indicator range is each one-hour block average with an opacity value at or below 10%. The one-hour block average opacity shall be based on the data recorded in Condition d)(5)b. above. When the opacity value over the averaging period of the indicator range is greater than 10%, corrective action (including, but not limited to, an evaluation of the emissions unit and ESP) shall be assessed and implemented as appropriate.

Upon detecting an excursion of the visible particulate emission indicator range listed above, the owner or operator shall restore operation of the emissions unit (including the control device) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or excedence (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as thorough response by the computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range.

If a determination is made by the Administrator or Ohio EPA that the permittee has not used acceptable procedures in response to an excursion or excedence based on the results of a determination made under 40 CFR Part 64.7(d)(2), the permittee may be required to develop a Quality Improvement Plan (QIP) consistent with the requirements of 40 CFR Part 64.8.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(18) The CAM plan for this emissions unit has been developed for NOx emissions. The CAM performance indicator for NO_x emissions is a continuous emissions monitor in the CO Boiler and regenerator stacks.

Upon detecting an excursion of the NOx emissions limit, the owner or operator shall restore operation of the emissions unit (including the control device) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or excedence (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as thorough response by the computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range.

If a determination is made by the Administrator or Ohio EPA that the permittee has not used acceptable procedures in response to an excursion or excedence based on the results of a determination made under 40 CFR Part 64.7(d)(2), the permittee may be required to develop a Quality Improvement Plan (QIP) consistent with the requirements of 40 CFR Part 64.8.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(19) [40 CFR 63, Subpart UUU] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES: CATALYTIC CRACKING UNITS

The permittee shall comply with the applicable monitoring and record keeping requirements required under 40 CFR Part 63, Subpart UUU, including but not limited to, the following sections:

a.	63.1564(a)(3), 63.1564(c)(2), 63.1565(a)(3), 63.1565(c)(2), 63.1569(a)(3), 63.1569(c)(2), 63.1574(f), 63.1574(f)(2)	Prepare an Operation, Maintenance, and Monitoring Plan and operate in accordance with it. Maintain records documenting compliance with the procedures in the plan.
b.	63.1569(a)(1)(i), 63.1569(a)(2), and Table 36	Monitor flow in the bypass line. Per an alternative monitoring request submitted October 30, 2006, the permittee monitors bypass stack temperature continuously.
c.	63.1564(b)(2)	On July 26, 2007 U.S. EPA approved an alternate monitoring plan to allow for calculation of FCCU regenerator exhaust flow rate in lieu of the monitoring procedures specified in Table 4 to 40 CFR Part 63, Subpart UUU.
d.	63.1564(c)(1), (c)((4), and Tables 6 and 7	Determine and record, each day, the average coke burn-off rate (thousands of kg/hr) and the hours of operation for each catalyst regenerator by Equation 1 of §63.1564 (you can use process data to determine the volumetric flow rate); and maintaining Ni emission rate below 1.0 mg/kg (0.001 lb/1,000 lbs) of coke burn-off in the catalyst regenerator.
e.	63.1564(c)(2)	Demonstrate continuous compliance with the work practice standard in paragraph (a)(3) of this section by maintaining records to document conformance with the procedures in your operation, maintenance, and monitoring plan.

f.	63.1565(b)(1)(ii)	If the permittee is not subject to the NSPS for CO, the permittee does not have to install and operate a continuous emission monitoring system if the permittee vent emissions to a boiler (including a "CO boiler") that has a design heat input capacity of at least 44 megawatts (MW) (150 mmBtu/hr).
g.	63.1569(c)(1) and Table 39 (Item 1)	Monitor and record on a continuous basis or at least every hour whether flow is present in the bypass line; visually inspecting the device at least once every hour if the device is not equipped with a recording system that provides a continuous record; and recording whether the device is operating properly and whether flow is present in the bypass line.
h.	63.1570(d)	Develop a written Startup, Shutdown, and Malfunction Plan (SSMP) and operate in accordance with the plan.
i.	63.1572(c), 63.1572(d)	These citations list the requirements that the continuous parameter monitoring system monitor must meet.
j.	63.1576, except that 63.1576(c), 63.1576(b)(3), and 63.1576(b)(4) do not apply.	Lists records that must be maintained as well as requirements for maintenance of those records.

e) Reporting Requirements

CEM REPORTS

(1) Continuous Opacity Monitoring Requirements

The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous opacity monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 63 Subpart UUU and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of opacity values in excess of any applicable limitation specified in this permit, 40 CFR Part 64 40 CFR Part 64 (CAM), OAC rule 3745-17-07, and any other applicable rules or regulations.

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous opacity monitor;

iii. a description of any change in the equipment that comprises the continuous opacity monitoring system (COMS), including any change to the hardware, changes to the software that may affect COMS readings, and/or changes in the location of the COMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous opacity monitoring system while the emissions unit was in operation;

vii. The date and time that each malfunction started and stopped.

viii. The information required by §63.1572(e) as described in permit condition e)(11)(d) below.

.Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excedence of the opacity limit has occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the quarterly EER report

[Authority for term: 40 CFR 60.7]

(2) Reporting Requirements for SO_2 Continuous Emissions Monitoring System

The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO_2 monitoring system:

c. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of SO_2 emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each excedence, as well as the reason (if known) and the corrective actions taken (if any) for each excedence. Excess emissions shall be reported in units of the applicable standard(s).

d. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous SO_2 and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total SO_2 emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous SO_2 monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted, the results of any relative accuracy test audit showing the continuous SO_2 monitor out-of-control and the compliant results following any corrective actions;

xi. total duration** of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility [pursuant 40 CFR 60.7(d)(1)];

xii. total duration** of CEM downtime for the reporting period, and if the total period CEM downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime*** of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation [pursuant 40 CFR 60.7(d)(1)]; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in b.xi. and b.xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* Where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report.

** Per OEPA request, the refinery agrees to include in each quarterly CEMS report the date, time, and duration of each excess emission event and the date, time and duration of each downtime event.

*** Downtime is time when the unit emission source is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

[Authority for term: 40 CFR 60.7]

(3) Reporting Requirements for H_2S Continuous Emissions Monitoring System

The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous hydrogen sulfide monitoring system:

e. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of hydrogen sulfide emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each excedence, as well as, the reason (if known) and the corrective actions taken (if any) for each excedence. Excess emissions shall be reported in units of the applicable standard(s).

f. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous hydrogen sulfide and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation;

vii. results and dates of quarterly cylinder gas audits;

viii. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

ix. unless previously submitted, the results of any relative accuracy test audit showing the continuous hydrogen sulfide monitor out-of-control and the compliant results following any corrective actions;

x. total duration** of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility [pursuant 40 CFR 60.7(d)(1)];

xi. total duration** of CEM downtime for the reporting period, and if the total period CEM downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime*** of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation [pursuant 40 CFR 60.7(d)(1)]; and

xii. the reason (if known) and the corrective actions taken (if any) for each event in b.x. and b.xi.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* Where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report.

** Per OEPA request, the refinery agrees to include in each quarterly CEMS report the date, time, and duration of each excess emission event and the date, time and duration of each downtime event.

*** Downtime is time when the unit emission source is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

[Authority for term: 40 CFR 60.7]

(4) Common Reporting Requirements for Continuous H_2S and SO_2 Continuous Emissions Monitoring Systems

a. The permittee shall submit a quarterly report for each CEMS, the accuracy results from Section 6 and the CD assessment results from Section 4 of 40 CFR Part 60 Appendix F Procedure 1. Report the drift and accuracy information as a Data Assessment Report (DAR), and include one copy of this DAR for each quarterly audit with the report of emissions. As a minimum, the DAR shall contain the following information:

i. permittee name and address;

ii. identification and location of monitors in the CEMS;

iii. manufacturer and model number of each monitor in the CEMS;

iv. assessment of CEMS data accuracy and date of assessment as determined by a Relative Accuracy Test Audit (RATA), Relative Accuracy Audit (RAA), or Cylinder Gas Audit (CGA) described in Section 5 of 40 CFR Part 60 Appendix F Procedure 1 including the relative accuracy for the RATA, the Accuracy (A) for the RAA or CGA, the Reference Method (RM) results, the cylinder gases certified values, the CEMS responses, and the calculations results as defined in Section 6. If the accuracy audit results show the CEMS to be out-of-control, the CEMS operator shall report both the audit results showing the CEMS to be out-of-control and the results of the audit following corrective action showing the CEMS to be operating within specifications;

v. results from EPA performance audit samples described in Section 5 and the applicable RM's; and

vi. summary of all corrective actions taken when CEMS was determined out-of-control, as described in Sections 4 and 5 or 40 CFR Part 60 Appendix F Procedure 1.

An example of a DAR format is shown in Figure 1 of 40 CFR Part 60 Appendix F, Procedure 1.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 60.7]

(5) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NO_x emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each excedence, as well as the reason (if known) and

the corrective actions taken (if any) for each excedence. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous NO_x and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total NO_x emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous NO_x monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO_x monitor out-of-control and the compliant results following any corrective actions;

xi. total duration** of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility [pursuant 40 CFR 60.7(d)(1)];

xii. total duration** of CEM downtime for the reporting period, and if the total period CEM downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime*** of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation [pursuant 40 CFR 60.7(d)(1)]; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in b.xi. and b.xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* Where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report.

** Per OEPA request, the refinery agrees to include in each quarterly CEMS report the date, time, and duration of each excess emission event and the date, time and duration of each downtime event.

*** Downtime is time when the unit emission source is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 60.7]

(6) Reporting Requirements for Carbon Monoxide Emissions Monitoring System

a. The permittee shall submit semiannual deviation (excursion) reports that identify each period when the CO emissions from the FCCU exceeded 500 ppmvd as a one-hour average. Written deviation reports shall include the following information:

i. the total operating time of the emissions unit during the reporting period;

ii. information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken;

iii. information on the number, duration, and cause for monitor downtime incidents (including unknown cause, if applicable, other than downtime associated with zero and span and other daily calibration checks); and

iv. if there are no deviations from the emission limitation and there was no monitor downtime, a statement that there were no deviations from the emission limitation and that the CO monitoring system was not inoperative, inactive, malfunctioning, out-of-control, repaired or adjusted.

b. These reports shall be submitted through Air Services eBusiness Center by January 30 and July 30 of each year and shall cover the previous six calendar months.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 60.7]

(7) The permittee shall submit quarterly deviation/excursion reports that identify each period in which the SO_2 emissions from P007 exceeded 1,020 tons per rolling 12-month period.

These reports shall be submitted through Air Services eBusiness Center by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(8) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install P0108887, modified on 5/4/2012: e)(1), e)(2), e)(3), e)(4), and e)(5). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

AIR TOXICS REPORT

(9) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminate Statute", ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

a. the original model input;

b. the updated model input;

c. the reason for the change(s) to the input parameter(s); and

d. a summary of the results of the updated modeling, including the input changes; and

e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 60.7]

(2) [40 CFR Part 63, Subpart UUU] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES: CATALYTIC CRACKING UNITS

The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart UUU, including the following sections:

a.	63.1570(f)	You must report each instance in which you did not meet each emission limitation and each operating limit in 40 CFR 63 Subpart UUU that applies to you. This includes periods of startup, shutdown, and malfunction. You also must report each instance in which you did not meet the work practice standards in Subpart UUU that apply to you. These instances are deviations from the emission limitations and work practice standards in Subpart UUU. These deviations must be reported according to the requirements in 63.1575.
b	63.1575(b)	Unless the Administrator has approved a different schedule, you must submit each report by the date in Table 43 of this subpart and according to the requirements in paragraphs 40 CFR 63.1575(b)(1) through (5).
c	63.1575(c)	The compliance report must contain the information required in paragraphs 40 CFR 63.1575(c)(1) through (4).
d	63.1575(e)	For each deviation from an emission limitation occurring at an affected source where you are using a continuous opacity monitoring system or a continuous emission monitoring system to comply with the emission limitation, you must include the information in paragraphs 63.1575(d)(1) through (3) and the information in paragraphs 63.1575(e)(1) through (13).
e	63.1575(f)	You also must include the information required in paragraphs 63.1575(f)(1) through (2) in each compliance report, if applicable
f	63.1575(g)	You may submit reports required by other regulations in place of or as part of the compliance report if they contain the required information.
g	63.1575(h)	The reporting requirements in paragraphs 63.1575(h)(1) and (2) apply to startups, shutdowns, and malfunctions:
h	40 CFR 63 Subpart UUU,	Submit a compliance report that contains the following (1) if there are not deviations from any emission limitation or work practice standard that applies to you,

	Table 43	a statement that there were no deviations from the standards during the reporting period and that no continuous opacity monitoring system or continuous emission monitoring system was inoperative, inactive, out-of-control, repaired, or adjusted; and 2) if you have a deviation from any emission limitation or work practice standard, the report must contain the information in §63.1575(d) or (e). The reports are due semiannually in accordance with 63.1575(b)

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

20 percent opacity as a six-minute average, except for 1 six-minute period per hour, and.

No more than 10% opacity as a 1-hour average.

Applicable Compliance Method:

Compliance shall be demonstrated using the data collected in condition d)(5)(b) above (opacity monitor). If required, Method 9 of 40 CFR Part 60 Appendix A shall be used to demonstrate compliance.

b. Emission Limitation:

0.020 pound particulate emissions per million Btu of actual heat input

Applicable Compliance Method:

Per the facilities CAM plan, ongoing compliance assurance is provided by compliance with the 10% 1-hour average opacity limit in Condition f)(1).a) above. If required, the procedure specified under OAC rule 3745-17-03(B)(9) shall be used to demonstrate compliance.

c. Emission Limitation:

0.10 grain H_2S per dry standard cubic foot of fuel gas burned as a volume-weighted, rolling 3-hour average

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the methods and procedures of 40 CFR 60.106(e)(1).

d. Emission Limitation:

Particulate emissions shall not exceed 1 pound per 1,000 pounds of coke burned

Applicable Compliance Method:

Per the facilities CAM plan, ongoing compliance assurance is provided by compliance with the 10% 1-hour average opacity limit in section f)(1).a above. If required, the procedures specified under 40 CFR 63.1571 and under the conditions specified in Table 4 of 40 CFR Part 63, Subpart UUU shall be used to demonstrate compliance.

e. Emission Limitation:

500 ppmvd CO as a one-hour average

Applicable Compliance Method:

Compliance shall be determined using the data from the CO continuous emissions monitoring system.

f. Emission Limitation:

SO_2 emissions from the FCCU shall not exceed 260 ppmvd at 0% oxygen as a rolling 7-day average

Applicable Compliance Method:

Compliance shall be determined using data from the SO_2 continuous emissions monitoring system.

Startup, Shutdown, or Malfunction:
Emissions during periods of Startup, Shutdown, or Malfunction shall not be considered in determining compliance with the 7-day rolling average emissions limits, provided that during such periods BP implements good air pollution control practices for minimizing SO_2 emissions.

g. Emission Limitation:

SO_2 emissions from the FCCU shall not exceed 160 ppmvd at 0% oxygen as a rolling 365-day average.

Applicable Compliance Method:

Compliance shall be determined using data from the SO_2 continuous emissions monitoring system

h. Emission Limitation:

20 ppmvd ammonia

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using U.S. EPA Conditional Test Method (CTM) 027. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

i. Emission Limitation:

41.61 tons per year ammonia

Applicable Compliance Method:

The annual emission limitation is based on the allowable concentration of 20 ppmvd at the maximum flow rate for 8,760 hours per year, therefore, compliance with the 20 ppmvd emission limitation constitutes compliance with the annual emission limitation.

j. Emission Limitation:

1,020 tons SO_2 per rolling 12-month period from the FCCU

Applicable Compliance Method:

Compliance shall be determined using data from the SO_2 continuous emissions monitoring system.

k. Emission Limitation:

58.1 ppmvd NO_x at 0% O_2 on a 365-day rolling average basis

Applicable Compliance Method:

Compliance shall be determined using data from the NO_x continuous emissions monitoring system.

l. Emission Limitation:

93.4 ppmvd NO_x at 0% O_2 on a 7-day rolling average basis

Applicable Compliance Method:

Compliance shall be determined using data from the NO_x continuous emissions monitoring system.

m. Emission Limitation:

Ni emissions shall not exceed 1.0 mg/kg of coke burned

Applicable Compliance Method:

The permittee shall demonstrate continuous compliance according to the method in Table 6 of 40 CFR Part 63, Subpart UUU. If required, the permittee shall

demonstrate compliance according to the procedures specified in Table 5 to 40 CFR Part 63, Subpart UUU.

n. Emission Limitation:

9.7 tons per year VOC emissions from equipment leaks

Applicable Compliance Method:

The leak detection and repair monitoring, record keeping and reporting requirements specified in sections c),d), and e) and shall serve as demonstration of compliance with this emission limitation.

The emission limit of 9.7 tons per year VOC emissions from equipment leaks was established to reflect the potential to emit for this emissions unit using the procedures specified in Protocol for Equipment Leak Emission Estimates (EPA document 453/R-95-017, subsequent updates to Protocol for Equipment Leak Emission Estimates, or alternative emission factor approved by Ohio EPA) to calculate the VOC emissions from equipment leaks. A summary of the calculations was submitted to Ohio EPA in Application for P0108887.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) Each CEMS shall be audited at least once each calendar quarter. Successive quarterly audits shall occur no closer than 2 months. The audits shall be conducted as follows:

a. Relative Accuracy Test Audit (RATA). The RATA shall be conducted at least once every four calendar quarters. Conduct the RATA as described for the RA test procedure in the applicable PS in Appendix B of 40 CFR Part 60 (e.g., PS 2 for SO_2 and NO_X). In addition, analyze the appropriate performance audit samples received from USEPA as described in the applicable sampling methods (e.g., Methods 6 and 7).

i. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Toledo Division of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

ii. Personnel from the Toledo Division of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

b. Cylinder Gas Audit (CGA).

i. If applicable, a CGA may be conducted in three of four calendar quarters, but in no more than three quarters in succession.

c. Relative Accuracy Audit (RAA).

i. RAA may be conducted three of four calendar quarters, but in no more than three quarters in succession. To conduct a RAA, follow the procedure described in the applicable PS in Appendix B of 40 CFR Part 60 for the relative accuracy test, except that only three sets of measurement data are required. Analyses of USEPA performance audit samples are also required.

[Authority for term: OAC rule 3745-77-07(C)(1); Appendix B of 40 CFR Part 60 (e.g., PS 2 for SO_2 and NO_X)]

(3) Ongoing compliance with the opacity, NOx, SO_2 and CO limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

[Authority for term: OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and 40 CFR 60, Appendices B and F]

(4) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emissions testing shall be conducted approximately 2.5 years after permit issuance and within 6 months prior to permit renewal:

i. concentrations: ammonia (1-hr average); and

ii. mass emissions rates for filterable PM (lb/1000 pounds of coke burn-off).

b. The following test method(s) or other test methods as approved by Ohio EPA shall be employed to demonstrate compliance with the allowable concentrations, mass emission rate(s) and control efficiency:

i. 40 CFR 60.106(a) and (b) for filterable PM (lb/ton of coke burn-off);

ii. Methods 1 through 4 and 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents;

iii. U.S. EPA Conditional Test Method (CTM) 027 for ammonia emissions; and

c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to TES for all emission tests. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s) and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in TES refusal to accept the results of the emission test.

Personnel from TES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of any emissions tests shall be signed by the person or persons responsible for the tests and submitted to TES within 30 days following completion of the tests.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(5) The permittee shall conduct certification tests of the continuous NOx, SO_2 and CO monitoring systems in units of the applicable standard(s) to demonstrate compliance with 40 CFR, Part 60, Appendix B, Performance Specifications 2, 3 and 4; and ORC section 3704.03(I).

Personnel from the Ohio EPA Central Office and the Ohio EPA District Office or Local Air Agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the Ohio EPA District Office or Local Air Agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous NOx, SO_2 and CO monitoring systems shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR, Part 60, Appendix B, Performance Specifications 2, 3 and 4; and ORC section 3704.03(I).

[Authority for term: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) Excessive Audit Inaccuracy. If the RA, using the RATA, CGA, or RAA exceeds the criteria in section 5.2.3 of 40 CFR Part 60 Appendix F Procedure 1, the CEMS is out-of-control. If the CEMS is out-of-control, take necessary corrective action to eliminate the problem. Following corrective action, the permittee shall audit the CEMS with a RATA, CGA, or RAA to determine if the CEMS is operating within the specifications. A RATA

shall always be used following an out-of-control period resulting from a RATA. The audit following corrective action does not require analysis of EPA performance audit samples. If audit results show the CEMS to be out-of-control, the CEMS operator shall report both the audit showing the CEMS to be out-of-control and the results of the audit following corrective action showing the CEMS to be operating within specifications.

[Authority for term: OAC rule 3745-77-07(C)(1)]

13. P009, Sulfur Recovery Unit

Operations, Property and/or Equipment Description:

P009 - Sulfur Recovery Unit 1 (SRU 1), 120 long tons per day, with tail gas treatment unit and thermal oxidizer. Includes emissions from SRU1 piping compnents and the Hydrocarbon FLare System (P4 EU Group - P003 and P004) for emergency upsets

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) (PTI P0119763 issued 10/30/2015)	See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(A)(1)	See b)(2)c.
c.	OAC rule 3745-17-11(B)(1)	See b)(2)d.
d.	OAC rule 3745-18-54(W)(7)	See b)(2)e.
e.	OAC rule 3745-21-09(T)	See b)(2)f.
f.	40 CFR Part 60, Subpart J(40 CFR 60.100-109)[In accordance with 40 CFR 60.100(a) this emissions unit is a Claus sulfur recovery plant with a design capacity for sulfur feed of greater than 20 long tons per day that includes a fuel gas combustion device (incinerator) where construction commenced after 10/4/1976 and prior to 5/14/2007 and is subject to the emissions limitations/ control measures specified in this section]	See b)(2)g. through b)(2)i. [60.104(a)(1) and (2)(i)]

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
g.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	See b)(2)j.
h.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 to Subpart CC - General Provisions Applicability to Subpart CC, specifies which parts of the General Provisions in 40 CFR 63.1-16 apply. Table 44 to Subpart UUU of Part 63 — Applicability of NESHAP General Provisions to Subpart UUU shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
i.	40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657) [In accordance with 40 CFR 63.648(a) this emissions unit is a petroleum refinery process unit located at an existing major source of hazardous air pollutants subject to the emissions limitations/control measure specified in this section for equipment leaks.]	See b)(2)k.
j.	40 CFR Part 63, Subpart UUU (40 CFR 63.1560 – 63.1579) [In accordance with 40 CFR 63.1562, this emissions unit is a sulfur recovery plant with a Claus sulfur recovery unit and tail gas treatment unit, located at an existing major source of HAP emissions, that is subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2) and subject to the emission limitations/ control measures specified in this section.]	The SO_2 emission limitation specified by this rule is equivalent to that specified by 40 CFR Part 60, Subpart J under 40 CFR 60.104(a)(2)(i). [Table 29, row 1 to 40 CFR Part 63, Subpart UUU] See b)(2)l.

(2) Additional Terms and Conditions

a. The Permit to Install (PTI 0119763 issued 10/30/2015) incorporates the emission limits and schedules set out in paragraphs 14-18 and 21 of the Consent Decree (United States of America, et al., v. BP Exploration& Oil Co., et al., Civil Action No. 2:96CV095 RL).

b. The permittee shall maintain all NSPS sulfur recovery pit emissions such that they are treated, monitored, and included as part of the sulfur recovery plant's emissions subject to the NSPS Subpart J limit for SO_2, 40 CFR 60.104(a)(2).

c. This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to a mass emission limitation in OAC rule 3745-17-11.

d. The uncontrolled mass rate of particulate emissions (PE)* from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-17-01(B)(17).

* The burning of gaseous fuels is the only source of PE from this emissions unit

e. The emission limitation specified by OAC rule 3745-18-54(W)(7) is as stringent as the emission limitation specified by 40 CFR Part 60, Subpart J.

f. The permittee shall comply with the applicable leak detection and repair requirements specified in OAC rule 3745-21-09(T). See term B.2 of Section B. of the permit for the applicable leak detection and repair requirements.

Consistent with the U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with the equipment leak standards in 40 CFR Part 63, Subpart CC for both equipment in organic HAP service and equipment not in organic HAP service. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T)

g. The permittee shall not burn in the tail gas incinerator any refinery fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf)(the equivalent concentration is 162 parts per million by volume of H_2S dry basis) as a volume-weighted, rolling 3-hour average concentration greater than 0.10 grain per dry standard cubic foot, except during periods of startup, shutdown or malfunction of the refinery fuel gas amine systems provided that the permittee shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. The monitoring, record keeping and reporting requirements for compliance with this condition is maintained under term B.4. of Section B. of this permit.

h. [60.105(e)(4) and 63.1568(a)(1)(i)]
The permittee shall not discharge or cause the discharge of any gases into the atmosphere from the Claus sulfur recovery plant containing in excess of 250 ppm SO_2 by volume (dry basis) at zero percent excess air as a rolling, 12-hour average.

i. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

j. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

k. The permittee shall comply with the applicable leak detection and repair requirements specified in 40 CFR Part 63, Subpart CC. See term B.2. of Section B. of the permit for the applicable leak detection and repair requirements.

l. The permittee shall comply with the requirements for existing sources subject to NSPS (Subpart J) in 40 CFR Part 63, Subpart UUU including the following sections.

i.	63.1568(a)(1)	Meet each emission limitation in Table 29 of this subpart that applies to you. If your sulfur recovery unit is subject to the NSPS for sulfur oxides in 60.104 of this chapter, you must meet the emission limitations for NSPS units.

c) Operational Restrictions

(1) A pilot flame shall be maintained at all times in the East (P003) and West (P004) Hydrocarbon Flares pilot light burners. Requirements for the East and West Hydrocarbon Flares in in the P4 Emission Unit Group of P003 and P004 terms and conditions in this permit.

[Authority for term: OAC rule 3745-77-07(A)(1)]

(2) [40 CFR 63, Subpart UUU] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES: SULFUR RECOVERY UNIT

The permittee shall comply with the applicable restrictions in 63.1568, including the following sections:

63.1568 – Requirements for HAP Emissions from SRU's		
a.	63.1568(a)(2) and Table 30, row 1	Table 30 does not specify any operating limits for SRUs subject to the NSPS.

63.1570 – General Requirements for Complying With Subpart UUU		
b.	63.1570(c)	You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in 63.6(e)(1)(i).

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly operate and maintain a device to continuously monitor the presence of the flare pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. For each day the emissions unit is in operation, the permittee shall record all periods during which there was no flare pilot flame or the monitoring equipment was not operating.

[Authority for term: OAC rule 3745-77-07(C)(1)]

SO_2 CEM REQUIREMENTS

(2) The permittee shall maintain a written quality assurance/quality control plan for the continuous SO_2 monitoring system, designed to ensure continuous valid and representative readings of SO_2 emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO_2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(3) The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(4) The permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of SO_2 emissions into the atmosphere. The monitor shall include an oxygen monitor for correcting the data for excess air.

a. The span values for this monitor are 500 ppm SO_2 and 25 percent O_2.

b. The performance evaluations for this SO2 monitor under 40 CFR 60.13(c) shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(5) The permittee shall maintain on site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous SO_2 monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request. [40 CFR 60.13] and [40 CFR Part 60, Appendix B]

(6) The permittee shall operate and maintain equipment to continuously monitor and record SO_2 emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous SO_2 monitoring system including, but not limited to:

a. emissions of SO_2 in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f);

b. emissions of SO_2 in units of ppm SO_2 by volume (dry basis) at zero percent excess as a rolling, 12-hour average;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous SO_2 monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the continuous SO_2 monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO_2 monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in g. and h., above.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

[Authority for term: 40 CFR 60.13; 40 CFR Part 60, Appendices B and F]

(7) [40 CFR 63, Subpart UUU] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES: SULFUR RECOVERY UNIT

The permittee shall comply with the applicable monitoring and recordkeeping requirements under this Subpart, including the following sections:

63.1568 – Requirements for HAP Emissions from SRU's		
a.	63.1568(a)(3)	The permittee must prepare an operation, maintenance, and monitoring plan (OMMP) according to the requirements in 63.1574(f) and operate accordingly.
b.	63.1568(b)(1) and Table 31, row 1	Operate and maintain a continuous SO_2 monitoring system according to 63.1572 and Table 31. This system must include an oxygen monitor for correcting the data for excess air.
c.	63.1568(b)(3) and Table 32, row 1	Establish each applicable site-specific operating limit in Table 30 of this subpart according to the procedures in Table 32 of this subpart. Table 32, row 1: Measure the SO_2 concentration with a CEM. Collect SO_2 monitoring data every 15 minutes for 24 consecutive operating hours. Reduce the data to 1-hour averages computed from four or more data points equally spaced over each 1-hour period.
d.	63.1568(b)(4)	Correct the reduced sulfur samples to zero percent excess air using Equation 1 of this section from subpart UUU.
e.	63.1568(c)(1) and Tables 34 and 35	Demonstrate continuous compliance with each emission limitation in Tables 29 and 30 of this subpart that applies according to the methods specified in Tables 34 and 35 of this subpart. Table 34, row 1: Collecting the hourly average SO_2 monitoring data (dry basis, percent excess air) according to 63.1572; determining and recording each 12-hour rolling average concentration of SO_2; maintaining each 12-hour rolling average concentration of SO_2 at or below the applicable emission limitation; and reporting any 12-hour rolling average concentration of SO_2 greater than the applicable emission limitation in the compliance report required by 63.1575.

		Table 35, row 1: Meeting the requirements of Table 34 of this subpart, see above.
f.	63.1568(c)(2)	Demonstrate continuous compliance with the work practice standards in 63.1568(a)(3) by complying with the procedures in your operation, maintenance, and monitoring plan (OMMP).
63.1570 – General Requirements for Complying With Subpart UUU		
g.	63.1570(d)	Develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 63.6(e)(3).
h.	63.1570(g)	Consistent with 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with 63.6(e)(1). The SSMP must include elements designed to minimize the frequency of such periods (i.e., root cause analysis). The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in 63.6(e).
63.1572 –Monitoring, operation and maintenance requirements		
i.	63.1572(a)	Operate and maintain each CEM system according to the requirements in 63.1572(a)(1) through (a)(4). (a)(1) You must install, operate, and maintain each continuous emission monitoring system according to the requirements in Table 40 of this subpart. = (a)(2) If you use a continuous emission monitoring system to meet the NSPS SO_2 limit, you must conduct a performance evaluation of each continuous emission monitoring system according to the requirements in 63.8 and Table 40 of this subpart. This requirement does not apply to an affected source subject to the NSPS that has already demonstrated initial compliance with the applicable performance specification. (a)(3) As specified in 63.8(c)(4)(ii), each continuous emission monitoring system must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. (a)(4) Data must be reduced as specified in 63.8(g)(2).
j.	63.1572(d) and (d)(1)	Monitor and collect data according to the requirements in 63.1572(d)(1) and (2)

		(d)(1) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), the permittee must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times the affected source is operating.
k.	63.1572(d)(2)	The permittee must not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities for purposes of this regulation, including data averages and calculations, for fulfilling a minimum data availability requirement, if applicable. The permittee must use all the data collected during all other periods in assessing the operation of the control device and associated control system.
63.1574 - Records		
l.	63.1574(f) and (f)(2)	Prepare and implement an operation, maintenance, and monitoring plan (OMMP) for each control system and continuous monitoring system for each affected source. The purpose of this plan is to detail the operation, maintenance, and monitoring procedures you will follow. (f)(2) Each plan must include, at a minimum, the information specified in paragraphs (f)(2)(i) through (xii) [NOTE: for this EU, include (f)(2)(i), (ii), (viii) and (x).
63.1576 – Records		
m.	63.1576(a)	Keep the records specified in 63.1576(a)(1) through (3): (a)(1) Copy of each notification report submitted to comply with this subpart, including all documentation supporting any initial notification or Notification of Compliance Status submitted, according to the requirements in 63.10(b)(2)(xiv). (a)(2) The records in 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction. (a)(3) Records of performance tests, performance evaluations, and opacity and visible emission observations as required in 63.10(b)(2)(viii).
n.	63.1576(b)	For the SO_2 CEM, keep the records required in 63.1576(b)(1) through (5)
o.	63.1576(d)	Keep records required by Tables 34 and 35 of this subpart (for sulfur recovery units) to show continuous compliance with each

		emission limitation that applies.
p.	63.1576(e)	Keep a current copy of your operation, maintenance, and monitoring plan (OMMP) onsite and available for inspection. Also, keep records to show continuous compliance with the procedures in your OMMP.
q.	63.1576(f)	Keep records of any changes that affect emission control system performance
r.	63.1576(g)	Keep records in a form suitable and readily available for expeditious review according to 63.10(b)(1).
s.	63.1576(h)	As specified in 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
t.	63.1576(i)	Keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 63.10(b)(1). The permittee can keep the records offsite for the remaining 3 years.

(8) [40 CFR 60, Subpart J] STANDARDS OF PERFORMANCE FOR PETROLEUM REFINERIES

The permittee shall comply with the applicable monitoring and recordkeeping requirements under this Subpart, including the following sections:

60.105 - Monitoring of Emissions and Operations		
a.	60.105(a)(3)	The permittee shall either operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration (dry basis, 0 percent excess air) of SO_2 emissions into the atmosphere, or monitoring as provided in 40 CFR 60.105(a)(4). The monitor must include an O_2 monitor for correcting the data for excess air. The permittee has chosen to comply using the H_2S monitoring system of 40 CFR 60.105(a)(4), therefore, the monitoring, recordkeeping and reporting requirements were written to reflect this monitoring option.
b.	60.105(a)(4)	The permittee shall operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration by volume (dry basis) of H_2S in the fuel gases before being burned in any fuel gas combustion device.

60.105 - Monitoring of Emissions and Operations		
c.	60.105(a)(4)(i)	The span value for this instrument is 425 mg/dscm H_2S.
d.	60.105(a)(4)(ii)	Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H_2S in the fuel gas being burned.
e.	60.105(a)(4)(iv)	Monitoring is not required per 60.105(a)(3) or (a)(4) for fuel gas streams that are inherently low in sulfur content. Fuel gas streams meeting one of the following requirements in 60.105(a)(4)(iv)(A) through (D) will be considered inherently low in sulfur content.
f.	60.105(a)(4)(iv)(A)	Monitoring exemption for pilot gas for heaters and flares.
g.	60.105(a)(4)(iv)(B)	Monitoring exemption for fuel gas streams meeting a sulfur content of 30 ppmv or less.
h.	60.105(a)(4)(iv)(C)	Monitoring exemption for fuel gas streams intolerant to sulfur contamination.
i.	60.105(a)(4)(iv)(D)	Monitoring exemption for fuel gas streams the permittee demonstrates are low sulfur content according to 40 CFR 60.105(b).
j.	60.105(a)(5)	For Claus sulfur recovery plants with oxidation control systems followed by incineration subject to 60.104(a)(2)(i), an instrument for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of SO_2 emissions into the atmosphere. The monitor shall include an oxygen monitor for correcting the data for excess air. (i) The span values for this monitor are 500 ppm SO_2 and 25 percent O_2.
k.	60.105(b)	Procedure for submitting an application for an exemption from monitoring for a low-sulfur fuel gas stream not specifically exempted in 40 CFR 60.105(a)(4)(iv).
l.	60.105(e)	For the purpose of reports required under 40 CFR 60.7(c), all averages for reporting of periods of excess emissions shall be determined as the arithmetic average of the applicable 1-hour averages, e.g., the rolling 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages. See (e)(3) and (e)(4) below.
m.	60.105(e)(3)	*For sulfur dioxide from fuel gas combustion*, all rolling 3-hour periods during which the average concentration of H_2S

60.105 - Monitoring of Emissions and Operations		
		as measured by the H_2S continuous monitoring system under 60.105(a)(4) exceeds 230 mg/dscm (0.10 gr/dscf).
n.	60.105(e)(4)	*For sulfur dioxide from Claus sulfur recovery plants*, all 12-hour periods during which the average concentration of SO_2 as measured by the SO_2 continuous monitoring system under 60.105(a)(5) exceeds 250 ppm (dry basis, zero percent excess air)
60.107 – Recordkeeping Requirements		
o.	60.107(e)	Maintain records of the specific exemption determined to apply for each fuel stream where the permittee determines an exemption listed in 40 CFR 60.105(a)(4)(iv) applies. Maintain a copy of the application as well as the letter granting approval of the application when applying for the low-sulfur fuel exemption described in 40 CFR 60.105(a)(4)(iv)(D).

e) Reporting Requirements

(1) SO_2 CEM: The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO_2 monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of SO_2 emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by within 30 days following the end of each calendar quarter and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous SO_2 and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to

the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous SO_2 monitoring system while the emissions unit was in operation;

vii. results and dates of quarterly cylinder gas audits;

viii. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

ix. unless previously submitted, the results of any relative accuracy test audit showing the continuous SO_2 monitor out-of-control and the compliant results following any corrective actions;

x. total duration** of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility [pursuant 40 CFR 60.7(d)(1)];

xi. total duration** of CEM downtime for the reporting period, and if the total period CEM downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime*** of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation [pursuant 40 CFR 60.7(d)(1)]; and

xii. the reason (if known) and the corrective actions taken (if any) for each event in b.x. and xi.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* Where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report.

** Per OEPA request, the refinery agrees to include in each quarterly CEMS report the date, time, and duration of each excess emission event and the date, time and duration of each downtime event.

*** Downtime is time when the unit emission source is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

[Authority for term: 40 CFR 60.7]

(2) [40 CFR Part 63, Subpart UUU] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES: SULFUR RECOVERY UNIT - REPORTS AND NOTIFICATIONS

The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart UUU, including the following sections:

63.1570 – General Requirements for Complying With Subpart UUU		
a.	63.1570(f)	Report each instance when each emission limitation and each operating limit was not met. This includes periods of startup, shutdown, and malfunction. Also, report each instance in which the work practice standards were not met. These instances are deviations from the emission limitations and work practice standards in this subpart. These deviations must be reported according to the requirements in 63.1575
63.1574 – Notifications & Reports		
b.	63.1574(a)(3)	If you are required to conduct a performance test, performance evaluation, design evaluation, opacity observation, visible emission observation, or other initial compliance demonstration, the permittee must submit a notification of compliance status according to §63.9(h)(2)(ii). If the required information has been submitted previously, you do not have to provide a separate notification of compliance status. Just refer to the earlier submissions instead of duplicating and resubmitting the previously submitted information
c.	63.1574(f)(1) and 63.1568(b)(6)	Submit the OMMP plan to your permitting authority for review and approval along with the notification of compliance status. The permittee does not have to include the entire plan in your part 70 or 71 permit, you must include the duty to prepare and implement the plan as an applicable requirement in your part 70 or 71 operating permit. You must submit any changes to the permitting authority for review and approval and comply with the plan until the change is approved.
d.	63.1574(d)	Include the additional information in Table 42 in the Notification of Compliance report.
63.1575 - Reports		

e.	63.1575(a)	Submit each report in Table 43, as applicable.
f.	63.1575(b)	Submit each report by the date in Table 43 regarding emission limitations and work practice standards according to the requirements in 63.1575(b)(1) through (5).
g.	63.1575(c)	The compliance report must contain the information required in 63.1575(c)(1) through (4).
h.	63.1575(d)	Deviations from the emission limitation and work practice standards shall contain the information required in (d)(1) through (d)(3) for compliance report.
i.	63.1575(e)	Required information for reports for CEMs.
j.	63.1575(f)	Include the information in 63.1575(f)(1) and (2) if applicable, pertaining to performance tests and any requested change in the applicability of a standard.
k.	63.1575(g)	The permittee may submit reports required by other regulations in place of or as part of the compliance report if they contain the required information.
l.	63.1575(h)	Reporting requirements regarding startups, shutdowns and malfunctions

(3) [40 CFR 60, Subpart J] STANDARDS OF PERFORMANCE FOR PETROLEUM REFINERIES

The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 60, Subpart J, including the following sections:

60.107 - Reports		
a.	60.107(d)	For any periods for which sulfur dioxide or oxides emissions data are not available, the permittee shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability
b.	60.107(f)	Submit the reports semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period.
c.	60.107(g)	Submit a signed statement certifying the accuracy and completeness of the information contained in the above report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

The permittee shall not burn in the tail gas incinerator any refinery fuel gas that contains H_2S in excess of 230 mg/dscm (0.10 gr/dscf or 162 ppmvd) as a volume-weighted, rolling 3-hour average.

Applicable Compliance Method:

Ongoing compliance with the hydrogen sulfide emission limitation(s) contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping term B.4. of Section B. of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, compliance shall also be demonstrated based upon the methods and procedures of 40 CFR 60.106(e)(1).

b. Emission Limitation:

250 ppm SO_2 by volume (dry basis) at zero percent excess air as a rolling, 12-hour average

Applicable Compliance Method:

Ongoing compliance shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping section of this permit, and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

If required, the permittee shall demonstrate compliance using the methods and procedures of 40 CFR 60.106(f).

(2) The initial compliance demonstration required by 40 CFR 63 Subpart UUU (paragraphs 63.1568(b)(5) and 63.1571(a)(1)) has been completed and submitted, so no additional testing is required.

(3) [40 CFR 60, Subpart J] STANDARDS OF PERFORMANCE FOR PETROLEUM REFINERIES
The permittee shall comply with the testing requirements under this subpart, including the following sections:

60.105 - Monitoring of Emissions and Operations		
a.	60.105(a)(5)(ii)	For Claus sulfur recovery plants with oxidation control systems followed by incineration subject to 60.104(a)(2)(i), an instrument for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of SO_2 emissions into the atmosphere. The monitor shall include an oxygen monitor for correcting the data for excess air. (5)(ii) The performance evaluations for this SO_2 monitor under 60.13(c) shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations.

g) Miscellaneous Requirements

(1) None.

14. P010, Crude/Vac 2

Operations, Property and/or Equipment Description:

P010- Fractionation of crude oil into its basic components. Vapors extracted from Crude Vacuum 2 are ducted to the refinery fuel gas system. The fugitive emissions from the Crude and Vac 2 unit are included with this source.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-18-54(W)(2)	0.40 pounds of sulfur dioxide (SO_2) per ton of actual process weight input See b)(2)a.
b.	OAC rule 3745-21-09(M)(1)	See b)(2)b.
c.	OAC rule 3745-21-09(T)	See b)(2)c.
d.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
e.	*Equipment Leaks* 40 CFR Part 63, Subpart CC(40 CFR 63.640-656) [In accordance with 40 CFR 63.640(c)(4) and 63.648(a)(1), this emissions unit has equipment in organic HAP service and is subject to the Refinery MACT LDAR program]	See b)(2)d.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR Part 60, Subpart GGG	See b)(2)e.
g.	40 CFR Part 64 (CAM Plan)	See b)(2)f.

(2) Additional Terms and Conditions

a. Emissions from the vacuum producing system are ducted to the refinery fuel gas system. All refinery heaters and boilers burning refinery fuel gas (RFG) are subject to the standards for sulfur dioxides under 40 CFR 60.104 (NSPS subpart J) which restricts the permittee from burning in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf). The SO_2 emission limitation specified by OAC rule 3745-18-54(W)(2) is less stringent than the standard in 40 CFR 60.104 Subpart J. Continuous compliance with this emission limitation is monitored by the permittees hydrogen sulfide continuous emissions monitoring system (CEMS). Monitoring, recordkeeping, reporting and testing requirements for the fuel gas CEMS are contained under the heater emissions unit terms and conditions of this permit.

b. The permittee shall control the emissions of VOC from any vacuum producing systems by compressing the vapors and adding them to the refinery fuel gas system.

c. The permittee shall comply with the requirements for equipment leaks in OAC rule 3745-21-09(T) as outlined in term B.2. of Section B.

d. The leak detection and repair requirements applicable to this emissions unit are subsumed into the facility-wide leak detection and repair requirements stated in term B.2. of Section B. of this permit.

e. In accordance with 40 CFR Part 63.640(p)(1), equipment leaks that are subject to the provisions of both 40 CFR Part 60, subpart GGG and 40 CFR Part 63, subpart CC are required to comply only with the provisions specified in 40 CFR Part 63, subpart CC. (See term B.2. of Section B. for the LDAR terms)

f. This process unit is subject to the terms and conditions of 40 CFR Part 64 for VOC. There is no additional emission limitation and work practice standard for this emissions unit because the Vac 2 off-gas is educted into the refinery fuel gas system performance specifications required for the combustion device to which the gases are routed, the combustion device, in this case, is considered inherent process equipment, therefore, no VOC CAM plan is required for the control device.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) None.

e) Reporting Requirements

(1) None.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. None.

g) Miscellaneous Requirements

(1) None.

15. P011, Crude/Vac 1

Operations, Property and/or Equipment Description:

Distillation tower and vacuum distillation tower identified as Crude 1 and Vacuum 1 (also known as Crude Vac 1). Vapors extracted from Crude Vac 1 are ducted via the Crude 1 Overhead System to the refinery fuel gas system. All fugitive emissions from Crude Vac 1 are included with this emissions unit.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T) (Chapter 31 Modification, Best Available Technology (BAT) conditions)(PTI P0119763 modified on 10/30/2015)	10.09 tons per year volatile organic compound (VOC) emissions (from equipment leaks) See b)(2)a.
b.	OAC rule 3745-31-05(D) (PTI P0110958 issued 9/11/2012)	See b)(2)b.
c.	OAC rule 3745-18-54(W)(2)	The sulfur dioxide (SO_2) emissions from this emissions unit shall not exceed 0.40 pound per ton of actual process weight input. See b)(2)b.
d.	OAC rule 3745-21-09(M)(1)	See b)(2)c.
e.	OAC rule 3745-21-09(T)	See b)(2)d.
f.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	See b)(2)e.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
g.	40 CFR Part 60, Subpart GGGa (40 CFR 60.590a – 60.593a) [In accordance with 40 CFR 60.590a, this emissions unit is a process unit located at a petroleum refinery which has equipment (defined by 40 CFR 60.591a) that was added after 11/7/2006 and subject to the emissions limitations/control measures specified in this section]	See b)(2)f.
h.	40 CFR Part 63, Subpart A (40 CFR 60.1-16)	In accordance with 40 CFR 63.642(c), Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
i.	40 CFR Part 63, Subpart CC (40 CFR 60.640 - 63.679) [In accordance with 40 CFR 63.640, this emissions unit is a petroleum refining process unit located at an existing major source of HAP emissions subject to the emissions limitations/control measures specified in this section.]	See b)(2)g. and b)(2)h.
j.	40 CFR Part 64 (CAM for VOC)	See d)(1) and e)(1)

(2) Additional Terms and Conditions

a. The annual VOC emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

b. The SO_2 emission limitation specified by OAC rule 3745-18-54(W)(2) is less stringent than the emission limitation specified under 40 CFR 60.104. All refinery heaters and boilers burning refinery fuel gas are subject to the standards for

sulfur oxides under 40 CFR 60.104 (NSPS Subpart J) or 40 CFR 60.102a(g)(1) (NSPS Subpart Ja) which restricts the permittee from burning in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis. Continuous compliance with this emission limitation is monitored by the permittee's hydrogen sulfide continuous monitoring systems (CEMS). Monitoring, recordkeeping, reporting and testing requirements for the fuel gas CEMS are contained under specific emissions unit terms and conditions for fuel burning equipment.

c. The permittee shall control the emissions of VOC from any vacuum producing systems (Vac 1) by piping the vapors to an appropriate firebox or incinerator, or by compressing the vapors and adding them to the refinery fuel gas system.

NOTE: BP-Husky refinery routes the Vacuum 1 offgas to the Crude 1 overhead drum and from there, directly to the refinery fuel gassystem.

d. The permittee shall comply with the applicable requirements for equipment leaks specified in OAC rule 3745-21-09(T). See term B.2 of Section B. of the permit for the applicable leak detection and repair requirements.

Consistent with the U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with the equipment leak standards in 40 CFR Part 60, Subpart GGGa for both equipment in organic HAP service and equipment not in organic HAP service. The MACT level monitoring of 40 CFR Part 60, Subpart GGGa is generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T).

e. 40 CFR Part 60 subpart A provides the applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

f. The permittee shall comply with the applicable requirements for equipment leaks specified in 40 CFR Part 60, Subpart GGGa for equipment leaks beginning when the TFO project modifications that affect P011are made. P011 is subject to the applicable requirements for equipment leaks specified in 40 CFR Part 60, Subpart GGG until the TFO project modifications that affect P011 are made.

The leak detection and repair requirements applicable to this emissions unit are subsumed into the facility-wide leak detection and repair requirements stated in term B.2. of Section B.

g. Pursuant to 40 CFR 63.640(p)(2), equipment leaks that are subject to the provisions of 40 CFR 63 Subpart CC and 40 CFR Part 60, Subpart GGGa, are required to comply only with the provisions specified in 40 CFR Part 60, Subpart GGGa.

h. When Vac 1 vent gas from this process is ducted to the refinery's fuel gas system, it is not part of the Subpart CC affected source per 63.640(d)(5) which states that no testing, monitoring, record keeping, or reporting is required under Subpart CC for refinery fuel gas systems or emission points routed to refinery fuel gas systems.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall keep records of those times when the Vac 1 vent gas from the process is not ducted to the refinery's fuel system and is bypassed to the flare:

a. the date(s) of the event(s); and

b. the beginning time(s) and the end time(s) of the bypass event(s).

[Authority for term: 40 CFR Part 64]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. Any times when the permittee did not keep the required records in d)(1).

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-15-03(B)(1)(a), OAC rule 3745-15-03(C), and OAC rule 3745-77-07(A)(3)(c)]

(2) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

The SO_2 emissions from this emissions unit shall not exceed 0.40 pound per ton of actual process weight input.

Applicable Compliance Method:

Compliance with this emissions limitation is demonstrated by venting the process vapors produced at this emissions unit to the refinery fuel gas system where the hydrogen sulfide (H_2S) concentration of fuel gas is reduced to less than 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA-recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis.

b. Emission Limitation:

10.09 tons per year VOC emissions from equipment leaks

Applicable Compliance Method:

As long as compliance with the applicable leak monitoring and repair requirements of NSPS Subpart GGGa are maintained, compliance with the emission limit above shall be demonstrated.

The emission limit of 10.09 tons per year VOC emissions from equipment leaks was established to reflect the potential to emit for this emissions unit using the procedures specified in *Protocol for Equipment Leak Emission Estimates* (EPA document 453/R-95-017, subsequent updates to *Protocol for Equipment Leak Emission Estimates*, or alternative emission factor approved by Ohio EPA) to calculate the VOC emissions from equipment leaks. A summary of the calculations was submitted to Ohio EPA in application (A0051671) for PTI P0119763. Per permit condition b)(2)a., no ongoing compliance demonstration is required.

g) Miscellaneous Requirements

(1) None.

16. P014, Oily Belt Filter Press

Operations, Property and/or Equipment Description:

P014- Oily Sludge Belt Filter Press is a closed belt press. (The oily belt press can be used to back-up the bio belt press (P013)).

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-0379, issued 3/11/1987)	See c)(1)
b.	OAC rule 3745-21-09(T)	See b)(2)a.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)b.
d.	*Equipment Leaks* 40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(c)(4) and 63.648(a)(1), this emissions unit has equipment in organic HAP service and is subject to the Refinery MACT LDAR program]	See b)(2)a.
e.	*Miscellaneous Process Vents* 40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR	See b)(2)c.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	63.640(c)(1) and 63.648(a), this emissions unit has equipment in organic HAP service and is subject to the Refinery MACT miscellaneous process vent provisions]	

(2) Additional Terms and Conditions

a. The leak detection and repair requirements stated in 40 CFR Part 63, subpart CC and OAC rule 3745-21-09(T) applicable to this emissions unit are subsumed into the facility-wide leak detection and repair requirements stated in term B.2. of Section B. of this permit.

b. Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.

c. This emissions unit is a Group 2 Miscellaneous Process Vent and has no applicable stack emission limitation under this regulation.

c) Operational Restrictions

(1) The operating hours of this emissions unit shall not exceed 4,380 hours per year.

[Authority for term: OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the total operating hours of this emissions unit and maintain records of the total operating hours per year.

[Authority for term: OAC rule 3745-77-07(A)(3)]

e) Reporting Requirements

(1) In accordance with the reporting requirements of the General Terms and Conditions in Section A of this permit, the permittee shall submit quarterly (deviation) reports that identify all periods in which the emissions unit was operated in excess of 4,380 hours per year.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(2) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. None.

g) Miscellaneous Requirements

(1) None.

17. P017, Coker 2

Operations, Property and/or Equipment Description:

P017 - Coker 2/ delayed petroleum coker, which processes the heaviest of the Vacuum units' streams and further recovers valuable gas oils, distillates and produces fuel gas and petroleum coke. The coker drum is vented to the refining process during the coking cycle. The drum is subsequently depressured through a coker blowdown drum that is shared with Coker 3 (P036) to the flare gas recovery system. After blowdown drum pressure reaches flare header pressure, the blowdown drum is vented to the atmosphere. The coke is then cut out of the process drum.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-945, issued on 4/26/1995)	18.3 tons per year of volatile organic compound (VOC) emissions (from coke cutting and equipment leaks 4.1 pounds of VOC per coking cycle from the hydrocarbon flare system 1.3 tons per year VOC from the hydrocarbon flare system 109.5 pounds of sulfur dioxide (SO_2) per coking cycle from the hydrocarbon flare system 34.3 tons per year SO_2 from the hydrocarbon flare system See b)(2)a., b)(2)b. and b)(2)c.
b.	OAC rule 3745-21-09(T)	See b)(2)d.
c.	OAC rule 3745-21-09(UU)(3)	See b)(2)c. and b(2)e.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	40 CFR Part 60, subpart GGG (40 CFR 60.590 – 593) [In accordance with 40 CFR 60.590(a), this facility has equipment within a process unit that is an affected facility in a petroleum refinery as defined in 60.591 subject to Subpart GGG of this part.]	See b)(2)d. and b)(2)f.
e.	40 CFR Part 63, subpart A	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
f.	*Equipment Leaks* 40 CFR Part 63, subpart CC (40 CFR 63.640 – 656) [In accordance with 40 CFR 63.640 this emissions unit includes equipment leaks from a petroleum refining process unit that is located at an existing major source of HAP subject to the emission limitations and control measures specified in this section.]	See b)(2)g.
g.	*Miscellaneous Process Vents* 40 CFR Part 63, subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(c)(1) and 63.648(a), this emissions unit has equipment in organic HAP service that is subject to the Refinery MACT miscellaneous process vent provisions]	See b)(2)c., b)(2)h. and b)(2)i.

(2) Additional Terms and Conditions

a. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(T) and 40 CFR Part 60, Subpart GGG.

b. The short-term and annual emission limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, recordkeeping and/or reporting requirements to ensure compliance with these limitations.

c. The flare requirements applicable to this emissions unit are subsumed into the terms for emissions units for the East and West Hydrocarbon Flares, P003 and P004.

d. Refer to term B.2. of Section B. for the applicable leak detection and repair requirements pertaining to OAC rule 3745-21-09(T) and 40 CFR Part 63, subpart CC.

e. All VOC emissions from the Coker 2 blowdown drum shall be vented to a flare that complies with the requirements of OAC rule 3745-21-09(DD)(1)(d). See term b)(2)c. above.

f. In accordance with 40 CFR 63.640(p) of subpart CC, equipment leaks that are also subject to the provisions of 40 CFR parts 60 standards promulgated before September 4, 2007, are required to comply only with the provisions specified in 40 CFR 63, subpart CC.

g. The leak detection and repair requirements stated in 40 CFR Part 63, subpart CC applicable to this emissions unit are subsumed into the facility-wide leak detection and repair requirements stated in term B.2. of Section B. of this permit. NOTE: Pursuant to 40 CFR 63.648(a) the permittee complies with the requirements of 40 CFR 60, subpart VV as an existing source.

h. [63.643(a)(1)]
TheCoker 2 blowdown drum vent is considered a Group 1 miscellaneous process vents under 40 CFR 63, subpart CC and is controlled by the hydrocarbon flare system at the refinery (P003 and P004). The permittee shall comply with the applicable emission limits and operating requirements of 40 CFR Part 63, subpart CC by reducing the emissions of organic HAP's using a flare that meets the requirements of 40 CFR 63.11(b) of subpart A. See b)(2)b. above.

i. [63.641] Definition of a Group 1 Miscellaneous Process Vent
Group 1 miscellaneous process vent means a miscellaneous process vent for which the total organic HAP concentration is greater than or equal to 20 parts per million by volume, and the total volatile organic compound emissions are greater than or equal to 33 kilograms per day for existing sources at the outlet of the final recovery device (if any) and prior to any control device and prior to discharge to the atmosphere.

c) Operational Restrictions

(1) The maximum allowable operating rate for this emissions unit is 626 coking cycles per year.

[Authority for term: OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain daily records of the number of coking cycles completed each day.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart CC, including the following sections:

63.644 Monitoring provisions for miscellaneous process vents		
a.	63.644(a)	The permittee has choosen to install the monitoring equipment specified in 63.644(a)(2). All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately. NOTE: The flare requirements applicable to this emissions unit are subsumed into the terms of the East and West Hydrocarbon Flares, P003 and P004.

e) Reporting Requirements

(1) In accordance with the reporting requirements of the General Terms and Conditions in Section A of this permit, the permittee shall include in the required quarterly deviation (excursion) reports of:

a. Any excedance of the 626 coking cycles per year operational restriction; and

b. Any periods in which the capture (collection) system and/or control device was not in operation while the emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

63.655 Reporting Requirements		
a.	63.655(g)	Submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the compliance exceptions specified in 63.655(g)(1) through (g)(6) occur..
b.	63.655(g)(6)(i)(B)	For miscellaneous process vents for which continuous parameter monitors are required by this subject, periods of excess emissions shall be identified in the Periodic Reports and shall be used to determine compliance with the emission standards. Periods of excess emission include an operating day when all pilot flames of a flare are absent (See P003/P004 for monitoring, record keeping and reporting for flares).
c.	63.655(g)(6)(ii)	For miscellaneous process vents, excess emissions shall be reported for the operating parameters specified in table 10 of this subpart unless other site-specific parameter(s) have been approved by the operating permit authority. From Table 10 (See P003/P004 for monitoring, recordkeeping and reporting for flares): -Record and report the presence of a flame at the pilot light over the full period of the compliance determination. - Record the times and durations of all periods when all pilot flames for a flare are absent or the monitor is not operating. - Report the times and durations of all periods when all pilot flames for a flare are absent or the monitor is not operating.
d.	63.655(g)(6)(iii)	Periods of startup and shutdown that meet the definition of 63.641, and malfunction that meet the definition in 63.2 and periods of performance testing and monitoring system calibration shall not be considered periods of excess emissions. Malfunctions may include process unit, control device, or monitoring system malfunctions.
e.	63.655(g)(7)	If a performance test for determination of compliance for a new emission point subject to this subpart or for an emission point that has changed from Group 2 to Group 1 is conducted during the period covered by a Periodic Report, the results of the performance test shall be included in the Periodic Report.
f.	63.655(h)(1)	Reports of startup, shutdown, and malfunctions required by 40 CFR 63.10(d)(5).

(3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

18.3 tons per year VOC emissions from coke cutting and equipment leaks

Applicable Compliance Method:

The 18.3 tons/yr VOC emission limit is based on the potential to emit for this emissions unit. The potential to emit was determined by adding the tons/yr VOC emissions from coke cutting and equipment leaks.

The maximum tons per year VOC emission from coke cutting was determined by multiplying the maximum of 626 coking cycles per year by the BP derived emission factor for coke cutting of 18 pounds of VOC emissions per coking cycle to obtain 5.63 tons/yr VOC emissions from coke cutting.

The maximum tons per year VOC emissions from equipment leaks was determined by multiplying the total number of components by a leaking factor of 2% of the total components. This product is then multiplied by the corresponding leak screening value correlation, multiplied by 2.2 lbs/kg, multiplied by 8760 hours per year, and divided by 2000 pounds per ton to obtain the VOC emission rate in tons per year for each type of leaking component for a total of 12.57 tons per year VOC emissions from equipment leaks. The leak screening values are listed in tables 2-10 and 2-14 of *Protocol for Equipment Leak Emission Estimates* (EPA document 453/R-95-017 or subsequent updates).

b. Emission Limitation:

4.1 pounds VOC emissions per coking cycle from the flare

Applicable Compliance Method:

This emission limit is based on the BP derived uncontrolled emission factor of 205.8 pounds per coking cycle multiplied by 0.02 to account for a flare control efficiency of 98% when emissions were previously vented to the flare. The permittee now complies with this emission limitation by design, since the blowdown emissions are now recovered at the flare gas recovery system and used as refinery fuel gas.

c. Emission Limitation:

1.3 tons per year VOC emissions from the flare

Applicable Compliance Method

This emission limitation is based on the 4.1 lb/coking cycle VOC emission limit multiplied by the maximum of 626 coking cycles per year and divided by 2000 pounds per ton when the emissions were vented to the flare. The permittee now complies with this emission limitation by design, since the blowdown emissions are now recovered at the flare gas recovery system and used as refinery fuel gas.

d. Emission Limitation:

109.5 pounds SO_2 per coking cycle

Applicable Compliance Method:

This emission limitation is based on the BPH derived emission factor when the blowdown emissions were vented to the flare. The permittee now complies with this emission limitation by design, since the blowdown emissions are now recovered at the flare gas recovery system and used as refinery fuel gas.

e. Emission Limitation:

34.3 tons per year SO_2 emissions from the flare

Applicable Compliance Method:

This emission limitation is based on 109.5 lbs/coking cycle SO_2 multiplied by the maximum of 626 coking cycles per year and divided by 2000 pounds per ton when the blowdown emissions were vented to the flare. The permittee now complies with this emission limitation by design, since the blowdown emissions are now recovered at the flare gas recovery system and used as refinery fuel gas.

[Authority for term: OAC rule 3745-17-07(A)(1)]

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable testing requirements in 40 CFR 63, subpart CC, including the following sections:

63.645 Test Methods and Procedures for Misc. Process Vents		
a.	63.645(a), (b), and (c)	To demonstrate compliance with the miscellaneous process vent provisions in 63.643 using a flare as the control device, the permittee shall test for visible emissions, net heating value and exit velocity per 40 CFR 63.116 of 40 CFR 63, subpart G.

		NOTE: Flare testing requirements are included under P003/P004 flare testing requirements.
b.	63.645(g)	Engineering assessment, including the information detailed in 63.645(g)(1), may be used to determine the TOC emission rate for the representative operating condition expected to yield the highest daily emission rate.

g) Miscellaneous Requirements

(1) None.

18. P025, Refinery WWT System

Operations, Property and/or Equipment Description:

P025- Facility-Wide Wastewater Treatment System: Process Oily Water System and stormwater system (including drains, manholes, junction boxes, lift stations, laterals and trunklines) within the refinery and refinery wastewater treatment system (excluding Belt Filter Presses P013 and P014) with the following treatment and control systems: carbon canisters and benzene strippers with non-condensables vented to the Hydrocarbon Flare System

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T) (PTI P01119763 issued 10/30/2015)	Best Available Technology Requirements See b)(2)a.
b.	OAC rule 3745-21-09(M)(2)	See b)(2)b.
c.	OAC rule 3745-21-09(UU)(4)	See b)(2)c.
d.	40 CFR Part 63, subpart A (40 CFR 63.1-16)	See b)(2)d.
e.	40 CFR Part 63, subpart CC(40 CFR 63.640-679) [In accordance with 40 CFR 63.640(a), this emissions unit is subject to the facility-wide waste-water program at an existing petroleum refinery subject to the emission limitations/control measures specified in this section for Group 1 and Group 2 wastewater streams.]	See b)(2)e., (2)f. and b)(2)g.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR Part 61, subpart A (40 CFR 61.1-19)	40 CFR Part 61, subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units subject to 40 CFR 61.
g.	40 CFR Part 61, subpart FF (40 CFR 61.340-358) [In accordance with 61.340(a) and 61.342(b) this facility is a petroleum refinery at which the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 ton/yr) and subject to the emission limitations and control measures specified in this section.]	See b)(2)h., b)(2)i. and g)(1)
h.	40 CFR Part 60, subpart A (40 CFR 60.1-19)	40 CFR Part 60, subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units subject to 40 CFR 60. The definitions listed under 40 CFR 691 apply for all standards and requirements under 40 CFR Part 60, subpart QQQ.
i.	40 CFR Part 60, subpart QQQ (40 CFR 60.690-699) [In accordance with 40 CFR 60.690, this emissions unit represents the facility-wide wastewater program at an existing petroleum refinery subject to the emission limitations/control measures specified in this section for wastewater streams not subject to 40 CFR 63, subpart CC or 40 CFR 61, subpart FF.]	Group 2 wastewater streams that are managed in piece of equipment subject to 40 CFR Part 60, subpart QQQ shall comply with the requirements of 40 CFR 60.692-1 through 60.692-5 and 60.693-1 and 60.393-2, except during periods of startup, shutdown or malfunction. See b)(2)j. and g)(2)
For Equipment leaks:		
j.	OAC rule 3745-21-09(T)	See b)(2)k. and b)(2)l.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
k.	40 CFR Part 60, subpart GGGa (40 CFR 60.590a-593a) [In accordance with 60.390a(a)(3), this emissions unit is part of a group of all the equipment (defined in 60.591a) within a process unit defined as an affected facility.]	The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart GGGa for the piping components of the two benzene strippers in the process unit within P025 for the purpose of Subpart GGGa. See b)(2)l.

(2) Additional Terms and Conditions

a. Compliance with the requirements of this rule includes compliance with the requirements of OAC rule 3745-21-09(M)(2), OAC rule 3745-21-09(T), OAC rule 3745-21-09(UU)(4), 40 CFR Part 60, Subpart QQQ, 40 CFR Part 61, Subpart FF, and 40 CFR Part 63, Subpart CC.

b. Except for any wastewater separator which is used solely for once-through, noncontact cooling water or for intermittent tank farm drainage resulting from accumulated precipitation, the permittee shall control the emissions of VOC from any wastewater separator by equipping all forebay sections and other separator sections with covers and seals which minimize the amount of oily water exposed to the ambient air. In addition, all covers and forebay and separator sections shall be equipped with lids and seals which are kept in a closed position at all times except when in actual use. [OAC rule 3745-21-09(M)(2)]

c. Pursuant to OAC rule 3745-21-09(UU)(4), all process wastewater from the crude desalter shall be discharged to a steam stripper for the recovery of condensable hydrocarbons, and all VOC emissions from the steam stripper shall be vented to a flare that complies with the requirements of OAC rule 3745-21-09(DD)(10)(d).

Consistent with the U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(DD)(10)(d) by demonstrating compliance with the flare requirements in 40 CFR Part 63, Subpart A. The MACT level monitoring of 40 CFR Part 63, is generally more stringent than the Ohio requirements of OAC rule 3745-21-09(DD)(10).

d. Table 6 of 40 CFR 63, Subpart CC specifies the provisions of Subpart A that apply and those that do not apply to owners and operators of sources subject to 40 CFR 63, Subpart CC.

e. Pursuant to 40 CFR Part 63.647(a), the permittees of Group 1 wastewater streams shall comply with the requirements of 40 CFR Part 61.340 through 61.355 of 40 CFR Part 61, Subpart FF for each stream that meets the definition for Group 1 wastewater streams as stated in 63.641 (stated below).

A *Group 1 wastewater stream* means a wastewater stream at a petroleum refinery with a total annual benzene loading of 10 megagrams per year or greater as calculated according to the procedures in 40.CFR 61.342 of Subpart FF that has a flow rate of 0.02 liters per minute or greater, a benzene concentration of 10 parts per million by weight or greater, and is not exempt from control requirements under the provisions of 40 CFR Part 61, Subpart FF. A *Group 2 wastewater stream* means a wastewater stream that does not meet the definition of Group 1 wastewater stream.

f. In accordance with 63.640(m), if a change that does not meet the criteria in 63.640(l) is made to a petroleum refining process unit subject to this subpart, and the change causes a Group 2 emission point to become a Group 1 emission point (as defined in 63.641), then the permittee shall comply with the requirements of this subpart for existing sources for the Group 1 emission point as expeditiously as practicable, but in no event later than 3 years after the emission point becomes Group 1. Submit a compliance schedule in accordance with 63.640(m)(1) through (m)(3).

g. Pursuant to 40 CFR Part 63.640(o), a Group 1 wastewater stream managed in a piece of equipment that is also subject to 40 CFR Part 60, Subpart QQQ is required to comply only with the provisions of 40 CFR Part 63, Subpart CC. Group 2 wastewater streams managed in equipment subject to the requirements of 40 CFR 60, Subpart QQQ are required to comply with 40 CFR 60, Subpart QQQ.

h. In accordance with 61.342(e), BP-Husky has chosen 61.342(e) as an alternative to the requirements specified in 61.342(c) and (d). The permittee may elect has elected to manage and treat the facility waste as follows:

   i. 61.342(e)(1) - Manage and treat facility waste with a flow-weighted annual average water content of less than 10 percent in accordance with the requirements of 61.342(c)(1); and

   ii. 61.342(e)(2) - Manage and treat facility waste (including remediation and process unit turnaround waste) with a flow-weighted annual average water content of 10 percent or greater, on a volume basis as total water, and each waste stream that is mixed with water or wastes at any time such that the resulting mixture has an annual water content greater than 10 percent, in accordance with the 61.342(e)(2)(i) and (e)(2)(ii), which requires the benzene quantity for the wastes in (e)(2) must be equal to or less than 6.0 Mg/yr (6.6 ton/yr) as determined by 61.355(k).

i. In accordance with 61.342(c)(1), for each waste stream that contains benzene including (but not limited to) organic waste streams that contain less than 10 percent water and aqueous waste streams, even if the wastes are not discharged to an individual drain system, the permittee shall:

   i. Remove or destroy the benzene contained in the waste using a treatment process or wastewater treatment system that complies with the standards specified in 61.348.

ii. Comply with the standards specified in 61.343 through 61.347 of this subpart for each waste management unit that receives or manages the waste stream prior to and during treatment of the waste stream in accordance with b)(2)g.i.

iii. Each waste management unit used to manage or treat waste streams that will be recycled to a process shall comply with the standards specified in 61.343 through 61.347. Once the waste stream is recycled to a process, including to a tank used for the storage of production process, feed, product, or product intermediates, unless this tank is used primarily for the storage of wastes, the material is no longer subject to b)(2)g

j. Group 2 wastewater streams managed by affected facilities subject to 40 CFR Part 60, Subpart QQQ shall comply with the requirements of 40 CFR 60, Subpart QQQ as follows:

i. [60.690(a)(1)]

The provisions of this Subpart apply to affected facilities located in petroleum refineries for which construction, modification, or reconstruction commenced after May 4, 1987.

ii. [60.690(a)(2)]

An individual drain system is a separate affected facility. Individual drain system means all process drains connected to the first common downstream junction box. The term includes all such drains and common junction box, together with their associated sewer lines and other junction boxes, down to the receiving oil-water separator.

iii. [60.690(a)(4)]

An aggregate facility is a separate affected facility. Aggregate facility means an individual drain system together with ancillary downstream sewer lines and oil-water separators, down to and including the secondary oil-water separator, as applicable.

k. The permittee shall comply with the applicable requirements for equipment leaks specified in OAC rule 3745-21-09(T). See term B.2 of Section B. of the permit for the applicable leak detection and repair requirements.

Consistent with the U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with the equipment leak standards in 40 CFR Part 60, Subpart GGGa for both equipment in organic HAP service and equipment not in organic HAP service. The NSPS and MACT level monitoring of 40 CFR Part 60, Subpart GGGa is generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T).

l. Refer to the appropriate term(s) in term B.2. of Section B. of this permit, the Facility-Wide Leak Detection and Repair programs for equipment leaks.

c) Operational Restrictions

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES

The permittee shall comply with the applicable restrictions required under 40 CFR Part 63, Subpart CC including the following sections:

a.	63.642(k)	The permittee shall comply with the wastewater provisions of 63.647 of Subpart CC.
b.	63.647(a) and (b)	For Group 1 wastewater streams, comply with the requirements of 40 CFR Part 61.340 through 61.355 of 40 CFR 61, Subpart FF. Group 1 and 2 wastewater streams are defined in 40 CFR Part 63.641.
c.	63.647(c)	Requirements for periodic measurement of benzene concentration in wastewater and for monitoring process or control device operating parameters. Operating outside the permitted limits is a violation of the emission standards. Failure to perform required leak monitoring for closed vent systems and control devices or failure to repair leaks within the time period specified in 40 CFR Part 61, Subpart FF, constitutes a violation of this standard.

(2) [40 CFR 61, Subpart FF] NATIONAL EMISSION STANDARD FOR BENZENE WASTE OPERATIONS

The permittee shall comply with the applicable restrictions required under 40 CFR Part 61, Subpart FF including, but not limited to, the following sections:

61.342 Standards: General		
a.	61.342(a)	Requirements for determining the benzene quantity from facility waste.
b.	61.342(e)	As an alternative to the requirements specified in 61.342(c) and (d), a facility at which the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 ton/yr) as determined in 61.342(a) may elect to manage and treat the facility waste in compliance with the requirements of 61.342(e)(1), and (e)(2).
c.	c. 61.342(g)	Compliance will be determined by review of facility records and results from tests and inspections using methods and procedures in 61.355.

61.345 Standards: Containers		
d.	61.345(a)	All containers are to be covered and all openings maintained in a closed, sealed position. Use submerged fill pipe when waste is transferred into a container by pumping.
61.346 Standards: Individual Drain Systems		
e.	61.346(a)(1)	All individual drain systems in which waste is placed in accordance with 40 CFR 61.342(c)(1)(ii) shall install, operate, and maintain a cover and closed vent system that routes all organic vapors vented from the drain system to a control device.
61.348 Standards:Treatment Processes		
f.	61.348(a)(1)	Except as provided in 61.348(a)(5), the waste stream shall be treated in a treatment process designed, installed, operated, and maintained that either: (i) Removes benzene from the waste stream to a level less than 10 parts per million by weight (ppmw) on a flow-weighted annual average basis, (ii) Removes benzene from the waste stream by 99 percent or more on a mass basis, or (iii) Destroys benzene in the waste stream by incinerating the waste in a combustion unit that achieves a destruction efficiency of 99 percent or greater for benzene.
g.	61.348(e)	Except as specified in 61.348(e)(3), if the treatment process or wastewater treatment system unit has any openings (e.g., access doors, hatches, etc.), all such openings shall be sealed (e.g., gasketed, latched, etc.) and kept closed at all times when waste is being treated, except during inspection and maintenance.
61.349 *Standards:Closed vent systems and control devices*		
h.	61.349(a)	For each closed-vent system and control device used to comply with standards in accordance with 61.343 through 61.348, design, install, operate, and maintain the closed-vent system and control device in accordance with the requirements of 61.349.
i.	61.349(a)(2)(ii)	A vapor recovery system (e.g. a carbon adsorption system or condenser) shall recover or control organic emissions vented to it with an efficiency of 95 weight percent or greater, or shall recover or control the benzene emissions

		vented to it with an efficiency of 98 weight percent or greater, or follow 61.349(a)(2)(i)(C).
j.	61.349(a)(2)(iii)	A flare shall comply with the requirements of 40 CFR 60.18
k.	61.349(b)	Operate the closed-vent system and control device at all times when waste is placed in the waste management unit vented to the control device except when maintenance or repair of the waste management unit cannot be completed without a shutdown of the control device.

(3) [40 CFR 60, Subpart QQQ] STANDARDS OF PERFORMANCE FOR VOC EMISSIONS FROM PETROLEUM REFINERY WASTEWATER SYSTEMS

The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart QQQ including, but not limited to, the following sections:

	60.692-1 Standards: General	
a.	60.692-1(a)	Equipment subject to the provisions of 40 CFR 60 Subpart QQQ shall comply with the requirements of §§60.692-1 to 60.692-5 and with §§60.693-1 and 60.693-2, except during periods of startup, shutdown, or malfunction.
b.	60.692-1(b)	Compliance with 60.692-1 to 60.692-5 and with 60.693-1 and 60.693-2 will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 60.696.
60.692-2 Standards: Individual Drain Systems		
c.	60.692-2(a)	Each drain shall be equipped with water seal controls.
d.	60.692-2(b)	Junction boxes shall be equipped with a cover and may have an open vent pipe. The vent pipe shall be at least 90 cm (3 ft) in length and shall not exceed 10.2 cm (4 in) in diameter. The covers shall have a tight seal around the edge and shall be kept in place at all times, except during inspection and maintenance.
e.	60.692-2(c)	Sewer lines shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces.
f.	60.692-2(d)	Except as provided in paragraph (e) of this section, each modified or reconstructed individual drain system that has a catch basin in the existing configuration prior to May 4,

		1987 shall be exempt from the provisions of this section.
g.	60.692-2(e)	Refinery wastewater routed through new process drains and a new first common downstream junction box, either as a part of a new individual drain system or an existing individual drain system, shall not be routed through a downstream catch basin.
60.692-3 Standards: Oil-water separators		
h.	60.692-3(a)	Each oil-water separator tank, slop oil tank, storage vessel, or other auxiliary equipment subject to the requirements of this subpart shall be equipped and operated with a fixed roof, which meets the following specifications, except as provided in 60.692-3(d) or in 60.693-2.
. i.	60.692-3(a)(1)	The fixed roof shall be installed to completely cover the separator tank, slop oil tank, storage vessel, or other auxiliary equipment with no separation between the roof and the wall.
. j.	60.692-3(a)(2)	The vapor space under a fixed roof shall not be purged unless the vapor is directed to a control device.
k.	60.692-3(a)(3)	If the roof has access doors or openings, such doors or openings shall be gasketed, latched, and kept closed at all times during operation of the separator system, except during inspection and maintenance.
	60.693-2 Standards: Alternative standards for oil-water separators	
l.	60.693-2(a)(1)	As an alternative to the fixed roof requirements for oil water separators in 40 CFR 60.692-3, construct and operate a floating roof on an oil-water separator tank, equipped with a closure device between the wall of the separator and the roof edge. The closure device is to consist of a primary seal and a secondary seal.
m.	60.693-2(a)(1)(i)(A)	The primary seal shall be a liquid-mounted seal or a mechanical shoe seal. A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the separator and the floating roof. A mechanical shoe seal means a metal sheet held vertically against the wall of the separator 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.
n.	60.693-2(a)(1)(i)(B)	The gap width between the primary seal and the separator

		wall shall not exceed 3.8 cm (1.5 in) at any point.
o.	60.693-2(a)(1)(i)(C)	The total gap area between the primary seal and the separator wall shall not exceed 67 cm^2/m (3.2 in^2/ft) of separator wall perimeter.
p.	60.693-2(a)(1)(ii)(A)	The secondary seal shall be above the primary seal and cover the annular space between the floating roof and the wall of the separator. The gap width between the secondary seal and the separator wall shall not exceed 1.3 cm (0.5 in.) at any point.
q.	60.693-2(a)(1)(ii)	The total gap area between the secondary seal and the separator wall shall not exceed 6.7 cm2/m (0.32 in^2/ft) of separator wall perimeter.
r.	60.693-2(a)(2)	Except as provided in 60.693-2(a)(4), each opening in the roof shall be equipped with a gasketed cover, seal, or lid, which shall be maintained in a closed position at all times, except during inspection and maintenance
s.	60.693-2(a)(3)	The roof shall be floating on the liquid (i.e., off the roof supports) at all times except during abnormal conditions (i.e., low flow rate).
t.	60.693-2(a)(4)	The floating roof may be equipped with one or more emergency roof drains for removal of stormwater. Each emergency roof drain shall be fitted with a slotted membrane fabric cover that covers at least 90 percent of the drain opening area or a flexible fabric sleeve seal
u.	60.693-2(c)	As an alternative, install and operate a floating roof on an oil-water separator tank, slop oil tank, storage vessel, or other auxiliary equipment. For portions of the oil-water separator tank where it is infeasible to construct and operate a floating roof, such as the skimmer mechanism and weirs, a fixed roof meeting the requirements of 60.692-3(a) shall be installed.
v.	60.693-2(d)	Except as provided in 60.693-2(c), if an owner or operator elects to comply with the provisions of this section, then the owner or operator does not need to comply with the provisions of 60.692-3 or 60.694 applicable to the same facilities.
60.692-4 Standards: Aggregate facility		
w.	60.692-4	A, new, modified, or reconstructed aggregate facility shall comply with the requirements of §§60.692-2 and 60.692-3

60.692-5 Standards: Closed vent systems and control devices		
x.	60.692-5(a)	Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816°C (1,500°F).
y.	60.692-5(b)	Vapor recovery systems (for example, condensers and adsorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater. The permittee operates carbon canisters for control of units subject to these requirements
z.	60.692-5(c)	Flares used to comply with this subpart shall comply with the requirements of 40 CFR 60.18.
aa.	60.692-5(d)	Closed vent systems and control devices used to comply with provisions of 40 CFR Part 60, Subpart QQQ shall be operated at all times when emissions may be vented to them.
bb.	60.692-5(e)(1)	Closed vent systems shall be designed and operated with no detectable emissions of VOC, as indicated by an instrument reading of less than 500 ppm above background, as determined during the initial and semiannual inspections by the methods specified in 40 CFR 60.696
cc.	60.692-5(e)(2)	Closed vent systems shall be purged to direct vapor to the control device.
dd.	60.692-5(e)(3)	A flow indicator shall be installed on a vent stream to a control device to ensure that the vapors are being routed to the device.
ee.	60.692-5(e)(4)	All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

d) Monitoring and/or Recordkeeping Requirements

(1) Monitoring requirements for OAC rule 3745-21-09.

The permittee shall collect and record the following information each day: the operating times for the Benzene wastewater strippers, Tanks 14 & 15, the West flare, and the crude desalters. At times when the hydrocarbon flare is out of service for maintenance or repair, the permittee will vent to the SRU 1 Acid Gas Flare or will shut down the Benzene Strippers.

[Authority for term: OAC rule 3745-21-09(UU)(4)]

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES

The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR Part 63, Subpart CC including the following sections:

a.	63.655(a)	The permittee shall comply with the recordkeeping provisions of 40 CFR 61.356 of Subpart FF.

(3) [40 CFR 61, Subpart FF] NATIONAL EMISSION STANDARD FOR BENZENE WASTE OPERATIONS

The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR Part 61, Subpart FF including the following sections:

	Standards: General	
a..	61.342(b)	The permittee shall be in compliance with the requirements of paragraphs (c) through (h) of this section by the initial startup for a new source with an initial startup after the effective date.
b.	61.342(f)	Requirements if the permittee transfers waste offsite to another facility where the waste is treated.
61.345 Standards: Containers		
c.	61.345(a)(1), (b) and (c)	The containers shall be monitored annually for leaks. Those greater than 500 ppmv above background are considered leaking. Each cover and all openings shall be visually inspected quarterly to ensure closed and gasketed. First effort at repair is within 15 days.
61.346 Standards: Individual drain systems		
d.	61.346(a)	*Standards: Individual drain systems*: Each drain system shall have a cover and closed vent system. Monitoring is required annually by the methods specified in 61.355(h); readings greater than 500 ppmv above background are considered leaking. First effort at repair shall be within 15 days. Visual inspections are required quarterly. Alternatives are listed in 61.346(b)

e.	61.346(b)(1)	*Alternatives to complying with 61.346(a):* (b)(1) Each drain shall be equipped with water seal controls or a tightly sealed cap or plug.
f.	61.346(b)(2)	Each junction box shall be equipped with a cover and may have a vent pipe. The vent pipe shall be at least 90 cm (3 ft) in length and shall not exceed 10.2 cm (4 in) in diameter.
g.	61.346(b)(2)(i)	Junction box covers shall have a tight seal around the edge and shall be kept in place at all times, except during inspection and maintenance
h.	61.346(b)(2)(ii)	One of the following methods shall be used to control emissions from the junction box vent pipe to the atmosphere:
i.	61.346(b)(2)(ii)(A)	Equip the junction box with a system to prevent the flow of organic vapors from the junction box vent pipe to the atmosphere during normal operation. An example of such a system includes the use of water seal controls on the junction box. A flow indicator shall be installed, operated, and maintained on each junction box vent pipe to ensure that organic vapors are not vented from the junction box to the atmosphere during normal operation.
j.	61.346(b)(2)(ii)(B)	Emissions from the junction box vent pipe to the atmosphere are controlled by connecting the junction box vent pipe to a closed-vent system and control device in accordance with 61.349
k.	61.346(b)(3)	Each sewer line shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces
l.	61.346(b)(4)	Visual inspection required quarterly for drains using water seas, tightly sealed cap or plug, junction boxes and unburied portions of the sewer line by the methods described in 61.346(b)(4).
m.	61.346(b)(5)	Except as provided in 61.350 of this subpart, when a broken seal, gap, crack or other problem is identified, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after identification.
61.348 Standards: Treatment Processes		
n.	61.348(a)(2)	Each treatment process complying with 61.348(a)(1)(i) or (a)(1)(ii) shall be designed and operated in accordance with the appropriate waste management unit standards specified in 61.343 through 61.347.

o.	61.348(a)(3)	For the purpose of complying with the requirements specified in 61.348(a)(1)(i), the intentional or unintentional reduction in the benzene concentration of a waste stream by dilution of the waste stream with other wastes or materials is not allowed.
p.	61.348(a)(4) and (a)(5)	Requirements for aggregate streams and combined streams.
q.	61.348(c)	Demonstration required to show that each treatment process or wastewater treatment system unit achieves the appropriate conditions through engineering calculations or performance tests.
r.	61.348(d)	A treatment process or waste stream is in compliance with the requirements of this subpart and exempt from the requirements of 61.348(c) provided that the permittee documents that the treatment process or waste stream is in compliance with other regulatory requirements. See (d)(3) and (d)(4) below.
s.	61.348(d)(3)	The waste stream is treated by a means or to a level that meets benzene-specific treatment standards in accordance with the Land Disposal Restrictions under 40 CFR part 268, and the treatment process is designed and operated with a closed-vent system and control device meeting the requirements of §61.349 of this subpart;
t.	61.348(d)(4)	The waste stream is treated by a means or to a level that meets benzene-specific effluent limitations or performance standards in accordance with the Effluent Guidelines and Standards under 40 CFR parts 401-464, and the treatment process is designed and operated with a closed-vent system and control device meeting the requirements of §61.349 of this subpart;
u.	61.348(e)(1)	Each seal, access door, and all other openings shall be checked by visual inspections quarterly to ensure that no cracks or gaps occur and that openings are closed and gasketed properly
v.	61.348(e)(2)	Except as provided in §61.350, when a broken seal or gasket or other problem is identified, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after identification.
w.	61.348(e)(3)	Requirements if the system has an opening on the treatment process that is maintained with a pressure less than atmospheric pressure.

x.	61.348(f)	Except for treatment processes complying with 61.348(d), the Administrator may request that the permittee demonstrate that a treatment process or wastewater treatment system unit meets the applicable requirements specified in 61.348(a) by conducting a performance test using the test methods and procedures as required in 40 CFR 61.355.
y.	61.348(g)	Monitor the treatment process or wastewater treatment system unit in accordance with the applicable requirements in 61.354.
61.349 *Standards:Closed vent systems and control devices*		
z.	61.349(a)(1)	Closed-vent systems and control devices shall be monitored annually for leaks by the methods specified in 61.355(h). Readings greater than 500 ppmv VOC above background are considered leaking. First effort at repair is required within 15 days. Visual inspections are required quarterly. Closed vent systems that contain a bypass line that could divert systems away from the control device shall be monitored by a flow indicator or be equipped with a valve secured, closed with a car-seal or lock and key.
aa.	61.349(f)	Each closed-vent system and control device shall be visually inspected quarterly. The visual inspection shall include inspection of ductwork and piping and connections to covers and control devices for evidence of visible defects such as holes in ductwork or piping and loose connections.
bb.	61.349(g)	If visible defects are observed during an inspection, or if problems are identified, or if detectable emissions are measured, a first effort to repair the closed-vent system and control device shall be no later than 5 calendar days after detection and the repair completed within 15 calendar days.
cc.	61.349(h)	Monitor the control device as follows: flares in accordance with 61.354(c)(3).
61.350 Standards: Delay of Repair		
dd.	61.350(a) and (b)	Delay of Repair is allowed if the repair is technically impossible without a partial or complete unit shutdown. Repair the equipment before the end of the next facility or unit shutdown.
61.354 Monitoring of Operations		
ee.	61.354(a)(1)	Monitor each treatment process or wastewater treatment system unit to ensure the unit is properly operated and

		maintained by measuring the benzene concentration of the waste stream exiting the treatment process once a month if complying with 61.348(a)(1)(i), or by measuring the benzene concentration of the waste stream entering and existing the treatment process once a month if complying with 61.348(a)(1)(ii).
ff.	61.354(a)(2)	Monitor each treatment process or wastewater treatment system unit to ensure the unit is properly operated and maintained according to manufacturer's specifications equipment to continuously monitor and record a process parameter(s) for the treatment process or wastewater treatment system unit that indicates proper system operation. Inspect the data recorded by the monitoring equipment (e.g., temperature monitor or flow indicator) to ensure that the unit is operating properly each operating day.
gg.	61.354(c)	For closed-vent systems and control devices, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor the control device operation as specified in the following paragraphs, unless alternative monitoring procedures or requirements are approved for that facility by the Administrator.
hh.	61.354(c)(3)	For a flare, a monitoring device in accordance with 40 CFR 60.18(f)(2) equipped with a continuous recorder.
ii.	61.354(d)	For carbon adsorption systems that do not regenerate the carbon bed directly on site, either the concentration level of the organic compounds or the concentration level of benzene in the exhaust vent stream from the carbon adsorption system shall be monitored on a regular schedule, and the existing carbon shall be replaced with fresh carbon immediately when carbon breakthrough is indicated. The device shall be monitored on a daily basis or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater or follow the alternative stated in 61.354(d).
jj.	61.354(f)	Requirements to inspect any bypass lines that could divert a vent stream from a control device
kk.	61.354(g)	Requirements for monitoring if the control is maintained at a pressure less than atmospheric.
61.356 Recordkeeping Requirements		

ll.	61.356(a)	Comply with the recordkeeping requirements of this section. Each record shall be maintained in a readily accessible location at the facility for a period not less than two years from the date the information is recorded unless otherwise specified. NOTE: this condition is less stringent than OAC 3745-77-07(A)(3)(b), which requires all records required by the Title V to be maintained for 5 years.
mm.	61.356(b)	Maintain records that identify each waste stream; indicate whether or not the waste stream is controlled for benzene emissions in accordance with this Subpart; and maintain a list of exempt waste streams along with calculations and documentations as applicable in 61.356(b)(1) through (b)(6).
nn.	61.356(d)	Recordkeeping requirements for control equipment. Maintain engineering design documentation for the life of the control equipment.
oo.	61.356(e)	Recordkeeping requirements for the treatment process or wastewater treatment system. See 61.356(e)(1) through (e)(4).
pp.	61.356(f)	Recordkeeping requirements for each closed-vent system and control device in accordance with 61.349. Includes certifying statements, engineering calculations and design analysis as described in 61.356(f)(1) and (f)(2)..
qq.	61.356(g)	Maintain a record for each visual inspection required by 40 CFR 61.343 through 61.347 that identifies a problem (such as a broken seal, gap or other problem), which could result in benzene emissions. The record shall include the date of the inspection, waste management unit and control equipment location where the problem is identified, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed.
rr.	61.356(h)	Maintain a record for each test of no detectable emissions required by 40 CFR 61.343 through 61.347 and 61.349. The record shall include the following information: date the test is performed, background level measured during test, and maximum concentration indicated by the instrument reading measured for each potential leak interface. If detectable emissions are measured at a leak interface, then the record shall also include the waste management unit, control equipment, and leak interface location where

		detectable emissions were measured, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed,
ss.	61.356(i)	Recordkeeping requirements for each treatment process and wastewater treatment system operated to comply with 61.348 including dates of startup and shutdown of the unit, parameter that is continuously monitored and periods when the unit is not operated as designed as described in 61.356(i)(1) through (i)(5).
tt.	61.356(j)(1)	For each control device, maintain documentation for each closed vent system and control device (i.e. flare and carbon canister) that includes the dates of startup and shutdown of the closed-vent system and control device.
uu.	61.356(j)(2)	For each control device (i.e flare and carbon canisters), maintain documentation of the description of the operating parameter (or parameters) to be monitored to ensure that the control device will be operated in conformance with these standards and the control device's design specifications and an explanation of the criteria used for selection of that parameter (or parameters). This documentation shall be kept for the life of the control device.
vv.	61.356(j)(3)	For each control device (i.e. flare and carbon canisters), maintain documentation of periods when the closed-vent system and control device are not operated as designed including all periods and the duration when: (i) Any valve car-seal or closure mechanism required under 61.349(a)(1)(ii) is broken or the by-pass line valve position has changed. (ii) The flow monitoring devices required under 61.349(a)(1)(ii) indicate that vapors are not routed to the control device as required.
ww.	61.356((j)(7)	Maintain documentation regarding the closed vent system and control device: for flares - maintain continuous records of the flare pilot flame monitoring and records of all periods during which the pilot flame is absent.
xx.	61.356((j)(10)	Maintain documentation regarding the closed vent system and control device: for Carbon adsorbers - dates and times when breakthrough is measured, when carbon is replaced. Record times when the above is not operated as designed; startups and shutdown of the units.

yy.	61.356(k)	Recordkeeping requirements for tanks that are managed under 61.351 – Alternative Standards for Tanks shall comply with the record keeping requirements of 40 CFR 60 Subpart 60.115b.
zz.	61.356(m)	Record keeping requirements for control equipment maintained at a pressure less than atmospheric pressure with openings to provide dilution air.

(4) Carbon Canisters Monitoring for 40 CFR 61 Subpart FF (per Paragraph 19(F) of the consent decree United States, et. al. v. BP Exploration & Oil, et. al., Northern District of Indiana, Hammond Division, Civil Action No. 2:96 CV 095 RL, entered on January 10, 2001.)

The permittee shall comply with either paragraph (4)a. or (4)b. below at all locations where a carbon canister(s) is utilized as the control device under the Benzene Waste NESHAP (40 CFR 61.354(d)).

a. Utilizing primary and secondary carbon canisters in series:

i. The permittee shall monitor for breakthrough between the primary and secondary carbon canisters at times when there is actual flow to the carbon canister, in accordance with the frequency specified in 40 CFR 61.354(d).

ii. The permittee shall replace the secondary carbon canisters with fresh carbon canisters immediately when VOC breakthrough of 50 ppm is detected. The original secondary carbon canister or a new carbon canister will be used as the new primary carbon canister. For this section "immediately" means within twenty-four (24) hours.

iii. The permittee shall maintain a supply of fresh carbon canisters at each facility at all times.

iv. Until installation of the second carbon canister, all monitoring shall be conducted as specified in d)(4)b..

b. Utilizing single carbon canisters:

i. The permittee shall monitor for breakthrough from the carbon canisters at times when there is actual flow to the carbon canister, in accordance with the frequency specified in 40 CFR 61.354(d).

ii. For the single canister option, canisters will be replaced immediately when breakthrough is determined as follows:

(a) For canisters less than or equal to 55 gallon drum size, breakthrough is any reading of VOC above background. The

permittee currently monitors these weekly to determine breakthrough;

(b) For canisters larger than 55 gallons, breakthrough is defined as either:

(i) 50 ppm VOC; or

(ii) 1 ppm benzene. To use 1 ppm benzene, canisters must be monitored for VOC. When a reading of 10 ppm VOC is detected, monitoring for benzene must be conducted on the following schedule:

Daily, if the historical replacement interval is two weeks or less, or Monday, Wednesday and Friday, if the historical replacement interval is greater than two weeks.

iii. For purposes of term d)(4)b., the term "immediately" shall be defined to mean: within eight (8) hours for canisters with historical replacement intervals of two weeks or less; or within twenty-four (24) hours for canisters with a historical replacement interval of more than two weeks.

iv. The permittee shall maintain a supply of fresh carbon canisters at each facility at all times.

v. Single carbon canisters can be replaced with a dual system at any time provided US EPA is notified and single canister monitoring is continued until the second canister is installed.

c. Records for Carbon Canisters shall be maintained in accordance with 40 CFR 61.356(j)(10) for carbon adsorbers not regenerated directly on site.

(5) [40 CFR 60, Subpart QQQ] STANDARDS OF PERFORMANCE FOR VOC EMISSIONS FROM PETROLEUM REFINERY WASTEWATER SYSTEMS

The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR Part 60, Subpart QQQ including the following sections:

60.692-1 Standards: General		
a.	60.692-1(c)	Permission to use alternative means of emission limitation to meet the requirements of 60.692-2 through 60.292-4 may be granted as provided in 60.694.
b.	60.692-1(d)	Equipment excluded from the this subpart: stormwater sewer systems; ancillary equipment which is physically separate from the wastewater system and doesn't come into contact with or store oily wastewater; and non-contact cooling water systems. Demonstrate compliance with the exclusions stated above as provided in sections 60.697(h),

		(i) and (j).
60.692-2 Standards: Individual Drain Systems		
c.	60.692-2(a)	Each drain subject to 60.692.2 shall equipped with water seal controls. If a drain is in active service, water seal controls shall be checked by visual or physical inspection monthly. If drain is out of active service, then visual and physical inspections are required weekly for indications of low water levels. If permittee elects to install a tightly sealed cap or plug over a drain that is out of service, inspections are required semiannually.
d.	60.692-2(b)	Each junction box shall be visually inspected semiannually to ensure that the cover is in place and to ensure that the cover has a tight seal around the edge. If a broken seal or gap is identified, first effort at repair shall be made as soon as practicable, but not later than 15 calendar days after the broken seal or gap is identified. If a junction box is equipped with a vent pipe, the vent pope will also be inspected semiannually.
e.	60.692-2(c)	Each unburied sewer line shall be visually inspected semiannually for indication of cracks, gaps, or other problems that could result in VOC emissions. Whenever cracks, gaps, or other problems are detected, repairs shall be made as soon as practicable, but not later than 15 calendar days after identification, except as provided in 60.692–6.
f.	60.692-2(d)	Except as provided in 60.692-2(e), each modified or reconstructed individual drain system that has a catch basin in the existing configuration prior to May 4, 1987 shall be exempt from the provisions of this section.
g.	60.692-2(e)	Refinery wastewater routed through new process drains and a new first common downstream junction box, either as part of a new individual drain system or an existing individual drain system, shall not be routed through a downstream catch basin.
60.692-3 Standards: Oil-water separators		
h.	60.692-3(a)(4)	Roof seals, access doors, and other openings shall be checked by visual inspection initially and semiannually thereafter to ensure that no cracks or gaps occur between the roof and wall and that access doors and other openings are closed and gasketed properly

		When a broken seal or gasket or other problem is identified, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after it is identified, except as provided in 60.692-6.
i.	60.692-3(a)(5)	When a broken seal or gasket or other problem is identified, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after it is identified, except as provided in 60.692-6.
60.692-5 *Standards for Closed Vent Systems and Control Devices*		
j.	60.692-5(e)(1)	Any closed vent systems subject to this Subpart are designed and operated with no detectable emissions (<500 ppm above background), monitored semiannually by methods in 60.696, repairs made within 30 days except as provided in 60.692-6.
k.	60.692-5(e)(5)	When emissions from a closed system are detected, first efforts at repair to eliminate the emissions shall be made as soon as practicable, but not later than 30 calendar days from the date the emissions are detected, except as provided in 60.692-6.
60.692-6 *Standards: Delay of Repair*		
l.	60.692-6(a)	Delay of repair is allowed for equipment subject to 40 CFR 60 Subpart QQQ, if the repair is technically impossible without a complete or partial process unit shutdown.
m.	60.692-6((b)	Repair of equipment described in 60.692-6(a) above, must occur before the end of the next refinery/process unit shutdown.
60.692-7 Standards: Delay of Compliance		
n.	60.692-7(a)	Delay of compliance of modified drain systems with ancillary downstream components is allowed if compliance cannot be achieved without a refinery/process unit shutdown.
o.	60.692-7(b)	Installation of equipment necessary to comply with the provisions of this subpart shall occur no later than the next scheduled refinery or process unit shutdown.
60.693-1 Alternative standards for individual drain systems		
p.	60.693-1(a) through (e);	Requirements for when electing to install alternative control for individual drain systems and oil-water separators.

60.693-2 Alternative standards for oil-water separators.		
q.	60.693-2(a)(1)(iii)(A)	Measurement of primary seal gaps shall be performed within 60 calendar days after initial installation of the floating roof and introduction of refinery wastewater and once every 5 years thereafter. The maximum gap width and total gap area shall be determined by the methods and procedures specified in 60.696(d).
r.	60.693-2(a)(1)(iii)(B)	Measurement of secondary seal gaps shall be performed within 60 calendar days of initial introduction of refinery wastewater and once every year thereafter. The maximum gap width and total gap area shall be determined by the methods and procedures specified in 60.696(d).
s.	60.693-2(a)(1)(iv)	The owner or operator shall make necessary repairs within 30 calendar days of identification of seals not meeting the requirements listed in 60.693-2(a)(1)(i) and (ii).
t.	60.693-2(a)(5)(i)	Access doors and other openings shall be visually inspected initially and semiannually thereafter to ensure that there is a tight fit around the edges and to identify other problems that could result in VOC emissions.
u.	60.693-2(a)(5)(ii)	When a broken seal or gasket on an access door or other opening is identified, it shall be repaired as soon as practicable, but not later than 30 calendar days after it is identified, except as provided in 60.692-6.
60.694 Permission to use alternative means of emission limitation		
v.	60.694(a)	If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved by the applicable requirement in 60.692, the Administrator will publish in the Federal Register a notice permitting the use of the alternative means for purposes of compliance with that requirement. The notice may condition the permission on requirements related to the operation and maintenance of the alternative means.
w.	60.694(b)	Any notice under 60.694(a) shall be published only after notice and an opportunity for a hearing
x.	60.694(c)	Any person seeking permission under this section shall collect, verify, and submit to the Administrator information showing that the alternative means achieves equivalent emission reductions.

60.695 Monitoring of Operations:		
y.	60.695(a)(3)(ii)	Install, calibrate, maintain and operate according to manufacturer's specifications carbon canisters for the control of VOC emissions. For a carbon adsorption system that does not regenerate the carbon bed directly onsite in the control device (e.g., a carbon canister), the concentration level of the VOCs in the exhaust vent stream from the carbon adsorption system shall be monitored on a regular schedule, and the existing carbon shall be replaced with fresh carbon immediately when carbon breakthrough is indicated. The device shall be monitored on a daily basis or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater. As an alternative to conducting this monitoring, the carbon may be replaced in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and organic concentration in the gas stream vented to the carbon adsorption system.
z.	60.695(b)	Where a VOC recovery device other than a carbon adsorber is used to meet the requirements specified in 60.692–5(a), the permittee shall provide to the Administrator information describing the operation of the control device and the process parameter(s) that would indicate proper operation and maintenance of the device. The Administrator may request further information and will specify appropriate monitoring procedures or requirements.
aa.	60.695(c)	An alternative operational or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.
60.697 Recordkeeping Requirements		
bb.	60.697(a) through (d)	Recordkeeping requirements for individual drain systems, junction boxes, sewer lines, oil-water separators subject to 60.692-3, and closed vent systems.
cc.	60.697(e)	Recordkeeping Requirements for emission points that cannot be repaired or corrected without a process unit shutdown.
dd.	60.697(f)	Keep copies of all design specifications of the equipment

		used to comply with 40 CFR 60, subpart QQQ, and keep for the life of the source. (see 60.697(f)(1) – (3)).
ee.	60.697(g)	Keep plans or specifications on the location of out of active service drains equipped with a sealed cap or plug over the drain.
ff.	60.697(h)	Keep plans or specs on the stormwater sewer system subject to the exclusion in 60.692-1(d)(1) to demonstrate that no wastewater from any process units or equipment is directly discharged to the stormwater sewer system.
gg.	60.697(i)	Recordkeeping requirements for ancillary equipment subject to the exclusion in 60.692–1(d)(2).
hh.	60.697(j)	For non-contact cooling water systems subject to the exclusions in 60.692-1(d)(3), keep plans or specs which demonstrate that the cooling water does not contact hydrocarbons or oily wastewater and is not re-circulated through a cooling tower.
ii.	60.697(k)(1)	For oil-water separators subject to 60.693-2, the location, date, and corrective action shall be recorded for inspections required by 60.693-2(a)(1)(iii)(A) shall be maintained for ten years after the information is recorded.
jj.	60.697(k)(2)	For oil-water separators subject to 60.693-2, the location, date, and corrective action shall be recorded for inspections required by 60.693-2(a)(1)(iii)(B) shall be maintained for two years after the information is recorded.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP From PETROLEUM REFINERIES

The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

Wastewater Reporting		
a.	63.655(a)	Each permittee subject to the wastewater provisions in 40 CFR Part 63.647 shall comply with the reporting provisions in 40 CFR Part 61.357 of 40 CFR Part 61, Subpart FF. There are no additional reporting requirements for wastewater under this Subpart unless a wastewater stream is included in an emissions average.

(2) [40 CFR 61, Subpart FF] NATIONAL EMISSION STANDARD FOR BENZENE WASTE OPERATIONS

The permittee shall submit annual and quarterly reports and other such notifications and reports as are required pursuant to 40 CFR Part 61, Subpart FF, including the following sections:

61.357 Reporting Requirements		
a.	61.357(a)	Reporting Requirements for the Initial Notification Report that summarizes the regulatory status of each waste stream subject to 61.342 as determined by the procedures specified in 61.355(c) to contain benzene.
b.	61.357(d)(1)	Initial report of the certification that the equipment to comply with these standards was installed and the initial inspections or tests were carried out.
c.	61.357(d)(2)	For facilities (BP-Husky) with total annual benzene from facility waste equal to or greater than 10 Mg/yr, submit annually a report that updates the waste stream characteristics based on the information submitted as an initial notification in 61.357(a).
d.	61.357(d)(5)	Required reports if complying with the alternative requirements of 61.342(e), then submit the information in 61.357(d)(5)(i) and (ii).
e.	61.357(d)(6)	Submit quarterly a report that the equipment necessary to comply with these standards has been certified in accordance with 61.357(d)(1) and that the required inspections were carried out.
f.	61.357(d)(7)	Submit quarterly to the Administrator the applicable reports in 61.357(d)(7); i.e., 61.357(d)(7)(i); (d)(7)(ii), (d)(7)(iii), (d)(7)(iv)(D), , (d)(7)(iv)(F), (d)(7)(iv)(I), and (d)(7)(v).
g.	61.357(d)(8)	Submit annually a report that summarizes all inspections required by 61.342 through 61.354 during which detectable emissions are measured or a problem that resulted in benzene emissions is identified, including information about the repairs and corrective actions.

(3) [40 CFR 60, Subpart QQQ] STANDARDS OF PERFORMANCE FOR VOC EMISSIONS FROM PETROLEUM REFINERY WASTEWATER SYSTEMS

The permittee shall submit annual and quarterly reports and other such notifications and reports as are required pursuant to 40 CFR Part 60, Subpart QQQ, including the following sections:

60.693-2 Alternative standards for oil-water separators.		
a.	60.693-2(b)	An owner or operator must notify the Administrator in the report required by 40 CFR 60.7 that the owner or operator has elected to construct and operate a floating roof under 60.693-2(a), alternative standards for oil-water separators.
60.698 Reporting Requirements		
b.	60.698(a)	If the permittee elects to comply with the provisions of §60.693, then notify the Administrator of the alternative standard selected in the report required in 60.7
c.	60.698(b)(1)	The permittee shall submit to the Administrator semiannually a certification that all of the required inspections have been carried out in accordance with these standards.
d.	60.698(c)	Submit semiannual reports that summarizes all inspections when a water seal was dry or otherwise breached, when a drain cap or plug was missing or improperly installed, or when cracks, gaps, or other problems were identified that could result in VOC emissions, including information about the repairs or corrective action taken.
e.	60.698(d) and (d)(3)	Submit semiannual reports to the Administrator that indicates: (d)(3) Each 3-hour period of operation during which the average VOC concentration level or reading of organics in the exhaust gases from a carbon adsorber is more than 20 percent greater than the design exhaust gas concentration level or reading. (d)(3)(ii) Each occurrence when the carbon in a carbon adsorber system that is not regenerated directly onsite in the control device is not replaced at the predetermined interval specified in 60.695(a)(3)(ii).
f.	60.698(e)	If compliance with the provisions of this subpart is delayed pursuant to 60.692-7, the notification required under 40 CFR 60.7(a)(4) shall include the estimated date of the next scheduled refinery or process unit shutdown after the date of notification and the reason why compliance with the standards is technically impossible without a refinery or process unit shutdown

(4) Deviation Reporting Requirements for OAC rule 3745-21-09

The permittee shall submit quarterly deviation (excursion) reports that identify the following: Except for any wastewater separator which is used solely for once-through, noncontact cooling water or for intermittent tank farm drainage resulting from accumulated precipitation, the permittee shall submit deviation (excursion reports) that identify all occurrences where covers, forebay and other separator sections were not equipped with lids, seals, or kept in a closed position except when in actual use. The quarterly reports shall be submitted, electronically through Ohio EPA Air services, within 30 days of the end of the quarter. If no deviations occurred during the quarter the permittee shall submit a statement that no deviations occurred during the calendar quarter.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

[Authority for term: OAC rule 3745-21-09(M)(2)]

(5) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: None

(2) [40 CFR 61, Subpart FF] NATIONAL EMISSION STANDARD FOR BENZENE WASTE OPERATIONS

The permittee shall comply with the applicable testing requirements required under 40 CFR 61, Subpart FF including the following sections:

61.342 Standards: General		
a.	61.342(g)	Compliance will be determined by review of facility records and results from tests and inspections using methods and procedures in 61.355.
61.349 Standards: Closed-Vent Systems and Control Devices		
b.	61.349(c)	Demonstrate that each control device (except for a flare) achieves the conditions specified in 61.349(a)(2) by using

		one of the methods stated in 61.349(c)(1) or 61.349(c)(2).
c.	61.349(d)	Demonstrate compliance of each flare by complying with the requirements of 40 CFR 60.18.
d.	61.349(e)	The Administrator may request at any time that the permittee demonstrate that a control device meets the applicable conditions specified in 61.349(a)(2) by conducting a performance test using the test methods and procedures as required in 61.355, and for control devices subject to 61.349(a)(2)(iv), the Administrator may specify alternative test methods and procedures, as appropriate.
61.355 Test Methods, Procedures and Compliance Provisions		
e.	61.355(a), (b) and (c)	Use the procedures in 61.355(a) and (b) to determine the annual waste quantity for each waste stream. Use the procedure in 61.355(c) to determine the flow-weighted annual average benzene concentration of each waste stream. Calculate the annual benzene quantity for each waste stream as stated in 61.355(a)(1)(iii).
f.	61.355(d)	If using performance tests to demonstrate compliance with 61.348 (a)(1)(i) [removes benzene to 10 ppmv or less], measure the flow-weighted annual average benzene concentration of the waste stream exiting the treatment process by collecting and analyzing a minimum of three representative samples of the waste stream using the procedures 61.355(c)(3). The test shall be conducted under conditions that exist when the treatment process is operating at the highest inlet waste stream flow rate and benzene content expected to occur. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a test. The owner or operator shall record all process information as is necessary to document the operating conditions during the test.
g.	61.355(e)	Requirements for demonstrating compliance with 61.348(a)(1)(ii) [removing 99% benzene from streams on a mass basis] using performance tests.
h.	61.355(g)	Testing requirements if using performance tests to demonstrate compliance with 61.348(b) [aggregate streams].
i.	61.355(h)	Requirements for testing equipment for compliance with no detectable emissions as required in 40 CFR Part 61.343 through 61.347 and 61.349 by using Method 21 of Appendix

		A.
j.	61.355(i)	Testing requirements if using a performance test to demonstrate compliance of a control device with either the organic reduction efficiency or benzene reduction efficiency under 61.349(a)(2) [i.e., carbon adsorption].
k.	61.355(k)	Procedures to determine the benzene quantity for purposes of the calculation required by 61.342(e)(2). See (k)(1) through (k)(7).

(3) [40 CFR 60, Subpart QQQ] STANDARDS OF PERFORMANCE FOR VOC EMISSIONS FROM PETROLEUM REFINERY WASTEWATER SYSTEMS

The permittee shall comply with the applicable testing requirements required under 40 CFR 60, Subpart QQQ including the following sections:

60.696 Performance test methods and procedures and compliance provisions		
a.	60.696(a)	Inspection requirements before using any equipment installed in compliance with the requirements of 60.692-2, 60.692-3, 60.692-4, 60.692-5, or 60.693. Points of inspection shall include, but are not limited to, seals, flanges, joints, gaskets, hatches, caps, and plugs.
b.	60.696(b)	Requirements for operators of each source equipped with a closed vent system and control device as required in 60.692-5 (other than a flare) is exempt from 60.8 of the General Provisions and shall use Method 21 to measure the emission concentrations, using 500 ppm as the no detectable emission limit. The instrument shall be calibrated each day before using. See (b)(1) through (b)(2) for calibration gas requirements.
c.	60.696(c)	Conduct a performance test initially, and at other times as requested by the Administrator, using the test methods and procedures in 60.18(f) to determine compliance of flares.
d.	60.696(d)	Compliance requirements for control equipment required to meet the alternative standards for oil-water separators meeting 60.693-2(a).

g) Miscellaneous Requirements

(1) Table I, Benzene Waste NESHAPs (40 CFR Part 61, Subpart FF) Affected Equipment

The BP-Husky refinery complies with the 6 Mg/yr option in Subpart FF [61.342(e)]. This compliance option allows the refinery some discretion on which portions of the waste water system are controlled as long as the uncontrolled total benzene quantity (as determined by procedures in 40 CFR 61.355(k)) is less than or equal to 6.0 Mg/yr. To meet this requirement, the refinery shall control the following equipment in benzene waste service to the standards of 40 CFR Part 61, Subpart FF.

TABLE 1 Affected Equipment Subject to 40 CFR Part 61, Subpart FF	
Affected Equipment Description	**Applicable Standard (Controls)**
Individual Drain Systems	**40 CFR 61.346**
Sump #1 (Junction Box JB-1)	[61.346 - Standards: Individual Drain Systems] (Carbon Canisters)
Sump #2 (Junction Box JB-2)	[61.346 - Standards: Individual Drain Systems] (Carbon Canisters)
Sump #6 (Junction Box JB-6)	[61.346 - Standards: Individual Drain Systems] (Carbon Canisters)
Reformer 3 Sump	[61.346 - Standards: Individual Drain Systems] (Carbon Canisters)
Drain at T089 (PR-500151) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T010 (PR-500152) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T011 (PR-500153) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T016 (PR-500154) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T017 (PR-500155) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T018 (PR-500156) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T019 (PR-500157) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T044 (PR-500158) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T041 (PR-500130) to Sump #2	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T040 (PR-500131) to Sump #2	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T120 (PR-500132) to Sump #2	[61.346 - Standards: Individual Drain Systems] and Consent

TABLE 1 Affected Equipment Subject to 40 CFR Part 61, Subpart FF	
Affected Equipment Description	**Applicable Standard (Controls)**
	Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T084 (PR-500134) to Sump #2	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T085 (PR-500135) to Sump #2	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T035 (PR-500143) to Sump #2	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Unburied Sewer PP-1 (Blender Prefilter and Coalescer Drain Line to Sump #2)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-2 (Vac Truck Unloading Station #1 to Tanks T166 and T167)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-3 (Aboveground piping from Sump #1 to Benzene Decanter)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-4 (Aboveground piping from Sump #2 to PP-3)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-5 (Aboveground piping from Tank T166, Tank T167, and Sump #6 to Benzene Decanter)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-6 (Aboveground piping from Benzene Decanter to Tank T073)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-7 (Aboveground piping from Cat Poly Flare Gas Recovery Absorber Tower to Benzene Decanter)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-8 (Aboveground piping from Crude 1 Desalters to Benzene Decanter)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-9 (Aboveground piping from Crude 2 Desalters to PP-9)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-10 (Aboveground piping from Tank T073 to Benzene Decanter, HC Degasser, and Tanks T045 and T046)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-11 (Aboveground piping from Benzene Decanter to Tanks T166 and T167)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-12 (Aboveground	[61.346 - Standards: Individual Drain Systems] (Visual

TABLE 1 Affected Equipment Subject to 40 CFR Part 61, Subpart FF	
Affected Equipment Description	**Applicable Standard (Controls)**
piping from Tanks T166 and T167 to Benzene Strippers)	Inspection)
Unburied Sewer PP-13 (Aboveground piping from Reformer 3 Sump to Tanks T045 and T046)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-14 (Aboveground piping at Tank PR-500901, Tank PR-500902, and vac truck loading station)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)

Tanks	40 CFR 61.343
T073 (PR-500084) – Slop Oil Tank	[40 CFR 61.351 - Alternative Standards for Tanks] (EFR in compliance with NSPS Kb standards)
T163 (PR-500648) – Foul Condensate Storage Tank	[40 CFR 61.351 - Alternative Standards for Tanks] (EFR in compliance with NSPS Kb standards)
T164 (PR-500295) – Foul Condensate Stripper Feed Tank	[40 CFR 61.351 - Alternative Standards for Tanks] (EFR in compliance with NSPS Kb standards)
T166 (PR-500014) – Benzene Stripper Feed Tank	[40 CFR 61.351 - Alternative Standards for Tanks] (EFR in compliance with NSPS Kb standards)
T167 (PR-500015) – Benzene Stripper Feed Tank	[40 CFR 61.351 - Alternative Standards for Tanks] (EFR in compliance with NSPS Kb standards)
T170 (PR-500294) – Foul Condensate Stripper Feed Tank	[40 CFR 61.351 - Alternative Standards for Tanks] (EFR in compliance with NSPS K standards)
T177 (PR-500757) – Foul Condensate Storage Tank	[40 CFR 61.351 - Alternative Standards for Tanks] (EFR in compliance with NSPS Kb standards)
Tank PR-500901 – QA/QC Lab Slop Tank #1	(3000-gallon fixed roof tank with closed vent system tied to carbon canister)
Tank PR-500902 – QA/QC Lab Slop Tank #2	(3000-gallon fixed roof tank with closed vent system tied to carbon canister)
Treatment Processes	**40 CFR 61.348**
Benzene Stripper #1	40 CFR 61.348 - Standards: Treatment Processes] (Closed vent system vented to the main hydrocarbon flare system (West Hydrocarbon Flare). If West Hydrocarbon Flare is taken out of service, the SRU #1 Acid Gas Flare is an approved back-up control device.)
Benzene Stripper #2	40 CFR 61.348 - Standards: Treatment Processes] (Closed vent system vented to the main hydrocarbon flare system (West Hydrocarbon Flare). If West Hydrocarbon Flare is

	taken out of service, the SRU #1 Acid Gas Flare is an approved back-up control device.)
Foul Condensate Stripper #1	40 CFR 61.341 – Definitions – *Sour Water Stream* and *Sour Water Stripper.*
Foul Condensate Stripper #2	40 CFR 61.341 – Definitions – *Sour Water Stream* and *Sour Water Stripper.*
Closed Vent Systems & Control Devices	**40 CFR 61.349**
Closed Vent System CV-1 (Benzene Stripper Overhead Drums to West Hydrocarbon Flare)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Closed Vent System CV-2 (Benzene Stripper Overhead Drums to SRU-1 Acid Gas Flare)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Closed Vent System CV-3 (Sump #1 to Carbon Canisters)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Carbon Canisters at Sump #1 (CC-1A, CC-1B)	[61.349 - Standards: Closed Vent Systems and Control Devices] and Consent Decree; (Visual Inspection and Monitoring)
Closed Vent System CV-4 (Sump #2 to Carbon Canisters)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Carbon Canisters at Sump #2 (CC-2A, CC-2B)	[61.349 - Standards: Closed Vent Systems and Control Devices] and Consent Decree; (Visual Inspection and Monitoring)
Closed Vent System CV-5 (Sump #6 to Carbon Canisters)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Carbon Canisters at Sump #6 (CC-6A, CC-6B)	[61.349 - Standards: Closed Vent Systems and Control Devices] and Consent Decree; (Visual Inspection and Monitoring)
Closed Vent System CV-6 (Heavy Cracked Degasser to West Hydrocarbon Flare)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
West Hydrocarbon Flare (P004)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Specifically 61.349 (a)(2)(iii), which references 40 CFR 60.18)
Closed Vent System VC-7 (Reformer 3 Sump to Carbon Canisters)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Carbon Canisters at Reformer 3 Sump CC-3A, CC-3B)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Closed Vent System CV-8 (QA/QC Lab Slop Tank PR-500901 to Carbon Canister)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Carbon Canister at Tank PR-500901 (CC-4)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Closed Vent System CV-9 (QA/QC Lab Slop Tank PR-500902 to Carbon Canister)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Carbon Canister at Tank PR-500902 (CC-5)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)

Closed Vent System CV-10 (Tank T164 and Tank T170 to SRU-1 Acid Gas Flare P051)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
SRU-1 Acid Gas Flare (P051)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Containers	**40 CFR 61.345**
Vacuum Trucks	[61.345 - Standards: Containers] (Visual Inspection and Monitoring)
Roll-off Boxes	[61.345 - Standards: Containers] (Visual Inspection and Monitoring)
Drums	[61.345 - Standards: Containers] (Visual Inspection and Monitoring)
Portable Tanks (Frac Tanks and Baker Boxes)	[61.345 - Standards: Containers] (Visual Inspection and Monitoring)

Note: The API Separators at the WWTU do not need to meet the requirements of 40 CFR 61.347 because the refinery complies with the 40 CFR 61.342(e) (6 Mg/yr option), not 40 CFR 61.342(c).

(2) Table 2, Individual Drain Systems Subject to 40 CFR Part 60, Subpart QQQ, Affected Equipment

TABLE 2 Individual Drain Systems Subject to 40 CFR Part 60, Subpart QQQ			
Emissions Unit ID	**Facility Description**	**Individual Drain System Description**	**Controls**
P009	New process sewer serving the SRU #1 Amine Acid Knockout Drum (PR-511893)	New individual drain system from Amine Acid Knockout Drum to Sewer 7	Water seals
P011	New process sewer serving the FCC Preheater heat exchanger, which is physically located in the Crude 1 Process Unit	New individual drain system from new heat exchangers to Masonry Sewer (via existing 30-inch trunk sewer)	Water seals and tight covers
P012	Modified process sewer to accommodate construction of new vacuum tower foundation in the Crude Vac 2 Process Unit	Modified individual drain system from vacuum tower foundation to the Masonry Sewer (via existing 10-inch and 18-inch sewers)	Water seals and tight covers
P025	New sewer serving Tank T190 (PR-500218)	New individual drain system from Tank T190 dike drain valve to Sewer 7	Water seals
P025	Lift Station 001	Junction Box serving tanks	Tight seal cover

TABLE 2 Individual Drain Systems Subject to 40 CFR Part 60, Subpart QQQ			
Emissions Unit ID	**Facility Description**	**Individual Drain System Description**	**Controls**
		T157, T159, and T161	
P025	Lift station 175	Junction Box serving tanks T153, T154, T155, and T156	Tight seal cover
P025	Sewer 7	Trunk sewer draining process units P009, P036, and P037 to the 84-inch Sewer	Water seals
P025	84-inch Sewer	Trunk sewer draining the refinery process block, tank fields, and grounds to the WWTU	Water seals
P025	Masonry Sewer	Trunk sewer draining process units, including P028, P029, and P041, to the 84-inch Sewer	Water seals
P025	Tank 001-002-003 Trunk Sewer	Trunk sewer draining T157, T159, and T161 to the Masonry Sewer. (Lift Stations 001 and 757 are located on this trunk sewer.)	Water seals
P025	Tank 171-172-174-175 Trunk Sewer	Trunk sewer draining T153-156, to the 84-inch Sewer. (Lift Station 175 is located on this trunk sewer.)	Water seals
P025	East Side 72-inch Sewer & 54-inch Sewer	New trunk sewer draining P803 to the 84-inch Sewer	Water seals and tight covers
P025	North Wash Pad Sewer	New individual drain system draining the North Wash Pad to the 84-inch Sewer	Water seals and tight covers
P025	Wastewater Treatment Unit (WWTU)	One 2-bay inlet channel, one primary API separator, 7 secondary API separators, and 2 lift stations	Inlet channel and API separators equipped with floating roof covers; lift stations equipped with tight seal covers, closed vent systems, and individual carbon canisters
P028	"A" Train Diesel Hydrotreater (ADHT)	New individual drain system serving the southern portion of the process unit and tied via a trunk sewer to the Masonry Sewer	Water seals
P029	"B" Train Gas Oil Hydrotreater (BGOT)	Drains in entire unit, including the BGOT Recycle Gas	Water seals

TABLE 2 Individual Drain Systems Subject to 40 CFR Part 60, Subpart QQQ			
Emissions Unit ID	**Facility Description**	**Individual Drain System Description**	**Controls**
		Compressor, to the Masonry sewer	
P034	Stormwater Diversion Chamber	Junction Box tied to tanks T168 and T169	Tight seal covers and 8 carbon canisters
P036	Coker 3	Drains in entire unit to Sewer 7	Water seals
P037	SRU #2 and #3	Drains in entire unit to Sewer 7	Water seals
P041	New process sewer in the Isocracker 2 (ISO 2) process unit serving the Hydrogen Make-Gas Compressor and East BGOT Reactor	New individual drain system draining Hydrogen Make-Gas Compressor and East BGOT Reactor to Masonry Sewer	Water seals
P803	Reformer 3	New individual drain system serving the entire process unit and tied to the East Side 54-inch Sewer	Water seals
P003	East Flare (Ja upgrade)	Drains tied to a new sewer connected to the East Side 72-inch Sewer	Water Seals and tight covers
P004	West Flare (Ja upgrade)	Drains tied to an existing upgraded sewer connection to the Masonry Sewer	Water Seals and tight covers
P042	East Flare Gas Recovery Compressors	Drains tied to BGOT Recycle Gas Compressor Sewer to the Masonry Sewer	Water Seals and tight covers
T145 (PR-500022)	Storage of petroleum liquids	Tank drain system	Dike valve
T148 (PR-500019)	Storage of petroleum liquids	Tank drain system	Dike valve
T149 (PR-500021)	Storage of petroleum liquids	Tank drain system	Dike valve
T151 (PR-500020)	Storage of petroleum liquids	Tank drain system	Dike valve
T153 (PR-500175)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T154 (PR-500174)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T155 (PR-500172)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T156 (PR-	Storage of petroleum liquids	Tank drain system	Drain/dike valves

TABLE 2 Individual Drain Systems Subject to 40 CFR Part 60, Subpart QQQ			
Emissions Unit ID	**Facility Description**	**Individual Drain System Description**	**Controls**
500171)			
T157 (PR-500002)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T159 (PR-500001)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T161 (PR-500003)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T163 (PR-500648)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T164 (PR-500295)	Storage of petroleum liquids	Tank drain system	Water seals
T166 (PR-500014)	Wastewater Storage	Tank drain system	Drain/dike valve
T167 (PR-500015)	Wastewater Storage	Tank drain system	Drain/dike valve
T168 (PR-500026)	Wastewater Storage	Tank drain system	Floating roof cover and carbon canisters
T169 (PR-500027)	Wastewater Storage	Tank drain system	Floating roof cover and carbon canisters
T187 (PR-500818)	Storage of petroleum liquids	Tank drain system	Drain/dike valve
T188 (PR-500819)	Storage of petroleum liquids	Tank drain system	Drain/dike valve
T190 (PR-500218)	Storage of petroleum liquids	Tank drain system	Drain/dike valve

19. P036, Coker 3

Operations, Property and/or Equipment Description:

P036 - Coker 3/ delayed petroleum coker, which processes the heaviest of the Vacuum units' streams and further recovers valuable gas oils, distillates and produces fuel gas and petroleum coke. The coker drum is vented to the refining process during the coking cycle. The drum is subsequently depressured through a coker blowdown drum that is shared with Coker 2 (P017) to the flare gas recovery system. After blowdown drum pressure reaches flare header pressure, the blowdown drum is vented to the atmosphere. The coke is then cut out of the process drum.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI P0119763 Issued 10/30/2015)	13.85 tons of VOC per rolling 12-month period (from coke cutting) 10.81 tons of VOC from fugitive emissions (equipment leaks) per rolling 12-month period See b)(2)a. and c)(1)
b.	OAC rule 3745-21-09(T)	See term B.2.b)(1)a. of Section B.
c.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	See b)(2)b.
d.	40 CFR Part 60, subpart GGG (40 CFR 60.590 – 593) [In accordance with 40 CFR 60.590(a), this facility has equipment within a process unit that is an affected facility in a petroleum refinery as defined in 60.591 subject	See term B.2.b)(1)d. of Section B.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	to Subpart GGG of this part.]	
d.	40 CFR Part 63, subpart A	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit. [63.642(c)]
f.	*Equipment Leaks* 40 CFR Part 63, subpart CC (40 CFR 63.640 – 656) [In accordance with 40 CFR 63.640 this emissions unit includes equipment leaks from a petroleum refining process unit that is located at an existing major source of HAP subject to the emission limitations and control measures specified in this section.]	See b)(2)c.
g.	*Miscellaneous Process Vents* 40 CFR Part 63, subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(c)(1) and 63.648(a), this emissions unit has equipment in organic HAP service that is subject to the Refinery MACT miscellaneous process vent provisions]	See b)(2)d., b)(2)e. and b)(2)f.

(2) Additional Terms and Conditions

a. The annual VOC emission limitation from fugitive equipment leaks was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

b. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

c. The leak detection and repair requirements stated in 40 CFR Part 63, subpart CC applicable to this emissions unit are subsumed into the facility-wide leak detection and repair requirements stated in term B.2. of Section B. of this permit. NOTE: Pursuant to 40 CFR 63.648(a) the permittee complies with the requirements of 40 CFR 60, subpart VV as an existing source.

d. The flare requirements applicable to this emissions unit are subsumed into the terms for emissions units for the East and West Hydrocarbon Flares, P003 and P004.

e. [63.643(a)(1)]
TheCoker 2 blowdown drum has vents that are considered a Group 1 miscellaneous process vents under 40 CFR 63, subpart CC and are controlled by the hydrocarbon flare system at the refinery (P003 and P004). The permittee shall comply with the applicable emission limits and operating requirements of 40 CFR Part 63, subpart CC by reducing the emissions of organic HAP's using a flare that meets the requirements of 40 CFR 63.11(b) of subpart A.

f. [63.641] Definition of a Group 1 Miscellaneous Process Vent
Group 1 miscellaneous process vent means a miscellaneous process vent for which the total organic HAP concentration is greater than or equal to 20 parts per million by volume, and the total volatile organic compound emissions are greater than or equal to 33 kilograms per day for existing sources at the outlet of the final recovery device (if any) and prior to any control device and prior to discharge to the atmosphere.

c) Operational Restrictions

(1) The permittee shall vent the coker blowdown emission to the refinery flare gas recovery system.

[Authority for term: OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of emissions occurring during any malfunction, bypassing control equipment, startup or shutdown period must be quantified and recorded.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(2) The permittee shall maintain records of all periods when the blowdown emissions from this emissions unit were not vented to the flare gas recovery system.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(3) The permittee shall record the number of coking cycles each month.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(4) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart CC, including the following sections:

63.644 Monitoring provisions for miscellaneous process vents		
a.	63.644(a)	The permittee has choosen to install the monitoring equipment specified in 63.644(a)(2). All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately. NOTE: The flare requirements applicable to this emissions unit are subsumed into the terms of the East and West Hydrocarbon Flares, P003 and P004.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports of the following:

a. All periods when:

i. emissions from coke cutting exceeded 13.85 tons of VOC per rolling 12-month period;

ii. the blowdown emissions were not vented to the flare gas recovery system.

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

63.655 Reporting Requirements		
a.	63.655(g)	Submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the compliance exceptions specified in 63.655(g)(1) through (g)(6) occur..
b.	63.655(g)(6)(i)(B)	For miscellaneous process vents for which continuous parameter monitors are required by this subject, periods of excess emissions shall be identified in the Periodic Reports and shall be used to determine compliance with the emission standards. Periods of excess emission include an operating day when all pilot flames of a flare are absent (See P003/P004 for monitoring, record keeping and reporting for flares).
c.	63.655(g)(6)(ii)	For miscellaneous process vents, excess emissions shall be reported for the operating parameters specified in table 10 of this subpart unless other site-specific parameter(s) have been approved by the operating permit authority. From Table 10 (See P003/P004 for monitoring, recordkeeping and reporting for flares): -Record and report the presence of a flame at the pilot light over the full period of the compliance determination. - Record the times and durations of all periods when all pilot flames for a flare are absent or the monitor is not operating. - Report the times and durations of all periods when all pilot flames for a flare are absent or the monitor is not operating.
d.	63.655(g)(6)(iii)	Periods of startup and shutdown that meet the definition of 63.641, and malfunction that meet the definition in 63.2 and periods of performance testing and monitoring system calibration shall not be considered periods of excess emissions. Malfunctions may include process unit, control device, or monitoring system malfunctions.
e.	63.655(g)(7)	If a performance test for determination of compliance for a new emission point subject to this subpart or for an emission point that has changed from Group 2 to Group 1 is conducted during the period covered by a Periodic Report, the results of the performance test shall be included in the Periodic Report.
f.	63.655(h)(1)	Reports of startup, shutdown, and malfunctions required by 40 CFR 63.10(d)(5).

(3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

VOC emissions from coke cutting shall not exceed 13.85 tons per year of VOC per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be determined by multiplying the VOC emission factor of 44.28 pounds VOC per blowdown cycle by the number of blowdown cycles per month to obtain the monthly total VOC emissions, add this value to the total for the previous 11 months to obtain the 12-month total VOC emissions (in pounds), and divide by 2000 lbs/ton.

If required, the permittee shall conduct testing of the emissions unit to determine the coke cutting emissions factor, and submit the results of that testing to Ohio EPA. Upon approval by the Director, the new emission factor shall be used for purposes of demonstrating compliance with the specified emission limit.

b. Emission Limitation:

10.81 tons per year of VOC as a rolling, 12-month summation from fugitive equipment leaks

Applicable Compliance Method:

As long as compliance with the applicable leak monitoring and repair requirements of 40 CFR 63 Subpart CC are maintained compliance with this emission limit above shall be demonstrated.

If required, compliance shall be determined by using the procedures specified in Protocol for Equipment Leak Emission Estimates (EPA document 453/R-95-017, subsequent updates to Protocol for Equipment Leak Emission Estimates, or alternative emission factor approved by Ohio EPA).

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable testing requirements in 40 CFR 63, subpart CC, including the following sections:

63.645 Test Methods and Procedures for Misc. Process Vents		
a.	63.645(a), (b), and (c)	To demonstrate compliance with the miscellaneous process vent provisions in 63.643 using a flare as the control device, the permittee shall test for visible emissions, net heating value and exit velocity per 40 CFR 63.116 of 40 CFR 63, subpart G. NOTE: Flare testing requirements are included under P003/P004 flare testing requirements.
b.	63.645(g)	Engineering assessment, including the information detailed in 63.645(g)(1), may be used to determine the TOC emission rate for the representative operating condition expected to yield the highest daily emission rate.

g) Miscellaneous Requirements

(1) None.

20. P037, Sulfur Recovery Unit #2 and #3

Operations, Property and/or Equipment Description:

P037 - Sulfur Recovery Units #2 and #3 with common tail gas treater, sulfur pits, and thermal oxidizer and associated with TRP Acid Gas Flare (P050)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 0119763 issued 10/30/2015)	Carbon monoxide (CO) emissions shall not exceed 2.7 lbs/hr and 8.07 tons per rolling, 12-month period. Nitrogen oxides (NO_x) emissions shall not exceed 4.4 lbs/hr and 12.76 tons per rolling, 12-month period. Particulate matter emissions less than or equal to 10 microns in diameter (PM_{10}) shall not exceed 0.6 lb/hr and 1.74 tons per rolling, 12-month period. Sulfur dioxide (SO_2) emissions from this emissions unit shall not exceed 172 tons per rolling, 12-month period. Fugitive volatile organic compound (VOC) emissions from equipment leaks shall not exceed 6.2 tons per year (from fugitive equipment leaks) See b)(2)a. and b)(2)l.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(D) (PTI P0119763 issued 10/30/2015)	See b)(2)b.
c.	OAC rule 3745-17-07(A)(1)	See b)(2)c.
d.	OAC rule 3745-17-11(B)(1)	See b)(2)d.
e.	OAC rule 3745-18-06(E)(2)	See b)(2)k.
f.	OAC rule 3745-21-09(T)	See b)(2)e.
g.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	See b)(2)f.
h.	40 CFR Part 60, Subpart J (40 CFR 60.100-109) [In accordance with 40 CFR 60.100(a) this emissions unit is a Claus sulfur recovery plant with a design capacity for sulfur feed of greater than 20 long tons per day that includes a fuel gas combustion device (incinerator) where construction commenced after 10/4/1976 and prior to 5/14/2007 and is subject to the emissions limitations/ control measures specified in this section]	See b)(2)g. and h. [60.104(a)(1) and (a)(2)(i)]
i.	40 CFR Part 60, Subpart GGG (40 CFR 60.590 - 593) [In accordance with 40 CFR 60.590, this emissions unit has a compressor and/or equipment as defined in 60.591 that is an affected facility in a petroleum refinery]	See b)(2)i. [63.640(p)(1)]
j.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 to Subpart CC — General Provisions Applicability to Subpart CC, specifies which parts of the General

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Provisions in 40 CFR 63.1-16 apply. Table 44 – Applicability of NESHAP General Provisions to Subpart UUU shows which part of the General Provisions in 40 CFR 63.1-16 apply. [40 CFR 63.642(c) and 63.1577]
k.	40 CFR Part 63, Subpart CC (40 CFR 640 - 679) [In accordance with 40 CFR 63.648(a) this emissions unit is a petroleum refinery process unit located at an existing major of hazardous air pollutants subject to the emissions limitations/control measure specified in this section.]	see b)(2)j. [63.648]
l.	40 CFR Part 63, Subpart UUU (40 CFR 63.1560-1579) [In accordance with 40 CFR 63.1562, this emissions unit is a sulfur recovery plant with a Claus sulfur recovery unit and tail gas treatment unit, located at an existing major source of HAP emissions, that is subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2) and subject to the emission limitations/ control measures specified in this section.]	The SO_2 emission limitation specified by this rule is equivalent to that specified by 40 CFR Part 60, Subpart J under 40 CFR 60.104(a)(2)(i). [Table 29, row 1 to 40 CFR Part 63, Subpart UUU] See b)(2)m.

(2) Additional Terms and Conditions

a. The requirements of this rule also include compliance with OAC rule 3745-21-09(T), 40 CFR Part 60, Subpart GGG, and 40 CFR 60 Subpart J.

b. This permit to install (PTI P0119763 issued 10/30/2015) incorporates the emission limits and schedules set out in paragraphs 14-18 and 21 of the Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CV095 RL).

The permittee shall route all NSPS sulfur recovery plant sulfur pit emissions such that they are treated, monitored, and included as part of the sulfur recovery plant's emissions subject to the NSPS Subpart J limit for SO_2, 40 CFR 60.104(a)(2).

c. This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to a mass emission limitation in OAC rule 3745-17-11.

d. The uncontrolled mass rate of particulate emissions (PE)* from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-17-01(B)(17).

* The burning of gaseous fuels is the only source of PE from this emissions unit

e. The permittee shall comply with the applicable leak detection and repair requirements specified in OAC rule 3745-21-09(T). See term B.2. of Section B.of this permit for the applicable leak detection and repair requirements.

Consistent with the U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with the equipment leak standards in 40 CFR Part 60, Subpart GGG for both equipment in organic HAP service and equipment not in organic HAP service. The NSPS and MACT level monitoring of 40 CFR Part 60, Subpart GGG is generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T).

NOTE: See term B.2. of Section B. referencing the applicable leak detection and repair requirements for this subpart.

f. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

g. The permittee shall not burn in the tail gas incinerator or any refinery fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf)(the equivalent concentration is 162 parts per million by volume of H_2S dry basis) as a volume-weighted, rolling 3-hour average concentration greater than 0.10 grain per dry standard cubic foot, except during periods of startup, shutdown or malfunction of the refinery fuel gas amine systems provided that the permittee shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. The monitoring, record keeping, and reporting requirements for these requirements are maintained under term B.4. of Section B. of this permit.

h. [60.105(e)(4) and 63.1568(a)(1)(i)]
The permittee shall not discharge or cause the discharge of any gases into the atmosphere from the Claus sulfur recovery plant containing in excess of 250 ppm SO_2 by volume (dry basis) at zero percent excess air as a rolling, 12-hour average.

i. Pursuant to 40 CFR 63.640(p)(1) equipment leaks that are also subject to the provisions of 40 CFR part 60 Subpart GGG, are required to comply only with the provisions specified in 40 CFR 63 Subpart CC.

NOTE: See term B.2. of Section B. referencing the applicable leak detection and repair requirements for this subpart.

j. The permittee shall comply with the applicable leak detection and repair requirements specified in 40 CFR Part 63, Subpart CC. See term B.2. of Section B. referencing the applicable leak detection and repair requirements for this subpart.

k. The emission limitation specified by OAC rule 3745-18-06(E)(2) is less stringent than the limitation specified by 40 CFR Part 60, Subpart J.

l. The annual VOC emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

m. The permittee shall comply with the requirements for existing sources subject to NSPS, Subpart J, in 40 CFR Part 63, Subpart UUU including the following sections.

i.	63.1568(a)(1)	Meet each emission limitation in Table 29 of this subpart that applies to you. If your sulfur recovery unit is subject to the NSPS for sulfur oxides in 60.104 of this chapter, you must meet the emission limitations for NSPS units.

c) Operational Restrictions

(1) A pilot flame shall be maintained at all times in the TRP Acid Gas flare's (P050) pilot light burner.

(2) [40 CFR 63, Subpart UUU] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES: SULFUR RECOVERY UNIT

The permittee shall comply with the applicable restrictions in 63.1568, including the following sections:

63.1568 – Requirements for HAP Emissions from SRU's		
a.	63.1568(a)(2) and Table 30, row 1	Table 30 does not specify any operating limits for SRUs subject to the NSPS.
63.1570 – General Requirements for Complying With Subpart UUU		
b.	63.1570(c)	You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in 63.6(e)(1)(i).

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall monitor and record the monthly average volumetric firing rate in the Thermal Oxidizer in units of standard cubic feet per month. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total CO, NO_x and PM_{10} emission rates in units of tons in accordance with the procedure outlined in the Testing Section f).

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall properly install, operate and maintain a device to continuously monitor the presence of the flare pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. For each day the emissions unit is in operation, the permittee shall record all periods during which there was no flare pilot flame or the monitoring equipment was not operating.

[Authority for term: OAC rule 3745-77-07(C)(1)]

SO_2 CEM REQUIREMENTS:

(3) The permittee shall maintain a written quality assurance/quality control plan for the continuous SO_2 monitoring system, designed to ensure continuous valid and representative readings of SO_2 emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO_2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix F]

(4) The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[Authority for term: 40 CFR 60.2 and/or 40 CFR 63.2 and Appendix F to 40 CFR Part 60]

(5) The permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of SO_2 emissions into the atmosphere. The monitor shall include an oxygen monitor for correcting the data for excess air.

a. The span values for this monitor are 500 ppm SO_2 and 25 percent O_2.

b. The performance evaluations for this SO_2 monitor under 40 CFR 60.13(c) shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(6) The permittee shall maintain on-site, the document(s) of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous SO_2 monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2. The letter(s)/document(s) of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

(7) The permittee shall operate and maintain equipment to continuously monitor and record SO_2 emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous SO_2 monitoring system including, but not limited to:

a. emissions of SO_2 in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f);

b. emissions of SO_2 in pounds per hour, ppm SO_2 by volume (dry basis) at zero percent excess as a rolling, 12-hour average, and tons SO_2 per rolling, 12-month period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous SO_2 monitoring system and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous SO_2 monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO_2 monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in g. and h. above.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F]

(8) Emissions occurring during any malfunction, bypassing, startup or shutdown period shall be quantified and recorded

[Authority for term: OAC rule 3745-77-07(C)(1)]

(9) The permittee shall monitor and record the monthly average stack oxygen content, fuel gas burned in the thermal oxidizer rate, and tail gas treater vent gas rate, and determine the monthly total gas flow. In addition, the permittee shall calculate and record the monthly average SO_2 concentration in the SRU stack from the data recorded by the continuous emission monitor. From these data, the permittee shall calculate and record the monthly total SO_2 emissions for that month and the 12-month, rolling summation of the monthly emissions in accordance with the procedures specified in f).

[Authority for term: OAC rule 3745-77-07(C)(1)]

(10) [40 CFR 63, Subpart UUU] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES: SULFUR RECOVERY UNIT

The permittee shall comply with the applicable monitoring and recordkeeping requirements under this Subpart, including the following sections:

63.1568 – Requirements for HAP Emissions from SRU's		
a.	63.1568(a)(3)	The permittee must prepare an operation, maintenance, and monitoring plan (OMMP) according to the requirements in 63.1574(f) and operate accordingly.
b.	63.1568(b)(1) and Table 31, row 1	Operate and maintain a continuous monitoring system according to 63.1572 and Table 31. This system must include an oxygen monitor for correcting the data for excess air.

c.	63.1568(b)(3) and Table 32, row 1	Establish each applicable site-specific operating limit in Table 30 of this subpart according to the procedures in Table 32 of this subpart. Table 32, row 1: Measure the SO_2 concentration with a CEM. Collect SO_2 monitoring data every 15 minutes for 24 consecutive operating hours. Reduce the data to 1-hour averages computed from four or more data points equally spaced over each 1-hour period.
d.	63.1568(b)(4)	Correct the reduced sulfur samples to zero percent excess air using Equation 1 of this section from subpart UUU.
e.	63.1568(c)(1) and Tables 34 and 35	Demonstrate continuous compliance with each emission limitation in Tables 29 and 30 of this subpart that applies according to the methods specified in Tables 34 and 35 of this subpart. Table 34, row 1: Collecting the hourly average SO_2 monitoring data (dry basis, percent excess air) according to 63.1572; determining and recording each 12-hour rolling average concentration of SO_2; maintaining each 12-hour rolling average concentration of SO_2 at or below the applicable emission limitation; and reporting any 12-hour rolling average concentration of SO_2 greater than the applicable emission limitation in the compliance report required by 63.1575. Table 35, row 1: Meeting the requirements of Table 34 of this subpart, see above.
f.	63.1568(c)(2)	Demonstrate continuous compliance with the work practice standards in 63.1568(a)(3) by complying with the procedures in your operation, maintenance, and monitoring plan (OMMP).
63.1570 – General Requirements for Complying With Subpart UUU		
g.	63.1570(d)	Develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 63.6(e)(3).
h.	63.1570(g)	Consistent with 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with 63.6(e)(1). The SSMP must include elements designed to minimize the frequency of such periods (i.e., root cause analysis). The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are

		violations, according to the provisions in 63.6(e).
63.1572 –Monitoring, operation and maintenance requirements		
i.	63.1572(a)	Operate and maintain each CEM system according to the requirements in 63.1572(a)(1) through (a)(4). (a)(1) You must install, operate, and maintain each continuous emission monitoring system according to the requirements in Table 40 of this subpart. (a)(2) If you use a continuous emission monitoring system to meet the NSPS SO_2 limit, you must conduct a performance evaluation of each continuous emission monitoring system according to the requirements in 63.8 and Table 40 of this subpart. This requirement does not apply to an affected source subject to the NSPS that has already demonstrated initial compliance with the applicable performance specification. (a)(3) As specified in 63.8(c)(4)(ii), each continuous emission monitoring system must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. (a)(4) Data must be reduced as specified in 63.8(g)(2).
j.	63.1572(d) and (d)(1)	Monitor and collect data according to the requirements in 63.1572(d)(1) and (2) (d)(1) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), the permittee must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times the affected source is operating.
k.	63.1572(d)(2)	The permittee must not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities for purposes of this regulation, including data averages and calculations, for fulfilling a minimum data availability requirement, if applicable. The permittee must use all the data collected during all other periods in assessing the operation of the control device and associated control system.
63.1574 - Records		
l.	63.1574(f) and (f)(2)	Prepare and implement an operation, maintenance, and monitoring plan (OMMP) for each control system and continuous monitoring system for each affected source. The

		purpose of this plan is to detail the operation, maintenance, and monitoring procedures you will follow. (f)(2) Each plan must include, at a minimum, the information specified in paragraphs (f)(2)(i) through (xii) [NOTE: for this EU, include (f)(2)(i), (ii), (viii) and (x).
63.1576 – Records		
m.	63.1576(a)	Keep the records specified in 63.1576(a)(1) through (3): (a)(1) Copy of each notification report submitted to comply with this subpart, including all documentation supporting any initial notification or Notification of Compliance Status submitted, according to the requirements in 63.10(b)(2)(xiv). (a)(2) The records in 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction. (a)(3) Records of performance tests, performance evaluations, and opacity and visible emission observations as required in 63.10(b)(2)(viii).
n.	63.1576(b)	For the SO_2 CEM, keep the records required in 63.1576(b)(1) through (5)
o.	63.1576(d)	Keep records required by Tables 34 and 35 of this subpart (for sulfur recovery units) to show continuous compliance with each emission limitation that applies.
p.	63.1576(e)	Keep a current copy of your operation, maintenance, and monitoring plan (OMMP) onsite and available for inspection. Also, keep records to show continuous compliance with the procedures in your OMMP.
q.	63.1576(f)	Keep records of any changes that affect emission control system performance
r.	63.1576(g)	Keep records in a form suitable and readily available for expeditious review according to 63.10(b)(1).
s.	63.1576(h)	As specified in 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
t.	63.1576(i)	Keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 63.10(b)(1). The permittee can keep the records offsite for the remaining 3 years.

(11) [40 CFR 60, Subpart J] STANDARDS OF PERFORMANCE FOR PETROLEUM REFINERIES

The permittee shall comply with the applicable monitoring and recordkeeping requirements under this Subpart, including the following sections:

60.105 - Monitoring of Emissions and Operations		
a.	60.105(a)(3)	The permittee shall either operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration (dry basis, 0 percent excess air) of SO_2 emissions into the atmosphere, or monitoring as provided in 40 CFR 60.105(a)(4). The monitor must include an O_2 monitor for correcting the data for excess air. The permittee has chosen to comply using the H_2S monitoring system of 40 CFR 60.105(a)(4), therefore, the monitoring, recordkeeping and reporting requirements were written to reflect this monitoring option.
b.	60.105(a)(4)	The permittee shall operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration by volume (dry basis) of H_2S in the fuel gases before being burned in any fuel gas combustion device.
c.	60.105(a)(4)(i)	The span value for this instrument is 425 mg/dscm H_2S.
d.	60.105(a)(4)(ii)	Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H_2S in the fuel gas being burned.
e.	60.105(a)(4)(iv)	Monitoring is not required per 60.105(a)(3) or (a)(4) for fuel gas streams that are inherently low in sulfur content. Fuel gas streams meeting one of the following requirements in 60.105(a)(4)(iv)(A) through (D) will be considered inherently low in sulfur content.
f.	60.105(a)(4)(iv)(A)	Monitoring exemption for pilot gas for heaters and flares.
g.	60.105(a)(4)(iv)(B)	Monitoring exemption for fuel gas streams meeting a sulfur content of 30 ppmv or less.
h.	60.105(a)(4)(iv)(C)	Monitoring exemption for fuel gas streams intolerant to sulfur contamination.
i.	60.105(a)(4)(iv)(D)	Monitoring exemption for fuel gas streams the permittee demonstrates are low sulfur according to 40 CFR 60.105(b).

60.105 - Monitoring of Emissions and Operations		
j.	60.105(a)(5)	For Claus sulfur recovery plants with oxidation control systems followed by incineration subject to 60.104(a)(2)(i), an instrument for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of SO_2 emissions into the atmosphere. The monitor shall include an oxygen monitor for correcting the data for excess air. (i) The span values for this monitor are 500 ppm SO_2 and 25 percent O_2.
k.	60.105(b)	Procedure for submitting an application for an exemption from monitoring for a low-sulfur fuel gas stream not specifically exempted in 40 CFR 60.105(a)(4)(iv).
l.	60.105(e)	For the purpose of reports required under 40 CFR 60.7(c), all averages for reporting of periods of excess emissions shall be determined as the arithmetic average of the applicable 1-hour averages, e.g., the rolling 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages. See (e)(3) and (e)(4) below.
m.	60.105(e)(3)	*For sulfur dioxide from fuel gas combustion*, all rolling 3-hour periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system under 60.105(a)(4) exceeds 230 mg/dscm (0.10 gr/dscf).
n.	60.105(e)(4)	*For sulfur dioxide from Claus sulfur recovery plants*, all 12-hour periods during which the average concentration of SO_2 as measured by the SO_2 continuous monitoring system under 60.105(a)(5) exceeds 250 ppm (dry basis, zero percent excess air)
60.107 – Recordkeeping Requirements		
o.	60.107(e)	Maintain records of the specific exemption determined to apply for each fuel stream where the permittee determines an exemption listed in 40 CFR 60.105(a)(4)(iv) applies. Maintain a copy of the application as well as the letter granting approval of the application when applying for the low-sulfur fuel exemption described in 40 CFR 60.105(a)(4)(iv)(D).

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify each period when emissions exceeded any of the following emissions limitations:

a. 8.07 tons CO per rolling, 12-month period;

b. 12.76 tons NO_x per rolling, 12-month period; and

c. 1.74 tons PM_{10} per rolling, 12-month period.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) SO_2 CEM: The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO_2 monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of SO_2 emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by within 30 days following the end of each calendar quarter and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous SO_2 and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total SO_2 emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous SO_2 monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted, the results of any relative accuracy test audit showing the continuous SO_2 monitor out-of-control and the compliant results following any corrective actions;

xi. total duration** of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility [pursuant 40 CFR 60.7(d)(1)];

xii. total duration** of CEM downtime for the reporting period, and if the total period CEM downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime*** of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation [pursuant 40 CFR 60.7(d)(1)]; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in b.xi. and b.xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* Where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report.

** Per OEPA request, the refinery agrees to include in each quarterly CEMS report the date, time, and duration of each excess emission event and the date, time and duration of each downtime event.

*** Downtime is time when the unit emission source is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

[Authority for term: 40 CFR 60.7]

(3) [40 CFR Part 63, Subpart UUU] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES: SULFUR RECOVERY UNIT - REPORTS AND NOTIFICATIONS

The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart UUU, including the following sections:

63.1570 – General Requirements for Complying With Subpart UUU		
a.	63.1570(f)	Report each instance when each emission limitation and each operating limit was not met. This includes periods of startup, shutdown, and malfunction. Also, report each instance in which the work practice standards were not met. These instances are deviations from the emission limitations and work practice standards in this subpart. These deviations must be reported according to the requirements in 63.1575
63.1574 – Notifications & Reports		
b.	63.1574(a)(3)	If you are required to conduct a performance test, performance evaluation, design evaluation, opacity observation, visible emission observation, or other initial compliance demonstration, the permittee must submit a notification of compliance status according to §63.9(h)(2)(ii). If the required information has been submitted previously, you do not have to provide a separate notification of compliance status. Just refer to the earlier submissions instead of duplicating and resubmitting the previously submitted information
c.	63.1574(f)(1) and 63.1568(b)(6)	Submit the OMMP plan to your permitting authority for review and approval along with the notification of compliance status. The permittee does not have to include the entire plan in your part 70 or 71 permit, you must include the duty to prepare and implement the plan as an applicable requirement in your part 70 or 71 operating permit. You must submit any changes to the permitting authority for review and approval and comply with the plan until the change is approved.
d.	63.1574(d)	Include the additional information in Table 42 in the Notification of Compliance report.
63.1575 - Reports		
e.	63.1575(a)	Submit each report in Table 43, as applicable.
f.	63.1575(b)	Submit each report by the date in Table 43 regarding emission limitations and work practice standards according to the requirements in 63.1575(b)(1) through (5).
g.	63.1575(c)	The compliance report must contain the information required in 63.1575(c)(1) through (4).
h.	63.1575(d)	Deviations from the emission limitation and work practice standards shall contain the information required in (d)(1) through (d)(3) for compliance report.

i.	63.1575(e)	Required information for reports for CEMs.
j.	63.1575(f)	Include the information in 63.1575(f)(1) and (2) if applicable, pertaining to performance tests and any requested change in the applicability of a standard.
k.	63.1575(g)	The permittee may submit reports required by other regulations in place of or as part of the compliance report if they contain the required information.
l.	63.1575(h)	Reporting requirements regarding startups, shutdowns and malfunctions

(4) [40 CFR 60, Subpart J] STANDARDS OF PERFORMANCE FOR PETROLEUM REFINERIES

The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 60, Subpart J, including the following sections:

60.107 - Reports		
a.	60.107(d)	For any periods for which sulfur dioxide or oxides emissions data are not available, the permittee shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability
b.	60.107(f)	Submit the reports semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period.
c.	60.107(g)	Submit a signed statement certifying the accuracy and completeness of the information contained in the above report.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

CO emissions shall not exceed 2.7 pounds per hour.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the actual volumetric firing rate of fuel gas burned in the Thermal Oxidizer in units of standard cubic feet (SCF) (as a monthly average value) by the CO emission factor from AP-42 Table 1.4-1 dated 7/98 (84 lb/mmscf), multiplied by the fuel gas heating value correction factor. The heating value correction factor is equal to the actual fuel gas heat content divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf).

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitation:

CO emissions shall not exceed 8.07 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the volumetric firing rate of the fuel gas burned in the Thermal Oxidizer in units of standard cubic feet (SCF) per rolling, 12-month period (mmscf as a monthly average value) by the CO emission factor from AP-42 Table 1.4-1 dated 7/98 (84 lb/mmscf), multiplied by the fuel gas heating value correction factor and dividing by 2,000 pounds per ton. The heating value correction factor is equal to the actual fuel gas heat content divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf).

c. Emission Limitation:

NO_x emissions shall not exceed 4.4 lbs/hr

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the actual firing rate of fuel gas burned in the Thermal Oxidizer in units of mmBtu/hr as a monthly average value, by the manufacturer's guaranteed low-NO_x burner emission factor of 0.10 lb/mmBtu.

If required, Methods 1 through 4 and Method 7E of 40 CFR Part 60, Appendix A shall be used to demonstrate compliance. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. Emission Limitation:

NO_x emissions shall not exceed 12.76 tons per rolling, 12-month period

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the actual firing rate of the fuel gas burned in the Thermal Oxidizer in units of mmBtu/hr as a monthly average value, by the NO_x emission manufacturer's emission factor (0.10 lb/mmBtu), multiplying by the maximum annual operating hours (8,760 hours), and divided by 2,000 pounds per ton.

e. Emission Limitation:

PM_{10} emissions shall not exceed 0.6 lb/hr

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the volumetric firing rate of fuel gas burned in the Thermal Oxidizer in units of standard cubic feet (SCF) (as a monthly average value) by the PM_{10} emission factor from AP-42 Table 1.4-2 dated 7/98 (7.6 lb/mmscf) multiplied by the fuel gas heating value correction factor. The heating value correction factor is equal to the actual fuel gas heat content divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf).

If required, Methods 201 and 202 of 40 CFR Part 51, Appendix M shall be used to demonstrate compliance. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

f. Emission Limitation:

PM_{10} emissions shall not exceed 1.74 tons per rolling, 12-month period

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the volumetric firing rate of the fuel gas burned in the Thermal Oxidizer in units of standard cubic feet (SCF) per rolling, 12-month period (mmscf as a monthly average value) by the PM_{10} emission factor from AP-42 Table 1.4-2 dated 7/98 (7.6 lb/mmscf) multiplied by the fuel gas heating value correction factor, and dividing by 2,000 pounds per ton. The heating value correction factor is equal to the actual fuel gas heat content divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf).

g. Emission Limitation:

6.2 tons per year VOC emissions (from fugitive equipment leaks)

Applicable Compliance Method:

Compliance with this emissions limit is demonstrated by compliance with the applicable leak monitoring and repair requirements of NSPS Subpart GGG.

The emission limit of 6.2 tons per year VOC emissions from equipment leaks was established to reflect the potential to emit for this emissions unit using the procedures specified in Protocol for Equipment Leak Emission Estimates (EPA document 453/R-95-017, subsequent updates to Protocol for Equipment Leak Emission Estimates, or alternative emission factor approved by Ohio EPA) to calculate the VOC emissions from equipment leaks. Per condition b)2)(l), no ongoing compliance demonstration is required.

h. Emission Limitation:

SO_2 emissions from this emissions unit shall not exceed 172 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with this emissions limitation shall be demonstrated by using the monthly emissions of SO_2 from this emissions unit, calculated by multiplying the calculated total flue gas volume (scf/yr) corrected to 0% O_2 by the SO_2 density at 60 F(0.1733 lb SO_2/ft^3 SO_2) multiplied by a temperature correction factor of (560R/ 520R) to correct the SO_2 density to the standard temperature of the SO_2 CEMS (100°F) then multiplied by the monthly average concentration of SO_2 in the flue gas (ppmv) as measured by the CEMS, divided by $1E^{06}$, and divided by 2,000 pounds per ton. Add the SO_2 emissions from the current month to the total SO_2 emissions for the previous 11 months to determine the tons of SO_2 emitted per rolling, 12-month period from this emissions unit.

i. Emission Limitation:

250 ppm SO_2 by volume (dry basis) at zero percent excess as a rolling, 12-hour average

Applicable Compliance Method:

Ongoing compliance shall be through the Monitoring and Recordkeeping section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

If required, the permittee shall demonstrate compliance using the methods and procedures of 40 CFR 60.106(f).

j. Emission Limitation:

The permittee shall not burn in the tail gas incinerator any refinery fuel gas that contains H_2S in excess of 230 mg/dscm (0.10 gr/dscf or 162 ppmvd) as a volume-weighted, rolling 3-hour average.

Applicable Compliance Method:

Ongoing compliance with the hydrogen sulfide emission limitation(s) contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be

demonstrated through the data collected as required in the Monitoring and Recordkeeping section in term B.4. of Section B. of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, compliance shall also be demonstrated based upon the methods and procedures of 40 CFR 60.106(e)(1).

(2) The initial compliance demonstration required by 40 CFR 63 Subpart UUU (paragraphs 63.1568(b)(5) and 63.1571(a)(1)) has been completed and submitted, so no additional testing is required.

(3) [40 CFR 60, Subpart J] STANDARDS OF PERFORMANCE FOR PETROLEUM REFINERIES

The permittee shall comply with the testing requirements under this subpart, including the following sections:

60.105 - Monitoring of Emissions and Operations		
a.	60.105(a)(5)(ii)	For Claus sulfur recovery plants with oxidation control systems followed by incineration subject to 60.104(a)(2)(i), an instrument for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of SO_2 emissions into the atmosphere. The monitor shall include an oxygen monitor for correcting the data for excess air. (5)(ii) The performance evaluations for this SO_2 monitor under 60.13(c) shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations.

g) Miscellaneous Requirements

(1) None.

21. P048, Knock Test Engines

Operations, Property and/or Equipment Description:

P048 - Knock Test Engines: 6 gasoline test engines with a maximum rating of 15 hp each used to determine the octane rating of gasoline produced

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
b.	OAC rule 3745-17-11(B)(5)(a)	Particulate emissions (PE) shall not exceed 0.310 lb/mmBtu of actual heat input from RICE less than or equal to 600 horsepower (HP).
c.	OAC rule 3745-18-06(B)	Exempt, see b)(2)a.
d.	40 CFR Part 63 Subpart ZZZZ (40 CFR 63.6580 to 63.6675) [In accordance with 40 CFR 63.6585, this emissions unit is a stationary internal combustion engine (ICE) subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines. This emissions unit is an existing stationary spark ignition (SI)	See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	reciprocating internal combustion engine (RICE), located at a major source for hazardous air pollutants (HAPs)]	
e.	40 CFR 63.6602 Table 2c #7 to Subpart ZZZZ	Comply with the maintenance / operational requirements from the NESHAP for Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE. See b)(2)c. and c)(2)e.
f.	40 CFR Part 63, subpart A (40 CFR 63.1 – 63.16)	Table 8 of 40 CFR Part 63, subpart ZZZZ, shows which parts of the General Provisions of subpart A applies to this emissions unit.

(2) Additional Terms and Conditions

a. Pursuant to OAC rule 3745-18-06(B), stationary internal combustion engines which have rated heat input capacities equal to, or less than, ten MM Btu per hour total rated capacity are exempt from OAC rule 3745-18-06(G).

b. These stationary spark ignition (SI) reciprocating internal combustion engine (RICE) are subject to and shall be operated in compliance with the applicable requirements of 40 CFR Part 63, Subpart ZZZZ, the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines. Compliance with the NESHAP includes the maintenance requirements and operating limitations from option 7 in Table 2c to the subpart.

[Authority for term: 40 CFR 63.6585, 40 CFR 63.6590(a)(1)(ii), 40 CFR 63.6595(a)(1), and 40 CFR 63.6602]

c. The permittee shall comply with the following applicable requirements identified in 40 CFR Part 63, Subpart ZZZZ:

a.	63.6595(a)(1)	The compliance date for Part 63 Subpart ZZZZ for existing SI RICE at a major source was 10/19/13.
b.	Applicable Tables from Part 63, Subpart ZZZZ	Compliance requirements in Table 2c #7; continuous compliance in Table 6 #9; general provision from Subpart A in Table 8.
c.	63.6602	Maintain compliance with operational limitations in Table

		2c #7 (inspection and maintenance requirements) to Part 63 Subpart ZZZZ.
d.	63.6665	Meet all of the general provisions of Subpart A, from sections 63.1 through 63.15, that apply to the SI RICE, as identified in Table 8 to Subpart ZZZZ.

c) Operational Restrictions

(1) The permittee shall only burn gasoline in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(1)]

(2) The permittee shall comply with the applicable operational requirements required in 40 CFR 63, subpart ZZZZ, including the following sections:

a.	63.6605	General duty to minimize emissions, with good air pollution control practices for minimizing emissions; and compliance required at all times.
b.	63.6625(e) and e(1)	The permittee must operate and maintain the stationary RICE according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
c.	63.6625(h)	The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.
d.	63.6625(j)	The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the

		results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later.
e.	63.6602 and Table 2.c., # 7	The permittee must comply with the emission limitations and other requirements in Table 2c to this subpart: a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.

d) Monitoring and/or Recordkeeping Requirements

(2) For each day during which the permittee burns a fuel other than gasoline, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(2) The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart ZZZZ, including the following sections:

a.	63.6640(a) and63.6655(d)	The permittee must keep the records required in Table 6, #9 of this subpart to show continuous compliance with each operating limitation that applies: i. Operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
b.	63.6655(e) and (e)(2)	The permittee must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the stationary RICE were operated and maintained according to the maintenance plan.
c.	63.6625(h)	Maintain a record of each idle and/or startup time that exceeded 30 minutes.

d.	63.6625(j)	The permittee must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.
e.	63.6660	Keep records readily available and retained for at least 5 years after the date of occurrence or date of report according to 63.10(b)(1).

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than gasoline was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-77-07(A)(3)

(2) The permittee shall submit quarterly reports with the following information:

a. identify each instance in which the operational requirements in Table 2c, #7 of 40 CFR 63, subpart ZZZZ, were not met; and

b. submit each instance in which the applicable requirements in Table 8 to 40 CFR 63, subpart ZZZZ, in which the general provisions from Subpart A, were not met.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and term A.2.c)(2), Standard Terms and Conditions of this permit]

(3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Reference Method 9 in 40 CFR, Part 60, Appendix A.

[Authority for rule: OAC rule 3745-17-07(A)(1)]

a. Emission Limitations:

0.310 lb PE/mmBtu from RICE less than or equal to 600 HP

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the emission limitations through exhaust emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

[Authority for rule: OAC rule 3745-17-11(B)(5)]

g) Miscellaneous Requirements

(1) Any amendment to Part 63, Subpart ZZZZ shall supersede the Subpart ZZZZ compliance limitations and/or compliance options contained in this permit.

22. P053, Diesel Engine #3

Operations, Property and/or Equipment Description:

P053 - Diesel Engine #3: Emergency fire water pump powered by a diesel engine with a maximum rated input capacity of 0.64 mmBtu/hr (251 hp)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	40 CFR Part 63 Subpart ZZZZ (40 CFR 63.6580 to 63.6675) [In accordance with 40 CFR 63.6585, this emissions unit is a stationary internal combustion engine (ICE) subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines. This unit is an existing emergency stationary compression ignition (CI) reciprocating internal combustion engine (RICE), located at a major source for hazardous air pollutants (HAPs)]	See b)(2)a.
b.	40 CFR Part 63, subpart A (40 CFR 63.1 – 63.16)	Table 8 of 40 CFR Part 63, subpart ZZZZ, shows which parts of the General Provisions of subpart A applies to this emissions unit.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20 percent opacity, as a

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		six-minute average, except as specified by rule.
d.	OAC rule 3745-17-11(B)(5)(a)	Particulate emissions (PE) shall not exceed 0.310 lb/MMBtu of actual heat input.
e.	OAC rule 3745-18-06(B)	Exempt, see b)(2)b.
f.	OAC rule 3745-31-03(A)(4)(b)	See d)(6)

(2) Additional Terms and Conditions

a. This emergency stationary compression ignition (CI) reciprocating internal combustion engine (RICE) is subject to and shall be operated in compliance with the applicable requirements of 40 CFR Part 63, Subpart ZZZZ, the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines. Compliance with the NESHAP includes the maintenance requirements and operating limitations from option 1 in Table 2c to the subpart.

[Authority for term: 40 CFR 63.6585, 40 CFR 63.6590(a)(1)(ii), 40 CFR 63.6595(a)(1), and 40 CFR 63.6602]

b. Pursuant to OAC rule 3745-18-06(B), stationary internal combustion engines which have rated heat input capacities equal to, or less than, ten MM Btu per hour total rated capacity are exempt from OAC rule 3745-18-06(G).

c) Operational Restrictions

(1) The permittee shall only burn diesel fuel in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(1)]

(2) The emergency stationary RICE must be operated according to the following requirements in order to be considered an emergency stationary RICE under Part 63 Subpart ZZZZ, otherwise it shall meet all of the requirements for non-emergency engines.

a. The emergency stationary RICE may be used at the facility in emergency situations with no restriction on time.

b. On May 1, 2015, U.S. Court of Appeals vacated §63.6640(f)(2), which is the basis for this section (b). The court remanded §63.6640(f)(2) to EPA for further

action. If and when further action is completed, this source will be subject to §63.6640(f)(2).

[Authority for term: 40 CFR 63.6640(f)(1) and (2)]

(3) The emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations includes engine maintenance and testing..

[Authority for term: 40 CFR 63.6640(f)(3)]

(4) The emergency stationary CI ICE shall be installed, operated, and maintained according to the manufacturer's specifications, written instructions, and procedures; and/or according to a maintenance plan developed by the permittee, which shall provide for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. The permittee shall operate and maintain the stationary CI ICE according to a written maintenance and operating plan and the requirements identified in option 1 in Table 2c to Part 63, Subpart ZZZZ, as required per 40 CFR 63.6602.

[Authority for term: 40 CFR 63.6595(a)(1), 40 CFR 63.6602, 40 CFR 63.6605, 40 CFR 63.6625(e), and Table 2c to Subpart ZZZZ of Part 63, #1]

(5) Unless meeting the requirements of 40 CFR 63.6625(i), the permittee shall change the oil and filter every 500 hours of operation or annually, whichever comes first; shall inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first; and shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace them as necessary. A log shall be maintained for the date of each oil/filter change and inspection.

[Authority for term: 40 CFR 63.6602, 40 CFR 63.6625(i), and Table 2c, option 1 to Subpart ZZZZ of Part 63]

(6) The permittee shall minimize the engine's time spent at idle and shall minimize the startup time to a period needed for appropriate safe loading of the engine, not to exceed 30 minutes.

[Authority for term: 40 CFR 63.6602, 40 CFR 63.6625(h), and Table 2c, option 1 to Subpart ZZZZ of Part 63]

(7) The permittee shall install a non-resettable hour meter in order to record the hours of operation during emergency and non-emergency conditions.

[Authority for term: 40 CFR 63.6625(f) and 40 CFR 63.6655(f)]

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than diesel, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(2) The permittee shall maintain a record of the diesel fuel burned in this RICE during each calendar year. The fuel oil usage can be calculated at the end of each year using the best method available to estimate the annual throughput which might include, but shall not be limited to: any flow meter installed on the engine, records of the volume of diesel fuel oil received with each delivery, the fuel oil levels recorded from the diesel storage tank, and/or the recorded or estimated hours of operation along with the manufacture's documentation of the fuel flow rate.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(3) Except during malfunctions, repairs, and required quality assurance and/or control activities, the permittee shall continuously monitor that the stationary RICE is operating; and all valid data (not recorded during malfunctions, repairs, or required quality assurance or control activities) shall be used in calculations used to report emissions or operating levels.

[Authority for term: 40 CFR 63.6635]

(4) In order to demonstrate compliance with the work and management practices identified in Table 2c to the subpart; continuous compliance according to #9 in Table 6; and to document that the engine was operated and maintained according to the facility's maintenance plan and work and management practices, the permittee shall maintain records of: the maintenance and inspections conducted on the stationary RICE in conjunction with records for the hours of operation and a record of each idle and/or startup time that exceeded 30 minutes. These records shall be maintained for at least 5 years after the date of implementation.

[Authority for term: 40 CFR 63.6655(e)(2), 40 CFR 63.6625(h), 40 CFR 63.6660, 40 CFR 63.10(b)(1), and Part 63, Subpart ZZZZ, Table 2c, option 1 and Table 6, option 9]

(5) The permittee shall maintain records or a log for the operation of the engine in emergency and non-emergency service, as recorded through the non-resettable hour meter. The records shall include the number or hours spent in emergency operation, including what classified the operation as an emergency; the number or hours spent in maintenance checks and readiness testing; and the number or hours spent in non-emergency operations. If the RICE is operated as part of a demand response operation, the permittee shall keep records of the notification of the emergency situation and the time the engine was operated as part of the demand response.

[Authority for term: 40 CFR 63.6655(f) for 40 CFR 63.6640(f)]

(6) Emergency electrical generators, emergency firefighting water pumps, or emergency air compressors powered by internal combustion engines greater than fifty horsepower (37.3 Kilowatts) where each engine operates at any one facility for no more than five hundred hours per rolling twelve-month period and where such engine burns gasoline, natural gas, distillate oil (with less than or equal to 0.5 per cent by weight sulfur), or liquid petroleum gas and shall maintain the following records:

a. Monthly records that contain the rolling twelve-month hours of operation; and

b. Records that show the type of fuel used and the sulfur content (in per cent by weight) of any distillate oil used.

[Authority for term: OAC rule 3745-31-03(A)(4)(b)]

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than diesel was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-77-07(A)(3)

(2) The permittee shall submit a semi-annual report per 63.6650 with the following information:

a. the number of hours of operation in emergency and non-emergency service, including the time of operations for maintenance checks and readiness testing, as recorded by the non-resettable hour meter; and

b. identify each instance in which the operational requirements in Table 2c were not met and/or each instance in which the applicable requirements in Table 8 to Subpart ZZZZ, the general provisions from Subpart A, were not met. The report shall identify the operating limitation or Subpart A requirement that was not met; the operating time during which the deviation occurred during the reporting period; the number, duration, and cause of each/the deviation(s), as applicable, and the corrective action(s) taken; and any exceedance of the limitation on the hours of operation during non-emergency service.

(3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed twenty 20% opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Reference Method 9 in 40 CFR, Part 60, Appendix A.

[Authority for term: OAC rule 3745-17-07(A)(1)]

b. Emission Limitation:

0.310 lb PE/mmBtu

Applicable Compliance Method:

The particulate emission limitation is from OAC rule 3745-17-11(B)(5) for small stationary internal combustion engines.

If required, the permittee shall demonstrate compliance with the emission limitations through exhaust emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

[Authority for term: OAC rule 3745-17-11(B)(5)(a)]

g) Miscellaneous Requirements

(1) None.

23. P054, Diesel Engine #4

Operations, Property and/or Equipment Description:

P054 - Diesel Engine #4; Emergency fire water pump powered by a diesel engine with a maximum rate input capacity of 2.19 mmBtu/hr (860 hp)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
b.	OAC rule 3745-17-11(B)(5)(b)	Particulate emissions (PE) shall not exceed 0.062 lb/MMBtu of actual heat input.
c.	OAC rule 3745-18-06(B)	Exempt, see b)(2)a.
d.	OAC rule 3745-31-03(A)(4)(b)	See d)(2)
e.	40 CFR Part 63 Subpart ZZZZ (40 CFR 63.6580 to 63.6675) [In accordance with 40 CFR 63.6585, this emissions unit is a stationary internal combustion engine (ICE) subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines. This unit is an existing emergency stationary compression	Exempt, see b)(2)b. and b)(2)c.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	ignition (CI) reciprocating internal combustion engine (RICE), located at a major source for hazardous air pollutants (HAPs) greater than 500 horsepower (hp)]	
f.	40 CFR Part 63, subpart A (40 CFR 63.1 – 63.16)	Table 8 of 40 CFR Part 63, subpart ZZZZ, shows which parts of the General Provisions of subpart A applies to this emissions unit.

(2) Additional Terms and Conditions

a. Pursuant to OAC rule 3745-18-06(B), stationary internal combustion engines which have rated heat input capacities equal to, or less than, ten MM Btu per hour total rated capacity are exempt from OAC rule 3745-18-06(G).

b. Pursuant to 40 CFR Part 63.6590(b)(1)(i), new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR Part 63.6640(f)(2)(ii) and (iii) section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of 63.6645(f).

c. In accordance with 40 CFR 63.6675, emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in b)(2)(i) through (iii) of this definition. All emergency stationary RICE must comply with the requirements specified in 63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in 63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

i. The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

ii. The stationary RICE is operated under limited circumstances for situations not included in b)(2)(i) of this definition, as specified in 63.6640(f).

iii. The stationary RICE operates as part of a financial arrangement with another entity in situations not included in b)(2)(i) of this definition only as allowed in 63.6640(f)(2)(ii) or (iii) and §63.6640(f)(4)(i) or (ii).

c) Operational Restrictions

(1) The permittee shall only burn diesel fuel in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(1)].

(2) The emergency stationary RICE must be operated according to the following requirements in order to be considered an emergency stationary RICE under Part 63 Subpart ZZZZ, otherwise it shall meet all of the requirements for non-emergency engines.

a. The emergency stationary RICE may be used at the facility in emergency situations with no restriction on time.

b. On May 1, 2015, U.S. Court of Appeals vacated §63.6640(f)(2), which is the basis for this section (b). The court remanded §63.6640(f)(2) to EPA for further action. If and when further action is completed, this source will be subject to §63.6640(f)(2) [Authority for term: 40 CFR 63.6640(f)(1) and (2)]

[Authority for term: 40 CFR 63.6640(f)(1) and (f)(2)]

(3) The emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations includes engine maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[Authority for term: 40 CFR 63.6640(f)(3)]

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than diesel, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(2) Emergency electrical generators, emergency firefighting water pumps, or emergency air compressors powered by internal combustion engines greater than fifty horsepower (37.3 Kilowatts) where each engine operates at any one facility for no more than five hundred hours per rolling twelve-month period and where such engine burns gasoline, natural gas, distillate oil (with less than or equal to 0.5 per cent by weight sulfur), or liquid petroleum gas and shall maintain the following records:

a. Monthly records that contain the rolling twelve-month hours of operation; and

b. Records that show the type of fuel used and the sulfur content (in per cent by weight) of any distillate oil used.

[Authority for term: OAC rule 3745-31-03(4)(b)]

(3) The permittee shall maintain records or a log for the operation of the engine in emergency and non-emergency service, as recorded through the non-resettable hour meter. The records shall include the number or hours spent in emergency operation, including what classified the operation as an emergency; the number or hours spent in maintenance checks and readiness testing; and the number or hours spent in non-emergency operations. If the RICE is operated as part of a demand response operation, the permittee shall keep records of the notification of the emergency situation and the time the engine was operated as part of the demand response.

[Authority for term: 40 CFR 63.6655(f) for 40 CFR 63.6640(f)]

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than diesel was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed twenty 20% opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Reference Method 9 in 40 CFR, Part 60, Appendix A.

[Authority for term: OAC rule 3745-17-07(A)(1)]

b. Emission Limitation:

0.062 lb PE/mmBtu

Applicable Compliance Method:

The particulate emission limitation is from OAC rule 3745-17-11(B)(5) for small stationary internal combustion engines.

If required, the permittee shall demonstrate compliance with the emission limitations through exhaust emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

[Authority for term: OAC rule 3745-17-11(B)(5)(b)]

g) Miscellaneous Requirements

(1) None.

24. P803, Reformer 3 Process U

Operations, Property and/or Equipment Description:

Reformer 3, Reformer 3 Regenerator, Naphtha Splitter, Debutanizer, Recycle and Net Gas Compressor, Piping and associated equipment, drums, exchangers, etc.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI P0115518 issued 8/22/2014)	Fugitive Volatile Organic Compound (VOC) emissions from equipment leaks shall not exceed 10.79 tons per year. VOC emissions from the regenerator vent shall not exceed 0.16 pound per hour and 0.70 tons per year.
b.	OAC rule 3745-31-05(A)(3) June 30, 2008 (PTI P0115518 issued 8/22/2014)	Carbon monoxide (CO) emissions shall not exceed 1.1 pounds per hour and 4.8 tons per year. Nitrogen Oxides (NO_x) emissions shall not exceed 0.01 pound per hour and 0.05 ton per year. Sulfur dioxide (SO_2) emissions shall not exceed 0.16 pound per hour and 0.7 ton per year. See b)(2)a.
c.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008 (PTI P0115518 issued 8/22/2014)	See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-21-09(T)	See b)(2)c.
e.	40 CFR Part 63, Subpart UUU (40 CFR 63.1560 – 1579) [In accordance with 40 CFR 63.1561(a)(1)(iii), this emissions unit is at an existing refinery and is defined as a catalytic reforming unit (63.1579)]	During coke burn-off and catalyst regeneration, reduce uncontrolled emissions of HCl by 97 percent by weight or to a concentration of 10 ppmv (dry basis), corrected to 3 percent oxygen from the process vents associated with the coke burn-off and catalyst rejuvenation operations. (63.1567(a)(1)) See b)(2)d. and b)(2)e.
f.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 63.16)	40 CFR Part 63, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 63. Table 6 to Subpart CC of 40 CFR Part 63 – General Provisions Applicability to Subpart CC and Table 44 to 40 CFR Part 63 Subpart UUU show which parts of the General Provisions in 40 CFR63.1-15 apply.
g.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640, this emissions unit is located at an existing petroleum refinery that is a major source of HAP emissions, and has equipment subject to equipment leak requirements specified in this subpart.]	See b)(2)f.
h.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.
i.	40 CFR Part 60 Subpart Ja	See b)(2)g.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(40 CFR 60.100a – 109a) [In accordance with 40 CFR 60.100a(c)(1), the conditions as they apply to modified flares are applicable. (See P003 and P004, Hydrocarbon Flares, for details.)]	
j.	40 CFR Part 60, Subpart GGGa (40 CFR 60.590a – 60.593a) [In accordance with 40 CFR 60.590a(a), this facility has a compressor or equipment within a process unit that is an affected facility in a petroleum refinery as defined in 60.590a(e) and 60.591a subject to Subpart GGGa of this part.]	See b)(2)h.
k.	40 CFR Part 60, Subpart NNN (40 CFR Part 60.660 – 60.668) [In accordance with 40 CFR 60.660(a), the dubtanizer tower is a distillation process unit that produces a chemical listed in 60.667 as a product, co-product, by-product, or intermediate. The non-condensibles from the debutanizer tower are sent to the refinery fuel gas system which is treated and used as fuel throughout the refinery]	See b)(2)i. and b)(2)j.

(2) Additional Terms and Conditions

a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NOx, CO, and SO_2 emissions from this air contaminant source since the uncontrolled potential to emit for NOx, CO, and SO_2 is less than ten tons per year.

c. Consistent with the U.S.EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with equipment leak standards in 40 CFR Part 63, Subpart CC for both equipment in organic HAP service and not in organic HAP service. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the LDAR requirements of OAC 3745-21-09(T). See term B.2 of Section B. of the permit for the applicable leak detection and repair requirements.

d. The permittee shall comply with the emissions limits in 40 CFR 63 Subpart UUU.

   i. [63.1567(a)(1)] Meet each emission limitation in Table 22 of Subpart UUU that applies to you. These emission limitations apply to emissions from catalytic reforming unit process vents associated with the coke burn-off and catalyst rejuvenation operations during coke burn-off and catalyst regeneration.

e. Per 40 CFR 63.1566(a)(3) and (4), the emission limitations in Tables 15 of 40 CFR 63 Subpart UUU do not apply to the coke burn-off, catalyst rejuvenation, reduction or activation vents, or to the control systems used for these vents. The emission limitations in Tables 15 and 16 of this subpart do not apply to emissions from process vents during depressuring and purging operations when the reactor vent pressure is 5 pounds per square inch gauge (psig) or less. NOTE: BPH's Reformer 3 vents all emissions back to the process during depressurization/purge steps, so there are no applicable process vents and no organic HAP emissions with these steps during normal operation.

f. The permittee subject to the provisions of 40 CFR 63, Subpart CC shall comply with the requirements in 40 CFR Part 63, Subpart CC for applicable equipment leak provisions referencing 40 CFR Part 60, Subpart VV and 63.648(b) except as provided in 63.648(a)(1), (a)(2), and 63.648(c) through (i).

   NOTE: Refer to Section B.2. for applicable leak detection and repair requirements.

g. This emissions unit will have new emergency relief vent piping and other connections to the refinery flare system (Emission Units P003 and/or P004). These connections may trigger the applicability of NSPS Subpart Ja to the refinery flares based on the definition of flare modification in the 40 CFR 60 Subpart Ja. NOTE: All the flare requirements pertaining to NSPS 40 CFR 60, subpart Ja are in the terms for emission units P003 and P004.

h. The permittee shall comply with the requirements in 40 CFR Part 60, Subpart GGGa for applicable equipment leak provisions referencing 40 CFR Part 60, Subpart VVa. Per 40 CFR 63.640(p)(1), equipment leaks subject to 40 CFR 63 Subpart CC provision, and also subject to the provisions of 40 CFR Parts 60

promulgated before 9/4/2007, are required to comply only with the provisions of 40 CFR 63 Subpart CC. Per 40 CFR 63.640(p)(2), equipment leaks that are also subject to the provisions of 40 CFR Part 60, Subpart GGGa, are required to comply only with the provisions specified in 40 CFR Part 60, Subpart GGGa

NOTE: Refer to Section B.2. for applicable leak detection and repair requirements for 40 CFR Part 60, subpart GGGa.

i. In accordance with 40 CFR 60.660(a), this facility is part of a distillation process unit that produces a chemical listed in 60.667 as a product, co-product, by-product, or intermediate. The permittee submitted a request to use an Alternative Monitoring Plan (AMP) to U.S. EPA for the Reformer 3 debutanizer tower vent and it was approved Sept. 6, 2013.

j. In accordance with 40 CFR 60.662(a), reduce emissions of TOC (less methane and ethane) by 98 weight-percent, or to a TOC (less methane and ethane) concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen, whichever is less stringent. If a boiler or process heater is used to comply with this paragraph, then the vent stream shall be introduced into the flame zone of the boiler or process heater. EPA approved BPH's request to comply with the monitoring requirements of 40 CFR 60 Subpart RRR, specifically 60.703(c)(1), (c)(1)(i), (c)(1)(ii), and (c)(2) as an alternative means of demonstrating compliance with 40 CFR 60 Subpart NNN 60.663(b)(2), (c)(1), (c)(2), and (c)(3).

c) Operational Restrictions

(1) [40 CFR 63, Subpart UUU] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES: CATALYTIC REFORMING UNITS

The permittee shall comply with the applicable restrictions of this Subpart including the following sections:

63.1567 - Requirements for Inorganic HAP Emissions		
a.	63.1567(a)(2) and Table 23, Row 5;	Meet each site-specific operating limit in Table 23 of this subpart that applies to this unit. These operating limits apply during coke burn-off and catalyst rejuvenation. BP chose option 5 which includes the following:The daily average temperature of the gas entering or exiting the adsorption system must not exceed the limit established during the performance test (387.2 degrees, tested on May 15, 2013); and the weekly average chloride level on the sorbent entering the adsorption system must not exceed the design or manufacturer's recommended limit (1.35 weight percent for the Chlorsorb™ System); and the weekly average chloride level on the sorbent leaving the adsorption system must not exceed the design or manufacturer's recommended limit (1.8 weight percent for the Chlorsorb™ System).

(2) [40 CFR 60, Subpart NNN] Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations

The permittee shall comply with the applicable restrictions of this subpart including the following sections:

60.662 - Standards		
a.	60.662	The permittee shall comply with 60.662(a) for each vent stream on and after the date on which the initial performance test required by 60.8 and 60.664 is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial start-up, whichever date comes first.

d) Monitoring and/or Recordkeeping Requirements

(1) [40 CFR 63, Subpart UUU] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES: CATALYTIC REFORMING UNITS

The permittee shall comply with the applicable monitoring and recordkeeping requirements of this Subpart including the following sections:

63.1567 - Requirements for Inorganic HAP Emissions		
a.	63.1567(a)(3)	*Requirements for Inorganic HAP Emissions*: Prepare an operation, maintenance, and monitoring plan according to the requirements in 40 CFR Part 63.1574(f) and operate at all times according to the procedures in the plan.
b.	63.1567(b)(1)	Operate and maintain a continuous monitoring system(s) according to the requirements in 40 CFR Part 63.1572 and Table 24. NOTE: BPH chose option 5 for P803 (See term f)(2) of this permit.)
c.	63.1567(b)(3)	Establish each site-specific operating limit in Table 23 of this subpart that applies to you according to the procedures in Table 25 of this subpart. NOTE: BP chose option 6 for P803 (See term f)(2) of this permit.)
d.	63.1567(c)(1)	Demonstrate continuous compliance with each emission limitation in Tables 22 and 23 (see Term c)(1)) that applies to this emissions unit according to the methods specified in Table 27 (see term b)(1)) and Table 28 according to the following:

		Table 28, option 5: a. Collecting the hourly and daily average temperature monitoring data according to 63.1572; and maintaining the daily average temperature below the operating limit established during the performance test. b. Collecting samples of the sorbent exiting the adsorption system three times per week (on non-consecutive days); and analyzing the samples for total chloride; and determining and recording the weekly average chloride concentration; and maintaining the chloride concentration below the design or manufacturer's recommended limit (1.35 weight percent for the Chlorsorb™ System). c. Collecting samples of the sorbent exiting the adsorption system three times per week (on non-consecutive days); and analyzing the samples for total chloride concentration; and determining and recording the weekly average chloride concentration; and maintaining the chloride concentration below the design or manufacturer's recommended limit (1.8 weight percent Chlorsorb™ System).
e.	63.1567(c)(2)	Demonstrate continuous compliance with the work practice standard in 40 CFR Part 63.1567(a)(3) by maintaining records to document conformance with the procedures in the operation, maintenance and monitoring plan.
63.1570 - General Requirements for Complying with subpart UUU		
f.	63.1570(a)	Comply with all the non-opacity standards in this subpart during the times specified in 40 CFR 63.6(f)(1).
g.	63.1570(c)	Operate and maintain the affected source, including air pollution control and monitoring equipment, according to the provisions in 40 CFR 63.6(e)(1)(i).
h.	63.1570(d)	Develop a written startup, shutdown and malfunction plan (SSMP) according to the provisions of 40 CFR 63.6(e)(3).
i.	63.1570(g)	Consistent with 40 CFR 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with 63.6(e)(1). The SSMP must include elements designed to minimize the frequency of such periods (i.e., root cause analysis). The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according

		to the provisions in 63.6(e).
63.1572 – Monitoring, Operation, and Maintenance Requirements		
j.	63.1572(c)	You must install, operate, and maintain each continuous parameter monitoring system according to the requirements in 63.1572(c)(1) through (c)(5) of this section
k.	63.1572(c)(1)	Operate and maintain each continuous parameter monitoring system in a manner consistent with the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately. Meet the equipment specifications in Table 41 of this subpart if pH strips or colormetric tube sampling systems are used.
l.	63.1572(c)(2)	The continuous parameter monitoring system must complete a minimum of one cycle of operation for each successive 15-minute period. The permittee must have a minimum of four successive cycles of operation to have a valid hour of data (or at least two if a calibration check is performed during that hour or if the continuous parameter monitoring system is out-of-control).
m.	63.1572(c)(3)	Each continuous parameter monitoring system must have valid hourly average data from at least 75 percent of the hours during which the process operated.
n.	63.1572(c)(4)	Each continuous parameter monitoring system must determine and record the hourly average of all recorded readings and if applicable, the daily average of all recorded readings for each operating day. The daily average must cover a 24-hour period if operation is continuous or the number of hours of operation per day if operation is not continuous.
o.	63.1572(c)(5)	Each continuous parameter monitoring system must record the results of each inspection, calibration, and validation check.
p.	63.1572(d) and (d)(1)	The permittee must monitor and collect data according to the requirements in 63.1572(d)(1) and (d)(2) of this section: 63.1572(1) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), the permittee must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times the affected source is

		operating
q.	63.1572(d)(2)	The permittee may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities for purposes of this regulation, including data averages and calculations, for fulfilling a minimum data availability requirement, if applicable. The permittee must use all the data collected during all other periods in assessing the operation of the control device and associated control system.
r.	63.1574(f)(2)	The permittee must prepare and implement an operation, maintenance, and monitoring plan (OMMP) for each control system and continuous monitoring system for each affected source. The plan must include the information specified in 63.1574(f)(2)(i) through (f)(2)(xii).
63.1576 – Recordkeeping Requirements		
s.	63.1576(a)	The permittee must keep the records specified in 63.1575(a)(1) through (3): (1) A copy of each notification and report that was submitted to comply with this subpart, including all documentation supporting any initial notification or Notification of Compliance Status that was submitted, according to the requirements in 63.10(b)(2)(xiv). (2) The records in 40 CFR 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction. (3) Records of performance tests, performance evaluations, and opacity and visible emission observations as required in 63.10(b)(2)(viii).
t.	63.1576(d)	Keep records required by Tables 20, 21, 27 and 28 of this subpart (for catalytic reforming units) to show continuous compliance with each emission limitation as applicable.
u.	63.1576(e)	Keep a current copy of your operation, maintenance, and monitoring plan onsite and available for inspection. Keep records to show continuous compliance with the procedures in your operation, maintenance, and monitoring plan.
v.	63.1576(f)	Keep the records of any changes that affect emission control system performance.
w.	63.1576(g)	Records must be maintained in a form suitable and readily

		available for expeditious review according to 63.10(b)(1).
x.	63.1576(h)	Keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record as specified in 63.10(b)(1).
y.	63.1576(i)	Keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 63.10(b)(1). You can keep the records offsite for the remaining 3 years.

(2) [40 CFR 60, Subpart NNN] Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations

The permittee shall comply with the applicable monitoring and recordkeeping requirements of this subpart including the following sections:

60.663 – Monitoring of Emissions and Operations		
a.	60.663(c) and AMP allows request to comply with monitoring requirements of 40 CFR 60.703(c)(1)	*NOTE*: BP-Husky submitted an Alternative Monitoring Plan (AMP) to U.S. EPA which was approved Sept. 6, 2013. The AMPallows BP-Husky to comply with 40 CFR 60, Subpart RRR, specifically 60.703(c)(1): The permittee that uses a boiler or process heater to comply shall install, calibrate, maintain and operate according to the manufacturer's specifications the following equipment: (c)(1) A flow indicator that provides a record of vent stream flow diverted from being routed to the boiler or process heater at least once every 15 minutes for each affected facility, except as provided in 60.703(c)(1)(ii) stated below: (c)(1)(i) The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream from being routed to the boiler or process heater, resulting in its emission to the atmosphere. (c)(1)(ii) Where the bypass line valve is secured in the closed position with a car-seal or a lock-and-key type configuration, a flow indicator is not required. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and the vent

		stream is not diverted through the bypass line. NOTE: BP-Husky does not have any bypass lines on this unit.
b.	60.663(c)(2) and AMP allows request to comply with monitoring requirements of 40 CFR 60.703(c)(2)	*NOTE*: BP-Husky submitted an Alternative Monitoring Plan (AMP) to U.S. EPA which was approved Sept. 6, 2013. The AMPallows BP-Husky to comply with 40 CFR 60, Subpart RRR, specifically 60.703(c)(2): 60.703(c)(2) Any vent stream introduced with primary fuel into a boiler or process heater is exempt from the requirement of having a temperature monitoring device in the firebox.
60.665 – Record Keeping Requirements		
c.	60.665(b)	Recordkeeping requirements of the data measured during each performance test – if applicable.
d.	60.665(c)	Keep up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored under 60.663 (a) and (c) as well as up-to-date, readily accessible records of periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. The Administrator may at any time require a report of these data. Where a combustion device is used to comply with 60.662(a), periods of operation during which the parameter boundaries established during the most recent performance tests are exceeded are defined as follows in 60.665(c)(1) through (c)(4), as applicable.
e.	60.665(d) and AMP allows compliance with 40 CFR 60.705(d) of subpart RRR	*NOTE:* BP-Husky submitted an Alternative Monitoring Plan (AMP) to U.S. EPA which was approved Sept. 6, 2013. The AMPallows BP-Husky to comply with 40 CFR 60, Subpart RRR, specifically 60.705(d): The permittee shall keep records of the following: 60.705(d)(1) Up-to-date, readily accessible continuous records of the flow indication specified under 60.703(c)(1)(i), as well as up-to-date, readily accessible records of all periods and the duration when the vent stream is diverted from the control device. 60.705(d)(2) Where a seal mechanism is used to comply with 60.703(c)(1)(ii), a record of continuous flow is not required. In such cases, the owner or operator shall keep up-to-date, readily accessible records of all monthly visual

		inspections of the seals as well as readily accessible records of all periods and the duration when the seal mechanism is broken, the bypass line valve position has changed, the serial number of the broken car-seal has changed, or when the key for a lock-and-key type configuration has been checked out.
f.	60.655(p)	The Administrator will specify appropriate recordkeeping requirements where the owner or operator of an affected facility complies with the standards specified under 60.662 other than as provided under 60.663(c). *NOTE*: BP-Husky submitted an Alternative Monitoring Plan (AMP) to U.S. EPA which was approved Sept. 6, 2013.
40 CFR 60 Subpart RRR - Additional Requirements for the AMP		
g.	60.705(s)	The permittee who seeks to demonstrate compliance with 60.702 (a) or (b) using a control device must maintain on file a schematic diagram of the affected vent streams, collection system(s), fuel systems, control devices, and bypass systems as part of the initial report. This schematic diagram must be retained for the life of the system. The schematic diagram documentation shall include the identification, location, and function of all monitoring systems and devices required under NSPS Subpart RRR at 40 CFR 60.703(b) and (c).

e) Reporting Requirements

(1) [40 CFR 63, Subpart UUU] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES: CATALYTIC REFORMING UNITS

The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart UUU, including the following sections:

63.1567 – Reporting Requirements for Inorganic HAP Emissions		
a.	63.1567(b)(7)	Submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 63.1574. NOTE: the initial compliance test was submitted in July 2013.
63.1570 - General Reporting Requirements		

b.	63.1570(f)	Report each deviation from an emission limitation, work practice standard, and operating limit per 63.1575. This includes periods of startup, shutdown, and malfunction.
63.1574 - Notifications		
c.	63.1574(a)	Except as allowed in this paragraph, the permittee must submit all of the notifications in 40 CFR 63.6(h), 63.7(b) and 63.7(c), 63.8(e), 63.8(f)(4), 63.8(f)(6) and 63.9(b) through (h) that apply by the dates specified.
d.	63.1674(d)	Include the information in Table 42 of this subpart in your notification of compliance status. NOTE: the initial compliance test was submitted in July 2013.
e.	63.1674(f)(1)	Submit the operation, maintenance and monitoring plan for review and approval along with your notification of compliance status. You must submit any changes for review and approval and comply with the plan until the change is approved.
63.1575 - Reports		
f.	63.1575(a)	Submit each semiannual report in Table 43 that applies to this emissions unit.
g.	63.1575(b)	Unless the Administrator has approved a different schedule, submit each report by the date in Table 43 of subpart UUU and according to the requirements in 63.1575(b)(1) through (5).
h.	63.1575(c)	The compliance report must contain the information required in 63.1575(c)(1) through (4).
i.	63.1575(d)	For each deviation from an emission limitation and for each deviation from the requirements for work practice standards that occurs at an affected source where you are not using a continuous opacity monitoring system or a continuous emission monitoring system to comply with the emission limitation or work practice standard in this subpart, the compliance report must contain the information in 63.1575(c)(1) through (3) and the information in 63.1575(d)(1) through (3).
j.	63.1575(f)	Include the information required in 63.1575(f)(1) and (2) in each compliance report if applicable.
k.	63.1575(g)	The permittee may submit reports required by other regulations in place of or as part of the compliance report if

		they contain the required information.
l.	63.1575(h)	The requirements in 63.1575(h)(1) and (2) apply to startups, shutdowns, and malfunctions: (h)(1) When actions taken to respond are consistent with the plan, you are not required to report these events in the semiannual compliance report and the reporting requirements in 63.6(e)(3)(iii) and 63.10(d)(5) do not apply. (h)(2) When actions taken to respond are not consistent with the plan, you must report these events and the response taken in the semiannual compliance report. In this case, the reporting requirements in 63.6(e)(3)(iv) and 63.10(d)(5) do not apply.

(2) [40 CFR 60, Subpart NNN] Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations

The permittee shall comply with the applicable reporting requirements of this subpart including the following sections:

60.665 – Reporting Requirements		
a.	60.665(a)	The permittee subject to 60.662 shall notify the Administrator of the specific provisions of 60.662 (§60.662 (a), (b), or (c)) with which the permittee has elected to comply. Notification shall be submitted with the notification of initial start-up required by 60.7(a)(3). If the permittee elects at a later date to use an alternative provision of 60.662 with which he or she will comply, then the Administrator shall be notified by the owner or operator 90 days before implementing a change and, upon implementing the change, a performance test shall be performed as specified by 60.664 within 180 days.
b.	60.665(b)	The same data specified in 60.665(b) in term d)(2) of this permit shall be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a control device, outlet concentration of TOC, or the TRE index value of a vent stream from a recovery system is determined.
c.	60.665(k)	The permittee is exempt from the quarterly reporting requirements contained in 60.7(c) of the General

		Provisions.
d.	60.665(l) and AMP allows compliance with 40 CFR 60.705(l) of subpart RRR	Semiannual reporting requirements if the permittee complies with the requirements 60.662. Report as stated in 60.665(l)(1) through (l)(7), as applicable. *NOTE*: BP-Husky submitted an Alternative Monitoring Plan (AMP) to U.S. EPA which was approved Sept. 6, 2013. The AMPallows BP-Husky to comply with 40 CFR 60, Subpart RRR, specifically 60.705(l),including 60.705(l)(2) and (l)(7): 60.705(l) The permittee shall submit to the Administrator semiannual reports of the following recorded information. 60.705(l)(2) All periods and duration recorded under 60.705(d) when the vent stream is diverted from the control device to the atmosphere; and 60.705(l)(7) All periods recorded under 60.705(d) in which the seal mechanism is broken or the by-pass line valve position has changed. A record of the serial number of the car-seal or a record to show that the key to unlock the bypass line valve was checked out must be maintained to demonstrate the period, the duration, and frequency in which the bypass line was operated.
e.	60.655(p)	The Administrator will specify appropriate reporting requirements where the owner or operator of an affected facility complies with the standards specified under 60.662 other than as provided under 60.663(a), (b), (c) and (d).

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. VOC emissions from the regenerator vent stack shall not exceed 0.16 pound per hour.

Applicable Compliance Methods:

This emission limitation is based on vendor material balance.

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-21-10(C). Alternative U.S. EPA approved methods may be used with prior approval from Ohio EPA.

b. Emission Limitation:

VOC emission from the regeneration vent stack shall not exceed 0.70 ton per year.

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the hourly emission limitation (0.16 lb/hr) by 8,760 hrs/yr and dividing by 2,000 pounds per ton.

c. Emission Limitation:

Fugitive VOC emission from equipment leaks shall not exceed 10.79 tons per year.

Applicable Compliance Method:

The leak detection and repair monitoring, recordkeeping and reporting requirements of b)(2)f. and detailed in term B.2 of Section B. (applicable leak detection and repair requirements), shall serve as demonstration of compliance with this emission limitation.

This emission limitation was calculated based on the following method. The percent of the leaking vapor and light liquid valves and pumps are based on from Toledo Refinery's past experience. The leaking components were assumed to leak at 10,000 ppm. Emissions are calculated based on EPA correlation equations (Table 2-10 of the U.S. EPA Protocol document for Equipment Leaks). Non-leakers are assumed to emit at the EPA default-zero leak rate (Table 2-12 of the U.S. EPA Protocol document for Equipment Leaks). Heavy liquid components are estimated based on average HL factors from API Publication 337, August 1996. Pressure relief valves vent to the flare and the average emission factors are reduced by 98%. The emission factors for hydrogen compressors are multiplied by 10% to estimate the VOC emissions from hydrogen compressors assuming the hydrogen compressors have a maximum of 10% VOC.

d. Emission Limitation:

CO emission from regeneration vent stack shall not exceed 1.1 pound per hour.

Applicable Compliance Method:

This emission limitation is based on vendor material balance.

If required, the permittee shall demonstrate compliance using the methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved methods may be used with prior approval from Ohio EPA.

e. Emission Limitation:

CO emission from regeneration vent stack shall not exceed 4.8 tons per hour.

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the hourly emission limitation (1.1 lb/hr) by 8,760 hrs/yr and dividing by 2,000 pounds per ton.

f. Emission Limitation:

NO_x emission from regeneration vent stack shall not exceed 0.01 pound per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using the methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved methods may be used with prior approval from Ohio EPA.

g. Emission Limitation:

NO_x emission from regeneration vent stack shall not exceed 0.05 ton per year.

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the hourly emission limitation (0.01 lb/hr) by 8,760 hrs/yr and dividing by 2,000 pounds per ton.

h. Emission Limitation:

SO_2 emission from regeneration vent stack shall not exceed 0.16 pound per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using the methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved methods may be used with prior approval from Ohio EPA.

i. Emission Limitation:

SO_2 emission from regeneration vent stack shall not exceed 0.7 ton per year.

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the hourly emission limitation (0.16 lb/hr) by 8,760 hrs/yr and dividing by 2,000 pounds per ton.

j. Emission Limitation:

During coke burn-off and catalyst regeneration, reduce uncontrolled emissions of HCl by 97 percent by weight or to a concentration of 10 ppmv (dry basis), corrected to 3 percent oxygen from the process vents associated with the coke burn-off and catalyst rejuvenation operation

Applicable Compliance Method:

If required, demonstrate compliance using 40 CFR 63.1575(b)(2) and (b)(4).

k. Emission Limitation:

Reduce emissions of TOC (less methane and ethane) by 98 weight-percent, or to a TOC (less methane and ethane) concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen, whichever is less stringent

Applicable Compliance Method:

Compliance with this limitation is demonstrated by venting the emissions to a boiler or process heater with the primary fuel.

(2) [40 CFR 63, Subpart UUU] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES: CATALYTIC REFORMING UNITS

The permittee shall comply with the applicable testing requirements of this Subpart including the following sections:

63.1567 - Demonstrating Continuous Compliance with the Inorganic HAP Emission Limitations and Work Practice Standards		
a.	63.1567(b)(2)	Conduct each performance test for a catalytic reforming unit according to the requirements in 40 CFR Part 63.1571 and the conditions specified in Table 25. Table 25, option 6: a. Establish operating limit for temperature. Measure and record the temperature of gas entering or exiting the adsorption system every 15 minutes. Determine and record the maximum hourly average temperature. b. Determination of Metal Concentration on Catalyst Particles (Instrumental Analyzer Procedure) in appendix A to subpart UUU; or EPA Method 5050 combined either with EPA Method 9056, or with EPA Method 9253; or EPA Method 9212 with the soil extraction procedures listed within the method. Use the above methods according to the following requirements: Measure the chloride level on the sorbent entering and exiting the adsorption system. Measure and record the chloride concentration of the sorbent material entering and exiting the adsorption system at least three times during each test run. Determine and record the average weight percent chloride concentration of the sorbent entering the

		adsorption system for each test run. Determine and record the average weight percent chloride concentration of the sorbent exiting the adsorption system for each test run.
b.	63.1567(b)(4)	Use the equations in 63.1567(b)(4)(i) through (iv) to determine initial compliance with the emission limitations.
c.	63.1567(b)(5)	The permittee demonstrated initial compliance with each applicable emission limitation that applies according to Table 26 (stack test performed May 15, 2013) - reduce uncontrolled emissions of HCl by 97 percent by weight or to a concentration of 10 ppmv db, corrected to 3% oxygen.
63.1571 – Performance Tests or Other Initial Compliance Demonstrations		
d.	63.1571(a)	Conduct performance tests and report the results by no later than 150 days after the compliance date specified in 63.1563 and according to the provisions in 63.7(a)(2). NOTE: The test report was submitted in July of 2013 (STARS2 report ID is 69196)
e.	63.1571(b)(1)	Conduct each performance test according to the requirements in 63.7(e)(1).
f.	63.1571(b)(2)	Conduct three separate test runs for each performance test as specified in 63.7(e)(3). Each test run must last at least 1 hour.
g.	63.1571(b)(3)	Conduct each performance evaluation according to the requirements in 63.8(e).
h.	63.1571(b)(4)	Do not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in 63.7(e)(1).
i.	63.1571(b)(5)	Calculate the average emission rate for the performance test by calculating the emission rate for each individual test run in the units of the applicable emission limitation using Equation 2, 5, or 8 of 63.1564, and determining the arithmetic average of the calculated emission rates.

(3) [40 CFR 60, Subpart NNN] Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations

The permittee shall comply with the testing requirements of this subpart including the following sections:

60.664 – Test Methods and Procedures		
a.	60.664(a)	For the purpose of demonstrating compliance with §60.662, all affected facilities shall be run at full operating conditions and flow rates during any performance test
b.	60.664(b) and AMP requirement 40 CFR 60.705(b)(5)	*NOTE*: BP-Husky submitted an Alternative Monitoring Plan (AMP) to U.S. EPA which was approved Sept. 6, 2013. The AMPallows BP-Husky to comply with 40 CFR 60, Subpart RRR, specifically 60.704(b)(5) and (5)(b)(ii): (b)(5) and (b)(5)(ii) The requirement for an initial performance test is waived, in accordance with 60.8(b), when a vent stream is introduced into a boiler or process heater with the primary fuel. The above waiver is applicable for boilers and process heaters which meet the definitions of a boiler or process heater under NSPS Subpart RRR at 40 CFR 60.701.
c.	60.664(c)	When a boiler or process heater with a design heat input capacity of 44 MW (150 million Btu/hour) or greater is used to seek to comply with 60.662(a), the requirement for an initial performance test is waived, in accordance with 60.8(b). However, the Administrator reserves the option to require testing at such other times as may be required, as provided for in Section 114 of the Act.

g) Miscellaneous Requirements

(1) None.

25. T047, FR, PR-500216

Operations, Property and/or Equipment Description:

T047 is a 150,609.09 barrel fixed roof storage vessel identified as tank number PR-500216. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-0112 as issued on 4/24/1978)	The requirements established pursuant to this rule are less stringent than the requirements specified in 40 CFR Part 63, Subpart CC.
b.	OAC rule 3745-21-09(L)	See b)(2)a.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
d.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(2) and 63.641, this emissions unit is subject to Subpart CC as a Group 2 storage vessel; it is associated with petroleum refining process units located at a plant site that is a major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a Group 2 storage	40 CFR 63, Subpart CC, establishes no emission limitation or control measures for Group 2 storage vessels. See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	vessel as defined in 63.641.]	
e.	40 CFR Part 60, subpart Ka	See b)(2)c.

(2) Additional Terms and Conditions

a. Consistent with U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(L) by demonstrating compliance with the storage tank standards in 40 CFR Part 63, Subpart CC. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the requirements of OAC rule 3745-21-09(L).

b. [63.640(m)]
If a change that does not meet the criteria in 63.640(l) is made to a petroleum refining process unit subject to 40 CFR Part 63 Subpart CC, and the change causes a Group 2 emission point to become a Group 1 emission point (as defined in 40 CFR Part 63.641), the permittee shall comply with the requirements of Subpart CC for existing emissions units for the Group 1 emission point as expeditiously as practicable, but in no event later than 3 years after the emission point becomes Group 1.

i. The permittee shall submit to the Director and Administrator for approval a compliance schedule, along with a justification for the schedule.

ii. The compliance schedule shall be submitted within 180 days after the change is made, unless the compliance schedule has been previously submitted to the permitting authority. If it is not possible to determine until after the change is implemented whether the emission point has become Group 1, the compliance schedule shall be submitted within 180 days of the date when the affect of the change is known to the source. The compliance schedule may be submitted in the next Periodic Report if the change is made after the date the Notification of Compliance Status report is due.

iii. The Administrator shall approve or deny the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification. Approval is automatic if not received from the Administrator within 120 calendar days of receipt.

c. As specified under 40 CFR 63.640(n)(7) of 40 CFR Part 63, subpart CC, a Group 2 storage vessel that is subject to the provisions of 40 CFR Part 60, Subpart Ka, but not to the control requirements of Ka, is required to only comply with the provisions of 40 CFR Part 63, Subpart CC.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart CC, including the following sections:

a.	63.655(i)(1)(iv)]	Maintain a record of any data, assumptions, and procedures used to make the determination that this storage vessel is Group 2, e.g., that the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent.
b.	63.642(e)	The permittee shall keep copies of all applicable reports and records required by this permit for at least 5 years except as otherwise specified in this permit. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

a.	63.640(m)	The permittee shall submit a compliance schedule in a periodic report describing any operational process change to this emission unit that causes it to change from a group 2 to a group 1 emission unit. (m)(1) The permittee shall submit to the Director and Administrator for approval a compliance schedule, along with a justification for the schedule. (m)(2) The compliance schedule shall be submitted within 180 days after the change is made, unless the compliance schedule has been previously submitted to the permitting authority. If it is not possible to determine until after the change is implemented whether the emission point has become Group 1, the compliance schedule shall be submitted within 180 days of the date when the affect of the

		change is known to the source. The compliance schedule may be submitted in the next Periodic Report if the change is made after the date the Notification of Compliance Status report is due. (m)(3) The Administrator shall approve or deny the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification. Approval is automatic if not received from the Administrator within 120 calendar days of receipt.
b.	63.655(f)(6)	Notification of Compliance Status reports required by 63.640(l)(3) and for storage vessels subject to the compliance dates specified in 63.640(h)(4) shall be submitted no later than 60 days after the end of the 6-month period during which the change or addition was made that resulted in the Group 1 emission point or the existing Group 1 storage vessel was brought into compliance, and may be combined with the periodic report. Six-month periods shall be the same 6-month periods specified in paragraph (g) of this section. The Notification of Compliance Status report shall include the information specified in paragraphs (f)(1) through (f)(5) of this section. This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, as part of the periodic report, or in any combination of these four. If the required information has been submitted before the date 60 days after the end of the 6-month period in which the addition of the Group 1 emission point took place, a separate Notification of Compliance Status report is not required within 60 days after the end of the 6-month period. If an owner or operator submits the information specified in paragraphs (f)(1) through (f)(5) of this section at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. None.

g) Miscellaneous Requirements

(1) None.

26. T073, EFR, PR-500084

Operations, Property and/or Equipment Description:

T073 is a 5,260.22 barrel petroleum liquid storage tank identified as PR-500084. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 wastewater tank pursuant to 40 CFR Part 63, Subpart CC.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-21-09(Z)	See b)(2)a.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
c.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(3) and 63.641, this emissions unit is subject to Subpart CC as a Group 1 storage vessel; it is associated with petroleum refining process units located at a plant site and that is a major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a Group 1 storage vessel as defined in 63.641.]	See b)(2)a. and b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	40 CFR Part 61, Subpart FF (40 CFR 61.340-358) [In accordance with 40 CFR 61.340(a) and (b), this emissions unit is subject to Subpart FF as a storage vessel holding BWON regulated material at a petroleum refinery.]	In accordance with 40 CFR 61.351(a), as an alternative to the standards for tanks specified in 61.343, the permittee elects to comply with subpart FF by having an external floating roof meeting the requirements of 40 CFR 60.112b(a)(2) of 40 CFR 60, Subpart Kb although this tank is not subject to 40 CFR Part 60, subpart Kb. See b)(2)c.

(2) Additional Terms and Conditions

a. Consistent with U.S. EPA streamlining , the permittee shall demonstrate compliance with OAC 3745-21-09(Z) and 40 CFR Part 63, subpart CC (for storage vessels) in accordance with 40 CFR Part 61, subpart FF (61.151) as an alternative to the standards for tanks specified by 40 CFR 61.343, by having an external floating roof meeting the requirements of 40 CFR 60.112b(a)(2) of 40 CFR 60, Subpart Kb, although the requirements of 40 CFR 60 Subpart Kb do not apply directly to this tank.

b. MACT status (Group 1 or Group 2) is determined by the type of material being stored in the tank as defined by 40 CFR 63.641. If an existing tank changes from a Group 1 to Group 2 storage vessel where the material stored is less than 1.51 psia (maximum true vapor pressure) or 4% by weight of HAPS, then the tank is only subject to the recordkeeping requirements of 40 CFR 63.123(a) of Subpart G and 63.655(i)(1)(iv) of Subpart CC and is not required to comply with any other provisions in 40 CFR 63.119 through 63.123 of Subpart G.

c. The permittee elects to comply with the alternative standards for tanks in 40 CFR 61.351, rather than the provisions of 61.343 of this subpart.

c) Operational Restrictions

(1) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS
The permittee shall comply with the applicable restrictions required under 40 CFR 61, Subpart FF that defers to 40 CFR Part 60, Subpart Kb, including the following sections:

a.	40 CFR 61.351(a) of Subpart FF	As an alternative to the standards for tanks specified in 61.343 of this subpart, the permittee may elect to comply with the fixed roof and external floating roof meeting the requirements in 40 CFR 60.112b(a)(2) of 40

		CFR 60, subpart Kb.
40 CFR 60, Subpart Kb – Storage Vessel Provisions The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart Kb, including the following sections:		
b.	60.112b(a)(2)	An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof.
c.	60.112b(a)(2)(i)	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.
d.	60.112b(a)(2)(i)(A)	The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.
e.	60.112b(a)(2)(i)(B)	The secondary seal 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 60.113b(b)(4)
f.	60.112b(a)(2)(ii)	Requirements for automatic bleeder vents, rim vents and emergency roof drains.
g.	60.112b(a)(2)(iii)	The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

d) Monitoring and/or Recordkeeping Requirements

(1) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 61, subpart FF, including the following sections:

a.	40 CFR 61.356(a)	The permittee shall comply with the recordkeeping requirements of this section. Each record shall be maintained in a readily accessible location at the facility site.
b.	61.356(k)	The permittee who elects the alternative to the standards for tanks specified in 61.351 of Subpart FF shall comply with the recordkeeping requirements in 40 CFR 60.115b of 40 CFR 60, Subpart Kb.
40 CFR 60, Subpart Kb – Storage Vessel Provisions The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 60, subpart Kb, including the following sections:		
60.115b Recordkeeping Requirements		
c.	60.115b(b)(3)	Keep a record of each gap measurement performed as required by 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain: (i) The date of measurement. (ii) The raw data obtained in the measurement. (iii) The calculations described in 60.113b(b)(2) and (b)(3).
60.113b - Inspections		
d.	60.113b(b)(1) and (b)(1)(i)-(iii)	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: Hydrostatic testing: within 60 days of initial fill with VOL and every 5 years after; 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; and 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 paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

e.	60.113b(b)(2)	Procedures for determining the gap widths and areas in the primary and secondary seals individually.
f.	60.113b(b)(3)	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 60.113b(b)(4).
g.	60.113b(b)(4)	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.
h.	60.113b(b)(5)	Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.
i.	60.113b(b)(6)	Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

e) Reporting Requirements

(1) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS
The permittee shall submit the following reports and such other notifications and reports to the appropriate Ohio EPA District office or local air agency as are required pursuant to 40 CFR 61, Subpart FF, including the following sections:

a.	40 CFR 61.357(f)	The permittee who elects the alternative to the standards for tanks specified in 61.351 of Subpart FF shall comply with the reporting requirements in 40 CFR 60.115b of 40 CFR 60, Subpart Kb.
40 CFR 60, Subpart Kb – Storage Vessel Provisions The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 60, Subpart Kb, including the following sections:		
60.115b Reporting Requirements		
b.	60.115b(b)(2)	Within 60 days of performing the seal gap measurements required by 60.113b(b)(1), furnish the Administrator with a report that contains:

		(i) The date of measurement. (ii) The raw data obtained in the measurement. (iii) The calculations described in 60.113b (b)(2) and (b)(3).
c.	60.115b(b)(4)	After each seal gap measurement that detects gaps exceeding the limitations specified by 60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in 60.115b(b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. None.

g) Miscellaneous Requirements

(1) None.

27. T102, EFR, PR-500645

Operations, Property and/or Equipment Description:

T102 is a 147,845.1 barrel petroleum liquid storage tank identified as PR-500645. It has an external floating roof with a mechanical shoe primary seal. It is currently classified as a Group 2 storage vessel pursuant to 40 CFR Part 63, Subpart CC.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
b.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(2) and 63.641, this emissions unit is subject to Subpart CC as a Group 2 storage vessel; it is associated with petroleum refining process units located at a plant site that is a major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a Group 2 storage vessel as defined in 63.641.]	40 CFR 63, Subpart CC, establishes no emission limitation or control measures for Group 2 storage vessels. See b)(2)a.
c.	OAC rule 3745-21-09(Z)	Exempt, see b)(2)b.

(2) Additional Terms and Conditions

a. [63.640(m)]
If a change that does not meet the criteria in 63.640(l) is made to a petroleum refining process unit subject to 40 CFR Part 63 Subpart CC, and the change causes a Group 2 emission point to become a Group 1 emission point (as defined in 40 CFR Part 63.641), the permittee shall comply with the requirements of Subpart CC for existing emissions units for the Group 1 emission point as expeditiously as practicable, but in no event later than 3 years after the emission point becomes Group 1.

i. The permittee shall submit to the Director and Administrator for approval a compliance schedule, along with a justification for the schedule.

ii. The compliance schedule shall be submitted within 180 days after the change is made, unless the compliance schedule has been previously submitted to the permitting authority. If it is not possible to determine until after the change is implemented whether the emission point has become Group 1, the compliance schedule shall be submitted within 180 days of the date when the affect of the change is known to the source. The compliance schedule may be submitted in the next Periodic Report if the change is made after the date the Notification of Compliance Status report is due.

iii. The Administrator shall approve or deny the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification. Approval is automatic if not received from the Administrator within 120 calendar days of receipt.

b. In accordance with OAC rule 3745-21-09(Z)(3)(c), this tank is exempt from the requirements of OAC 3745-21-09(Z)(1) and (Z)(2) since the tank contains a petroleum liquid which, as stored, has a maximum true vapor pressure less than 1.5 pounds per square inch absolute.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart CC, including the following sections:

a.	63.655(i)(1)(iv)]	Maintain a record of any data, assumptions, and procedures used to make the determination that this storage vessel is Group 2, e.g., that the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent.

b.	63.642(e)	The permittee shall keep copies of all applicable reports and records required by this permit for at least 5 years except as otherwise specified in this permit. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

a.	63.640(m)	The permittee shall submit a compliance schedule in a periodic report describing any operational process change to this emission unit that causes it to change from a group 2 to a group 1 emission unit.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. None.

g) Miscellaneous Requirements

(1) None.

28. T120, EFR, PR-500132

Operations, Property and/or Equipment Description:

T120 is a 59,415.58 barrel petroleum liquid storage tank identified as PR-500132. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-131 as issued on 5/4/1979)	See b)(2)a.
b.	OAC rule 3745-21-09(Z)	See b)(2)b. and b)(2)c.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
d.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(2) and 63.641, this emissions unit is subject to Subpart CC as a Group 1 storage vessel; it is associated with petroleum refining process units located at a plant site and that is a	In accordance with 63.646(a) the permittee of a Group 1 storage vessel subject to 40 CFR Part 63, Subpart CC shall comply with the requirements of 63.119 through 63.121 of 40 CFR 63, Subpart G, except as provided in 63.646(b) through 63.646(l). See b)(2)d. through b)(2)f.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a Group 1 storage vessel as defined in 63.641.]	
e.	40 CFR Part 60, Subpart Ka	See b)(2)g.
f.	40 CFR Part 61, Subpart FF (drains)	See b)(2)h.

(2) Additional Terms and Conditions

a. The requirements established pursuant to OAC rule 3745-31-05(A)(3) are less stringent than the requirements specified in 40 CFR Part 63, Subpart CC.

b. Per OAC 3745-21-09(Z)(3)(c), no tank can store a petroleum liquid with a maximum true vapor pressure greater than 1.5 pounds per square inch absolute unless it is equipped with an external floating roof.

c. Per OAC rule 3745-21-09(Z)(1)(b)(i) and (ii), the welded external floating roof storage tank equipped with a mechanical shoe primary seal and rim-mounted secondary seal shall meet the following requirements.

i. There shall be no visible holes, tears or other openings in the seal or seal fabric.

ii. For the primary seal, the total seal gap area shall not exceed 10.0 square inches per foot of tank diameter.

iii. For the secondary seal, the total seal gap area shall not exceed 1.0 square inch per foot of tank diameter.

The permittee may change the seal types during the term of this permit provided that a written notification and revised “emission activity category” form, including the results of the latest seal gap measurements, are submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the change occurs.

d. While this emissions unit is operated in Group 1 service, the permittee shall comply with the requirements of 40 CFR 63.119 through 63.121 (Subpart G) except as provided in 63.646(b) through 63.646(l) of Subpart CC. This emissions unit shall comply with 40 CFR Part 63, Subpart CC by employing an external floating roof with a dual seal system as dictated within these terms and conditions.

e. MACT status (Group 1 or Group 2) is determined by the type of material being stored in the tank as defined by 40 CFR 63.641. If an existing tank changes from a Group 1 to Group 2 storage vessel where the material stored is less than 1.51 psia (maximum true vapor pressure) or 4% by weight of HAPS, then the tank is only subject to the recordkeeping requirements of 40 CFR 63.123(a) of Subpart G and 63.655(i)(1)(iv) of Subpart CC and is not required to comply with any other provisions in 40 CFR 63.119 through 63.123 of Subpart G.

f. [63.646(g)]
Failure to perform inspections and monitoring required by 40 CFR Part 63.646, Subpart CC shall constitute a violation of the applicable standard of this Subpart.

g. As specified under 40 CFR 63.640(n)(5), a Group 1 storage vessel that is also subject to the provisions of 40 CFR Part 60, Subpart Ka is required to only comply with the provisions of 40 CFR Part 63, Subpart CC.

h. The 40 CFR Part 61, Subpart FF, drain at this tank is subject to 40 CFR 61.346 – Standards: Individual Drain Systems and uses a water seal to comply. These requirements are included under the requirements for P025 in this Title V Permit.

c) Operational Restrictions

(1) The external floating roof tank shall be maintained using the following control measures:

a. Any opening in the external floating roof, except automatic bleeder vents, rim space vents, leg sleeves, stub drains, and slotted gauging/sampling wells shall be equipped with:

i. a cover, seal, or lid which remains in the closed position at all times without any visible gaps, except when the opening is in actual use; and

ii. a projection into the tank below the liquid surface.

b. Any automatic bleeder vent shall remain in the closed position, except when the external floating roof is floated off or landed on the roof leg supports.

c. Any rim vent shall be set to open at the manufacturer's recommended setting, except when the external floating roof is being floated off the roof leg supports.

d. Any emergency roof drain shall be equipped with a slotted membrane fabric cover or other device which covers at least 90 percent of the area of the opening.

e. Any stub drain shall be equipped with a projection into the tank below the liquid surface.

f. Any slotted gauging/sampling well shall be equipped with an object which floats on the liquid surface within the well and which covers at least 90 percent of the area of the well opening.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-21-09(Z)(1)(c)]

(2) [40 CFR 63, Subpart CC] – NESHAP FROM PETROLEUM REFINERIES - STORAGE VESSEL PROVISIONS
The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart CC, including the following sections:

a.	63.646(f)(1)	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.
b.	63.646(f)(2)	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.
c.	63.646(f)(3)	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.

(3) [40 CFR 63, Subpart G] STORAGE VESSEL PROVISIONS

The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart G, including the following sections:

63.119 Storage Vessel Provisions – Reference Control Technology		
a.	63.119(c)	The permittee who uses an external floating roof shall comply with the requirements specified in 63.119(c)(1), (c)(3) and (c)(4) as provided in 63.646(c) of Subpart CC.
b.	63.119(c)(1)	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, the upper seal (secondary seal) is above the lower seal (primary seal). The primary seal shall be either a metallic shoe seal or a liquid-mounted seal. Both seals shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion. See 63.119(c)(1)(i) through (c)(1)(iii) for exceptions.
c.	63.119(c)(3)	The external 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.
d.	63.119(c)(4)	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
63.120 Storage Vessels, Procedures to Determine Compliance		
e.	63.120(b)(5)	PRIMARY SEAL – additional requirements: Where a metallic shoe seal is in use, one end of the metallic shoe shall extend into the stored liquid and the other end shall extend a minimum vertical distance of 61 centimeters above the stored liquid surface. There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope
f.	63.120(b)(6)	SECONDARY SEAL – additional requirements: 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 except as provided in 40 CFR Part 63.160(b)(4). There shall be no holes, tears, or other openings in the seal or seal fabric.

d) Monitoring and/or Recordkeeping Requirements

(1) The seals of the external floating roof tank shall be inspected as follows:

a. The seal and seal fabric shall be inspected annually for visible holes, tears, or other openings.

b. The secondary seal gap shall be measured annually, in accordance with the method specified in paragraph (I) of OAC rule 3745-21-10.

c. The primary seal gap shall be measured at least once every 5 years, in accordance with the method specified in paragraph (I) of OAC rule 3745-21-10.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-09(Z)(2)(a), (b), and (c)]

(2) The seal gaps shall be measured to determine the width and area of the gaps between the wall of the external floating roof tank and the seal around the circumference of the roof. The width of the seal gap shall be determined using probes of the appropriate width, to accurately measure the actual distance from the seal to the tank wall. The area of the seal gap shall be determined by multiplying the width of the seal gap by the circumferential length of the gap. The total seal gap area is the accumulated area of all gaps which are greater than 0.125 inch in width.

[OAC rule 3745-21-10(I)] [OAC rule 3745-21-09(Z)(2)(c)]

(3) The permittee shall maintain records of the following information:

a. the dates and results of each seal and seal fabric inspection and each seal gap measurement; and

b. the annual throughput of each petroleum liquid stored in the tank.

A copy of these records shall be made available to the Director or an authorized representative of the Director upon written or verbal request.

[Authority for term OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-09(Z)(2)(d) and (e)]

(4) The permittee shall maintain records of the following information for at least five years:

a. the types of petroleum liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

A copy of these records shall be made available to the Director or an authorized representative of the Director upon written or verbal request.

[Authority for term: OAC rule 37-77-07(C)(1) and OAC rule 3745-21-09(Z)(4)]

(5) Compliance with the tank repair requirements in 40 CFR Part 63, Subpart CC has been determined to be as stringent or more stringent as the tank repair requirements of OAC rule 3745-21-09(Z).

[Authority for term: OAC rule 3745-77-07(C)(1)]

(6) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart CC, including the following sections:

a.	63.642(e)	Keep copies of all applicable records and reports required by 40 CFR 63, subpart CC, for at least 5 years except as otherwise specified in this permit. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape or microfiche.
63.646 – Storage Vessel Provisions		
b.	63.646(b)	*Storage Vessel Provisions:* All terms not defined in 63.641 shall have the meaning given them in 40 CFR Part 63, Subparts A or G. The Group 1 storage vessel definition presented in 40 CFR Part 63.641 applies in lieu of the

		Group 1 storage vessel definitions presented in tables 5 and 6 of 40 CFR Part 63.119 of Subpart G.
c.	63.646(b)(1)	Use good engineering judgment or test results to determine the stored liquid weight percent total organic HAP.
d.	63.646(b)(2)	Method 18 of 40 CFR Part 60, Appendix A shall be used to determine the average weight percent of organic HAP in the liquid if the permittee and Administrator do not agree on whether the annual average weight percent organic HAP's in the stored liquid is above or below 4 percent.
e.	63.646(e)	When complying with the inspection requirements of 40 CFR Part 63.120 of Subpart G, storage vessels at existing sources subject to 40 CFR Part 63, Subpart CC, are not required to comply with the provisions for gaskets, slotted membranes, and sleeve seals.
63.655(i) references 63.123 of 40 CFR 63, Subpart G – Storage Vessel Recordkeeping		
f.	63.655(i)	*Recordkeeping Requirements*: Keep the storage vessel records specified in 63.123 of Subpart G except as specified in 63.655(i)(i) through (iv).
g.	63.655(i)(1)(i)	Records related to gaskets, slotted membranes, and sleeve seals are not required for storage vessels within existing sources.
h.	63.655(i)(1)(iv)	If a storage vessel is determined to be Group 2 storage vessel, a record of any data, assumptions, and procedures used to make this determination shall be retained.

(7) [40 CFR 63, Subpart G] NESHAP FROM THE SYNTHETIC ORGANIC CHEMICL MANUFACTURING INDUSTRY FOR PROCESS VENTS, STORAGE VESSELS, TRANSFER OPERATIONS, AND WASTEWATER

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart G, including the following sections:

63.120-Storage Vessel Inspections:		
a.	63.120(b)(1)(i)	Except as provided in 40 CFR Part 63.120(b)(7), determine the gap areas and maximum gap widths between the primary seal and the wall of the storage vessel, and the secondary seal and the wall of the storage vessel according to the frequency specified in the following paragraphs:

		For external floating roof vessel equipped with a primary and secondary seal, measurements of gaps between the vessel wall and the primary seal shall be performed during the hydrostatic testing of the vessel at least once every 5 years;
b.	63.120(b)(1)(iii)	Measurements of gaps between the vessel wall and the secondary seal shall be performed at least once per year; and
c.	63.120(b)(1)(iv)	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 vessels specified in table 5 or table 6 of 40 CFR 63 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 H
d.	63.120(b)(2)(i)	Determine the gap widths and gap areas in the primary and secondary seals (seal gaps) individually by the procedures described below. Seal gaps, if any, shall be measured at one or more floating roof levels when the roof is not resting on the roof leg supports.
e.	63.120(b)(2)(ii)	Seal gaps, if any, shall be measured around the entire circumference of the vessel in each place where an 0.32 centimeter (1⁄8 inch) diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the storage vessel. The circumferential distance of each such location shall also be measured.
f.	63.120(b)(2)(iii)	The total surface area of each gap described in 63.120(b)(2)(ii) shall be determined by using probes of various widths to measure accurately the actual distance from the vessel wall to the seal and multiplying each such width by its respective circumferential distance.
g.	63.120(b)(3)	Add the gap surface area of each gap location for the primary seal and divide the sum by the nominal diameter of the vessel. The accumulated area of gaps between the vessel wall and the primary seal shall not exceed 212 square centimeters per meter (10 square inches per foot) of vessel diameter and the width of any portion of any gap shall not exceed 3.81 centimeters (1.5 inches).

h.	63.120(b)(4)	Add the gap surface area of each gap location for the secondary seal and divide the sum by the nominal diameter of the vessel. The accumulated area of gaps between the vessel wall and the secondary seal shall not exceed 21.2 square centimeters per meter of vessel diameter and the width of any portion of any gap shall not exceed 1.27 centimeters. These seal gap requirements may be exceeded during the measurement of primary seal gaps as required by 40 CFR 63.120(b)(1)(i) and (b)(1)(ii).
i.	63.120(b)(5)	The primary seal shall meet the additional requirements specified: (i) Where a metallic shoe seal is in use, one end of the metallic shoe shall extend into the stored liquid and the other end shall extend a minimum vertical distance of 61 centimeters above the stored liquid surface. (ii) There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.
j.	63.120(b)(6)	The secondary seal shall meet the additional requirements specified: (i) 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 except as provided in 63.120(b)(4). (ii) There shall be no holes, tears, or other openings in the seal or seal fabric.
k.	63.120(b)(7)	If the permittee determines that it is unsafe to perform the seal gap measurements required in 63.120(b)(1) and (b)(2) or to inspect the vessel to determine compliance with 63.120(b)(5) and (b)(6) because the floating roof appears to be structurally unsound and poses an imminent or potential danger to inspecting personnel, the permittee shall comply with the requirements in either 63.120(b)(7)(i) or (b)(7)(ii).
l.	63.120(b)(8)	Repair failures identified no later than 45 calendar days after identification, or empty and remove the storage vessel from service no later than 45 calendar days after identification of conditions that do not meet requirements listed in 40 CFR Part 63.120(b)(3), (b)(4), (b)(5) and (b)(6). If a failure is detected that cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, two extensions of up to 30 calendar days may be utilized. 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.

m.	63.120(b)(10)	Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed and required repairs if the roof has defects or the seals have holes, tears or other openings in the seal or seal fabric.
63.123 – Recordkeeping Requirements		
n.	63.123(a)	Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep records as long as the storage vessel retains Group 1 status and is in operation.
o.	63.123(d) for EFR Tanks	Keep records describing the results of each seal gap measurement made in accordance with 40 CFR Part 63.120(b). Include the date of the measurement, the raw data obtained in the measurement, and the calculations described in 40 CFR Part 63.120(b)(3) and (b)(4).
p.	63.123(g)	Requirements for permittees who elects to utilize an extension in emptying a storage vessel in accordance with 40 CFR 63.120 (b)(7)(ii) or (b)(8). Keep the documentation readily accessible.
q.	63.155(i)(1)(i)	Records related to gaskets, slotted membranes, and sleeve seals are not required for storage vessels within existing sources.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

63.655 - Reporting Requirements		
a.	63.655(h)(2)(i)	*Storage Vessel Provisions – Notification Requirements:* In order to have an observer present, notify TES in writing, 30 days in advance: - of the refilling of each Group 1 storage vessel that has been emptied and degassed except as stated in 63.655(h)(2)(i)(A) through (C). - for EFR tanks, of any seal gap measurements. The state can waive this notification requirement.

b.	63.655(h)(2)(ii)	Notify the Administrator of any seal gap measurements. The notification shall be made in writing at least 30 calendar days in advance of any gap measurements required by 63.120 (b)(1) or (b)(2) of subpart G. The State or local permitting authority can waive this notification requirement for all or some storage vessels subject to the rule or can allow less than 30 calendar days' notice.
c.	63.655(g)	*Submit Periodic Reports* no later than 60 days after the end of each 6-month period when any of the compliance exceptions specified in 63.655(g)(1) through (6) or (g)(9) occur. The first 6-month period shall begin on the date the Notification of Compliance Status report is required to be submitted.
d.	63.655(g)(3)	*Periodic Reporting of results of seal gap measurements for EFR tanks:* - submit documentation of the results of each seal gap measurement in accordance with 63.120(b) in which the seal and seal gap requirements of 63.120(b)(3), (b)(4), (b)(5), or (b)(6) are not met. Include documentation in 63.655(g)(3)(i)(A) through (g)(3)(i)(D). - documentation of an extension, if utilized, required in period report per 63.655(g)(3)(ii). - submit documentation of any failures that are identified during visual inspections required by 40 CFR Part 63.120(b)(10). The documentation shall meet the specifications and requirements stated in 63.655(g)(3)(iii).

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. None.

g) Miscellaneous Requirements

(1) None.

29. T139, FR, PR-500685

Operations, Property and/or Equipment Description:

T139- 25,000 gallon fixed roof storage vessel identified as tank number PR-500685. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.64

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-0379, issued 3/11/1987 and modified on 7/30/2002)	The permittee shall operate this emissions unit in accordance with good engineering practice.
a.	OAC rule 3745-21-09(L)	Exempt, see b)(2)a.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
c.	40 CFR Part 63, Subpart CC(40 CFR 63.640-656)[In accordance with 40 CFR 63.640(a), 63.640(c)(2) and 63.641, this emissions unit is subject to Subpart CC as a Group 2 storage vessel; it is associated with petroleum refining process units located at a plant site that is a major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a Group 2 storage vessel as defined in 63.641.]	40 CFR 63, Subpart CC, establishes no emission limitation or control measures for Group 2 storage vessels. See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	40 CFR Part 60, Subpart Kb	Exempt, see b)(2)c.

(2) Additional Terms and Conditions

a. In accordance with OAC rule 3745-21-09(L)(2), this emissions unit is exempt because it is defined as a fixed roof tank with a capacity less than forty thousand gallons.

b. [63.640(m)]
If a change that does not meet the criteria in 63.640(l) is made to a petroleum refining process unit subject to 40 CFR Part 63 Subpart CC, and the change causes a Group 2 emission point to become a Group 1 emission point (as defined in 40 CFR Part 63.641), the permittee shall comply with the requirements of Subpart CC for existing emissions units for the Group 1 emission point as expeditiously as practicable, but in no event later than 3 years after the emission point becomes Group 1.

i. The permittee shall submit to the Director and Administrator for approval a compliance schedule, along with a justification for the schedule.

ii. The compliance schedule shall be submitted within 180 days after the change is made, unless the compliance schedule has been previously submitted to the permitting authority. If it is not possible to determine until after the change is implemented whether the emission point has become Group 1, the compliance schedule shall be submitted within 180 days of the date when the affect of the change is known to the source. The compliance schedule may be submitted in the next Periodic Report if the change is made after the date the Notification of Compliance Status report is due.

iii. The Administrator shall approve or deny the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification. Approval is automatic if not received from the Administrator within 120 calendar days of receipt.

c. In accordance with 40 CFR 60.110b(b), the design capacity of this storage vessel is greater than 75 m^3 (19,814 gal) but less than 151 m^3 (39,890 gal) and the maximum vapor pressure of the stored material is less than 15.0 kPa (2.176 psi), this tank is exempt from 40 CFR Part 60, Subpart A and Subpart Kb.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart CC, including the following sections:

a.	63.655(i)(1)(iv)]	Maintain a record of any data, assumptions, and procedures used to make the determination that this storage vessel is Group 2, e.g., that the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent.
b.	63.642(e)	The permittee shall keep copies of all applicable reports and records required by this permit for at least 5 years except as otherwise specified in this permit. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

a.	63.640(m)	The permittee shall submit a compliance schedule in a periodic report describing any operational process change to this emission unit that causes it to change from a group 2 to a group 1 emission unit.
b.	63.655(f)(6)	Notification of Compliance Status reports required by 63.640(l)(3) shall be submitted no later than 60 days after the end of the 6-month period during which the change or addition was made that resulted in the existing Group 1 storage vessel was brought into compliance, and may be combined with the periodic report. Six-month periods shall be the same 6-month periods specified in 63.655(g). The Notification of Compliance Status report shall include the information specified in 63.655(f)(1) through (f)(5). This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, as part of the periodic report, or in any combination of these four. If the required information has been submitted before the date 60 days

		after the end of the 6-month period in which the addition of the Group 1 emission point took place, a separate Notification of Compliance Status report is not required within 60 days after the end of the 6-month period. If an owner or operator submits the information specified in 63.655(f)(1) through (f)(5) at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. None.

g) Miscellaneous Requirements

(1) None.

30. T164, FR, PR-500295

Operations, Property and/or Equipment Description:

T164 is a 10,110.16 barrel fixed roof storage vessel with a closed vent system controlled by the East and West Hydrocarbon Flare System (P003 and P004). The tank is identified as tank number PR-500295 and is classified as a Group 1 wastewater tank pursuant to 40 CFR 63.641

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001 (PTI 04-708 issued 3/18/1992, modified in P0117083 on 4/6/2015)	0.94 tons per year volatile organic compounds (VOC) See b)(2)a. and b)(2)b.
b.	OAC rule 3745-21-09(L)	See b)(2)c.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
d.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(3) and 63.641, this emissions unit is subject to Subpart CC as part of a petroleum refining process unit located at a plant site that is a major source as defined in section 112(a) of the Clean Air Act; and meets the	In accordance with 63.647(a) and 63.655(a), the permittee of a Group 1 storage tank storing Group 1 Wastewater streams shall comply with the requirements of 61.340 through 61.357 of 40 CFR 61, Subpart FF. See b)(2)d. and b)(2)e.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	definition of a tank storing Group 1 wastewater streams.]	
e.	40 CFR Part 61, Subpart FF (40 CFR 61.340-358) [In accordance with 40 CFR 61.340(a) and (b), this emissions unit is subject to Subpart FF as a storage vessel holding BWON regulated material at a petroleum refinery.]	In accordance with 40 CFR 61.342(c)(1)(ii), the permittee shall comply with 40 CFR 61.343(a)(1) which requires the permittee to install, operate and maintain a fixed roof and closed vent system that routes all organic vapors vented from the tank to a control device; or the permittee may choose to comply with the alternative requirements specified in 40 CFR 61.343(b).
f.	40 CFR Part 60, Subpart Kb (40 CFR 60.110b-117b) [In accordance with 40 CFR 60.110b, this emissions unit is a storage vessel with a design capacity greater than 151 m^3 with a maximum true vapor pressure greater than 3.5 kilopascals that was reconstructed or modified after July 23, 1984., subject to the emissions limitations/control measures specified in 60.112b(a)(3).]	See b)(2)e.
g.	40 CFR Part 60, Subpart QQQ [In accordance with 40 CFR 60.691, the tank is served by an individual drain system that was installed after July 23, 1984 and subject to the emissions limitations/control measures specified in 60.692-2]	See b)(2)f.

(2) Additional Terms and Conditions

a. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Kb.

b. This emission unit shall be equipped with a closed vent system controlled by the SRU #1 Acid Gas Flare (P051) meeting the requirements of 40 CFR 60.18.

c. The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid that, as stored, has a true vapor pressure greater than 1.52 pounds per square inch absolute, unless the tank is equipped with an internal floating roof (or equivalent control approved by the Director) in accordance with the requirements of paragraph (L)(1) of OAC rule 3745-21-09 prior to storing a petroleum liquid with a higher vapor pressure. NOTE: Per OAC rule 3745-21-09(L)(1)(a)(ii), the Director of Ohio EPA approved installation of a closed vent system vented to a flare as an alternative equivalent control device in PTI 04-708 issued 3/18/1992.

d. In accordance with 63.611, the definition for storage vessel exempts wastewater storage tanks from the storage vessel provisions of 40 CFR 63.646, Subpart CC.

e. In accordance with 40 CFR 60.112b(a), the storage vessel shall be equipped with a closed vent and control system.

f. The tank drains are subject to the requirements of 40 CFR 60 Subpart QQQ, specifically, 40 CFR Part 60 60.692-2 Standards: Individual Drain Systems and uses a water seal to comply. These requirements are included under the emission unit specific requirements for P025 – The Wastewater Treatment System.

c) Operational Restrictions

(1) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS

The permittee shall comply with the applicable restrictions required under 40 CFR 61, Subpart FF, including the following sections:

a.	61.343(a)	Meet the standards in paragraph (a)(1). The standards in this section apply to the treatment and storage of the waste stream in a tank, including dewatering.
b.	61.343(a)(1)	The owner shall install operate and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from this tank to a control device
c.	61.343(a)(1)(i)(A) NOTE: 40 CFR 60.112b(a)(3)(i) of subpart Kb has similar requirements.	The fixed roof shall meet the following requirements: The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in 61.355(h) of this subpart.

d.	61.343(a)(1)(i)(B)	Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the tank except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.
e.	61.343(a)(1)(i)(C)	These requirements apply if the cover and closed vent system are maintained at a pressure less than atmospheric pressure.
f.	61.343(a)(1)(ii)	The closed-vent system and control device shall be designed and operated in accordance with the requirements of 61.349 of this subpart.
g.	61.343(b)	An alternative to meeting the requirements of 61.343(a)(1) by managing the waste stream to have a flow-weighted annual average water content less than or equal to 10% water on a volume basis and maintaining the vapor pressure to less than 5.2 kPa (0.75 psi).
61.349 Standards: Closed-Vent Systems and Control Devices		
h.	61.349(a)	The permittee shall properly design, install, operate and maintain the closed-vent system and control device.
i.	61.349(a)(1)(i)	The closed vent system shall: (i) be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined at least once per year by the methods specified in 61.355(h) and other requirements.
j.	61.349(a)(1)(ii)	Vent systems that contain any bypass line that could divert the vent stream away from a control device used to comply with the provisions of this subpart shall install, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow away from the control device at least once every 15 minutes, except as provided in paragraph (a)(1)(ii)(B) of this section.
k.	61.349(a)(1)(ii)(A)	The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.
l.	61.349(a)(1)(ii)(B)	Where the bypass line valve is secured in the closed position with a car-seal or a lock-and-key type configuration, a flow indicator is not required.

m.	61.349(a)(1)(iii)	All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place;
n.	61.349(a)(1)(iv)	For each closed-vent system complying with 61.349(a), one or more devices which vent directly to the atmosphere may be used on the closed-vent system provided each device remains in a closed, sealed position during normal operations except when the device needs to open to prevent physical damage or permanent deformation of the closed-vent system resulting from malfunction of the unit in accordance with good engineering and safety practices for handling flammable, explosive, or other hazardous materials.
o.	61.349(a)(2)(iii) NOTE: 40 CFR 60.112b(a)(3)(ii) of subpart Kb has similar requirements that will be met by the flare.	Requirements for design and operating the control device. The flare shall comply with the requirements of 40 CFR 60.18.
p.	61.349(b)	The closed-vent system and control device (flare) shall be operated at all times when waste is placed in the waste management unit vented to the control device except when maintenance or repair of the waste management unit cannot be completed without a shutdown of the control device.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of actual annual throughput of materials stored in this emissions unit and calculate the annual emissions from this emissions unit according to the provisions of f).

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall maintain records of the following information for the fixed roof tank:

a. the types of petroleum liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each petroleum liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

These records shall be maintained for at least 5 years and shall be made available to the Director or his representative upon verbal or written request.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-09(L)(3)]

(3) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart CC, including the following sections:

63.655(a)	The permittee subject to the wastewater provisions in 63.647 shall comply with the recordkeeping in 61.356 of 40 CFR part 61, subpart FF unless they are complying with the wastewater provisions specified in paragraph (o)(2)(ii) of §63.640. There are no additional reporting and recordkeeping requirements for wastewater under this subpart.

(4) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 61, subpart FF, including the following sections:

61.343 Standards: Tanks		
a.	61.343(c)	Each fixed-roof, seal, access door, and all other openings shall be checked by visual inspection initially and quarterly thereafter to ensure that no cracks or gaps occur and that access doors and other openings are closed and gasketed properly.
b.	61.343(d)	Repair requirements when a broken seal, gasket or other problem is identified or when detectable emissions are measured. First effort at repair shall be as soon as practicable but not later than 45 days after identification.
61.349 Standards: Closed-Vent Systems and Control Devices		
c.	61.349(d)	Demonstrate compliance of each flare in accordance with the terms and conditions of 40 CFR 60.18 for flares.
d.	61.349(f)	Each closed-vent system and control device shall be visually inspected initially and quarterly thereafter. The visual inspection shall include inspection of ductwork and piping and connections to covers and control devices for evidence of visible defects such as holes in ductwork or piping and loose connections.

e.	61.349(g)	Repair requirements observed during an inspection or if detectable emissions are measured. A first effort to repair the closed-vent system and control device shall be made as soon as practicable but no later than 5 calendar days after detection and completed no later than 15 calendar days after the emissions are detected or the visible defect is observed.
f.	61.349(h)	Monitor the control device in accordance with 61.354(c).
61.350 Standards: Delay of Repair		
g.	61.350(a)	Delay of repair of facilities or units will be allowed if the repair is technically impossible without a complete or partial facility or unit shutdown.
h.	61.350(b)	Repair of such equipment shall occur before the end of the next facility or unit shutdown.
61.354 Monitoring of Operations		
i.	61354(c)	Calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor the control device operation. The permittee shall inspect at least once each operating day the data recorded by the monitoring equipment to ensure that the control device is operating properly.
j.	61354(c)(3)	For a flare, the pilot flame monitoring device required in accordance with 40 CFR 60.18(f)(2) shall be equipped with a continuous recorder.
k.	61.354(e)	An alternative operation or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.
l.	61.354(f)	Requirements for bypass lines.
61.355 Test Methods, Procedures and Compliance Provisions		
m.	61.355(h)	Requirements for testing equipment for compliance with no detectable emissions (i.e., use Method 21, calibrate the detection instrument daily, how to monitor the equipment).
61.356 Recordkeeping Requirements		
n.	61.356(a)	The permittee shall comply with the recordkeeping requirements of this section. Each record shall be

		maintained in a readily accessible location at the facility site for a period not less than two years from the date the information is recorded unless otherwise specified.
o.	61.356(d)	Recordkeeping requirements for the control equipment. Maintain engineering design documentation and retain it for the life of the control equipment.
p.	61.356(f)	Required records for the closed-vent system and control device. Maintain the documentation for the life of the control device.
q.	61.356(f)(1)	Statement signed and dated by the permittee certifying that the closed-vent system and control device will meet the required performance level or operate at the highest load capacity expected to occur.
r.	61.356(f)(2)	Requirements if engineering calculations are used to determine control device performance.
s.	61.356(f)(2)(i)(D)	For a flare, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also consider the requirements specified in 40 CFR 60.18.
t.	61.356(g)	Recordkeeping requirements of each visual inspection that identifies a problem that could result in benzene emissions. The record shall include the date of the inspection, waste management unit and control equipment location where the problem is identified, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed.
u.	61.356(h)	Recordkeeping requirements for each test of no detectable emissions and the required information for the records. The record shall include the following information: date the test is performed, background level measured during test, and maximum concentration indicated by the instrument reading measured for each potential leak interface. If detectable emissions are measured at a leak interface, then the record shall also include the waste management unit, control equipment, and leak interface location where detectable emissions were measured, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed
v.	61.356(j)	Recordkeeping requirements for the control device operation.

w.	61.356(j)(7)	If a flare is used, maintain continuous records of the flare pilot flame monitoring and records of all periods during which the pilot flame is absent.

(5) [40 CFR 60, Subpart Kb] STANDARDS OF PERFORMANCE FOR VOLATILE ORGANIC LIQUID STORAGE VESSELS

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 60, Subpart Kb, including the following sections:

60.113b Procedures		
a.	60.113b(d)	The owner or operator of each source that is equipped with a closed vent system and a flare shall meet the requirements as specified in the general control device requirements, 60.18(e) (operate the flare at all times emissions are vented to it) and 60.18(f) (use Method 22 to determine compliance with no visible emissions).
60.115b Recordkeeping Requirements		
b.	60.115b(d)(2)	Records shall be kept of all periods of operation during which the (SRU #1 Acid Gas) flare pilot flame is absent.
60.116b Monitoring of operations		
c.	60.116b(a)	Keep copies of all records required by 40 CFR Part 60, Subpart Kb for at least 5 years, except for the record required by 40 CFR Part 60.116b(b) which will be kept for the life of the source.
d.	60.116b(b)	Keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.
e.	60.116b(g)	The permittee of each vessel equipped with a closed vent system and control device (flare) meeting the specification of 60.112b is exempt from the requirements of 40 CFR 60.116b(c) and (d).

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

63.655 - Reporting Requirements		
a.	63.655(a)	The permittee subject to the wastewater provisions in 63.647 shall comply with the reporting provisions in 61.357 of 40 CFR part 61, subpart FF unless they are complying with the wastewater provisions specified in paragraph (o)(2)(ii) of 63.640. There are no additional reporting and recordkeeping requirements for wastewater under this subpart.

(2) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS
The permittee shall submit the following reports and such other notifications and reports to the appropriate Ohio EPA District office or local air agency as are required pursuant to 40 CFR 61, Subpart FF, including the following sections:

61.357 Reporting Requirements		
a.	61.357(d); (d)(1) thru (d)5)	Annual reports required for facilities if the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 PTY). NOTE: The reporting requirements in 61.357(d)(1) through (d)(5) can be reported in the reports for emission unit P025, rather than separately for each tank.
b.	61.357(d)(6)	Quarterly reports of the certification that all of the required inspections have been carried out in accordance with this subpart.
c.	61.357(d)(7); (d)(7)(iv) and (d)(7)(iv)(F)	Quarterly reports that includes the information in 61.357(d)(7)(iv) regarding monitored control devices. For flares, each period in which the pilot flame of the flare is absent.
d.	61.357(d)(7)(v)	Quarterly reports that identifies any period in which the pressure in the waste management unit is equal to or greater than atmospheric pressure for a cover and closed-vent system monitored in accordance with 61.354(g).
e.	61.358(d)(8)	Submit annually a report that summarizes all inspections required by 61.342 through 61.354 during which detectable emissions are measured or a problem (such as a broken seal, gap or other problem) that could result in benzene emissions is identified, including information about the repairs or corrective action taken.

(3) [40 CFR 60, Subpart Kb] STANDARDS OF PERFORMANCE FOR VOLATILE ORGANIC LIQUID STORAGE VESSELS

The permittee shall comply with the applicable reporting requirements required in 40 CFR 60, Subpart Kb, including the following sections:

a.	60.115b(d)(3)	Submit Semiannual reports of all periods when the SRU #1 Acid gas flare pilot flame was absent.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

0.94 tons per year VOC

Applicable compliance Method:

b. If required, compliance shall be demonstrated using: the latest version of Tanks, computer software, or equivalent AP-42 methodology issued by U.S. EPA for calculating tank emissions; records required by section c) of the terms and conditions for unit; and an estimated flare control efficiency of 98 percent.

g) Miscellaneous Requirements

(1) None.

31. T170, FR, PR-500294

Operations, Property and/or Equipment Description:

T170 is a 10,065.33 barrel fixed roof storage vessel with a closed vent system controlled by the East and West Hydrocarbon Flare System (P003 and P004). The tank is identified as tank number PR500294 and is classified as a Group 1 wastewater tank pursuant to 40 CFR 63.641.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-05(A)(3) (PTI 04-919 issued7/3/1996, modified in P0112354 issued 4/11/2014)	1.42 tons per year volatile organic compounds (VOC) 4.9 tons per year sulfur dioxide (SO_2) See b)(2)a. and b)(2)b.
b.	OAC rule 3745-21-09(L)	See b)(2)c.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
d.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(3) and 63.641, this emissions unit is subject to Subpart CC as part of a petroleum refining process unit located at a plant site that is a major source as defined in section 112(a) of the	In accordance with 63.647(a) and 63.655(a), the permittee of a Group 1 storage tank storing Group 1 Wastewater streams shall comply with the requirements of 61.340 through 61.357 of 40 CFR 61, Subpart FF. See b)(2)d.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	Clean Air Act; and meets the definition of a tank storing Group 1 wastewater streams.]	
e.	40 CFR Part 61, Subpart FF (40 CFR 61.340-358) [In accordance with 40 CFR 61.340(a) and (b), this emissions unit is subject to Subpart FF as a storage vessel holding BWON regulated material at a petroleum refinery.]	In accordance with 40 CFR 61.342(c)(1)(ii), the permittee shall comply with 40 CFR 61.343(a)(1) which requires the permittee to install, operate and maintain a fixed roof and closed vent system that routes all organic vapors vented from the tank to a control device; or the permittee may choose to comply with the alternative requirements specified in 40 CFR 61.343(b).
f.	40 CFR 60, Subpart K (40 CFR 60.110-113) [In accordance with 40 CFR 60.110(c), this emissions unit is a petroleum liquid storage vessel with a storage capacity greater than 65,000 gallons and construction commenced after June 11, 1973, and prior to May 19, 1978 subject to the emissions limitations/control measures specified in this section]	See b)(2)e. and b)(2)f.
g.	40 CFR Part 60, subpart QQQ (40 CFR 60.690 – 60.699)	See b)(2)g.

(2) Additional Terms and Conditions

a. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart K.

b. This emission unit shall be equipped with a closed vent system controlled by the SRU #1 Acid Gas Flare (P051) meeting the requirements of 40 CFR 60.18.

c. The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid that, as stored, has a true vapor pressure greater than 1.52 pounds per square inch absolute, unless the tank is equipped with an internal floating roof (or equivalent control approved by the Director) in accordance with the requirements of paragraph (L)(1) of OAC rule 3745-21-09 prior to storing a petroleum liquid

with a higher vapor pressure. Per OAC rule 3745-21-09(L)(1)(a)(ii), the Director of Ohio EPA approved installation of a closed vent system vented to flare as an alternative equivalent control device in PTI 04-919 issued 7/3/1996.

d. In accordance with 63.641, the definition for storage vessel exempts wastewater storage tanks from the storage vessel provisions of 40 CFR 63.646, Subpart CC.

e. In accordance with 40 CFR 60.112(a), the storage vessel with a true vapor pressure greater than 11.1 psia shall be equipped with a vapor recovery system or its equivalent.

f. The requirements of this rule are less stringent than the requirements established by 40 CFR Part 63, subpart CC and 40 CFR Part 61, subpart FF.

g. The tank water draw drains at this tank is subject to the requirements of 40 CFR 60, subpart QQQ, specifically 60.692-2, Standards: Individual Drain Systems. These requirements are detailed under emission unit specific requirements for P025, The Wastewater Treatment System.

c) Operational Restrictions

(1) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS
The permittee shall comply with the applicable restrictions required under 40 CFR 61, Subpart FF, including the following sections:

61.343 Standards: Tanks		
a.	61.343(a)	Meet the standards in paragraph (a)(1) in accordance with 61.342 (c)(1)(ii). The standards in this section apply to the treatment and storage of the waste stream in a tank, including dewatering.
b.	61.343(a)(1)	The permittee shall operate and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the tank to a control device.
c.	61.343(a)(1)(i)(A)	The fixed roof shall meet the following requirements: The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods

		specified in 61.355(h) of this subpart.
d.	61.343(a)(1)(i)(B)	Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the tank except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.
e.	61.343(a)(1)(i)(C)	These requirements only apply if cover and closed vent system are maintained at a pressure less than atmospheric.
f.	61.343(a)(1)(ii)	The closed-vent system and control device shall be designed and operated in accordance with the requirements of 61.349 of 40 CFR 61 subpart FF.
g.	61.343(b)	An alternative to meeting the requirements of 61.343(a)(1) by managing the waste stream to have a flow-weighted annual average water content less than or equal to 10% water on a volume basis and maintaining the vapor pressure to less than 5.2 kPa (0.75 psi).
61.349 Standards: Closed-Vent Systems and Control Devices		
h.	61.349(a)	The permittee shall properly design, install, operate and maintain the closed-vent system and control device.
i.	61.349(a)(1)(i)	The closed vent system shall: (i) Operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined at least once per year by the methods specified in 61.355(h) and other requirements;
j.	61.349(a)(1)(ii)	Vent systems that contain any bypass line that could divert the vent stream away from a control device used to comply with the provisions of this subpart shall install, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow away from the control device at least once every 15 minutes, except as provided in 61.349(a)(1)(ii)(B) of this section

k.	61.349(a)(1)(ii)(A)	The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.
l.	61.349(a)(1)(ii)(B)	Where the bypass line valve is secured in the closed position with a car-seal or a lock-and-key type configuration, a flow indicator is not required.
m.	61.349(a)(1)(iii)	All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.
n.	61.349(a)(1)(iv)	For each closed-vent system complying 61.349(a), one or more devices which vent directly to the atmosphere may be used on the closed-vent system provided each device remains in a closed, sealed position during normal operations except when the device needs to open to prevent physical damage or permanent deformation of the closed-vent system resulting from malfunction of the unit in accordance with good engineering and safety practices for handling flammable, explosive, or other hazardous materials.
o.	61.349(a)(2) and (a)(2)(iii)	Requirements for design and operating the control device. The flare shall comply with the requirements of 40 CFR 60.18.
p.	61.349(b)	The closed-vent system and control device (flare) shall be operated at all times when waste is placed in the waste management unit vented to the control device except when maintenance or repair of the waste management unit cannot be completed without a shutdown of the control device.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information for the fixed roof tank:

a. the types of petroleum liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each petroleum liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

These records shall be maintained for at least 5 years and shall be made available to the Director or his representative upon verbal or written request.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-09(L)(3)]

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart CC, including the following sections:

a.	63.655(a)	The permittee subject to the wastewater provisions in 63.647 shall comply with the recordkeeping in 61.356 of 40 CFR part 61, subpart FF unless they are complying with the wastewater provisions specified in paragraph (o)(2)(ii) of §63.640. There are no additional reporting and recordkeeping requirements for wastewater under this subpart.

(3) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 61, subpart FF, including the following sections:

61.343 Standards: Tanks		
a.	61.343(c)	Each fixed-roof, seal, access door, and all other openings shall be checked by visual inspection initially and quarterly thereafter to ensure that no cracks or gaps occur and that access doors and other openings are closed and gasketed properly.
b.	61.343(d)	Repair requirements when a broken seal, gasket or other problem is identified or when detectable emissions are measured. First effort at repair shall be as soon as practicable but not later than 45 days after identification.
61.349 Standards: Closed-Vent Systems and Control Devices		
c.	61.349(d)	Demonstrate compliance of each flare in accordance with 61.349(a)(2)(iii): A flare shall comply with the requirements of 40 CFR 60.18.
d.	61.349(f)	Each closed-vent system and control device shall be visually inspected initially and quarterly thereafter. The visual inspection shall include inspection of ductwork and piping and connections to covers and control devices for evidence of visable defects such as holes in ductwork or

		piping and loose connections.
e.	61.349(g)	Repair requirements observed during an inspection or if detectable emissions are measured. A first effort to repair the closed-vent system and control device shall be made as soon as practicable but no later than 5 calendar days after detection and completed no later than 15 calendar days after the emissions are detected or the visible defect is observed.
f.	61.349(h)	Monitor the control device in accordance with 61.354(c).
61.350 Standards: Delay of Repair		
g.	61.350(a)	Delay of repair of facilities or units will be allowed if the repair is technically impossible without a complete or partial facility or unit shutdown.
h.	61.350(b)	Repair of such equipment shall occur before the end of the next facility or unit shutdown.
61.354 Monitoring of Operations		
i.	61.354(c)	Calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor the control device operation. The permittee shall inspect at least once each operating day the data recorded by the monitoring equipment to ensure that the control device is operating properly.
j.	61.354(c)(3)	For a flare, the piolot flame monitoring device required in accordance with 40 CFR 60.18(f)(2) shall be equipped with a continuous recorder.
k.	61.354(e)	An alternative operation or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.
l.	61.354(f)	Requirements for bypass lines.
61.355 Test Methods, Procedures and Compliance Provisions		
m.	61.355(h)	Requirements for testing equipment for compliance with no detectable emissions (i.e., use Method 21, calibrate the detection instrument daily, how to monitor the equipment).
61.356 Recordkeeping Requirements		

n.	61.356(a)	The permittee shall comply with the recordkeeping requirements of this section. Each record shall be maintained in a readily accessible location at the facility site for a period not less than two years from the date the information is recorded unless otherwise specified.
o.	61.356(d)	Recordkeeping requirements for the control equipment. Maintain engineering design documentation and retain it for the life of the control equipment.
p.	61.356(f)	Required records for the closed-vent system and control device. Maintain the documentation for the life of the control device.
q.	61.356(f)(1)	Statement signed and dated by the permittee certifying that the closed-vent system and control device will meet the required performance level or operate at the highest load capacity expected to occur.
r.	61.356(f)(2)	Requirements if engineering calculations are used to determine control device performance.
s.	61.356(f)(2)(i)(D)	For a flare, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also consider the requirements specified in 40 CFR 60.18.
t.	61.356(g)	Recordkeeping requirements of each visual inspection that identifies a problem that could result in benzene emissions. The record shall include the date of the inspection, waste management unit and control equipment location where the problem is identified, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed.
u.	61.356(h)	Recordkeeping requirements for each test of no detectable emissions and the required information for the records. The record shall include the following information: date the test is performed, background level measured during test, and maximum concentration indicated by the instrument reading measured for each potential leak interface. If detectable emissions are measured at a leak interface, then the record shall also include the waste management unit, control equipment, and leak interface location where detectable emissions were measured, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed.
v.	61.356(j)	Recordkeeping requirements for the control device

		operation.
w.	61.356(j)(7)	If a flare is used, maintain continuous records of the flare pilot flame monitoring and records of all periods during which the pilot flame is absent.

(4) Pursuant to 40 CFR 60.113(d), this tank is exempt from the monitoring requirements of 40 CFR 60, subpart K because this tank is controlled by a vapor recovery device pursuant to 40 CFR 60.112.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

63.655 - Reporting Requirements		
a.	63.655(a)	The permittee subject to the wastewater provisions in 63.647 shall comply with the reporting provisions in 61.357 of 40 CFR part 61, subpart FF unless they are complying with the wastewater provisions specified in paragraph (o)(2)(ii) of 63.640. There are no additional reporting and recordkeeping requirements for wastewater under this subpart.

(2) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS
The permittee shall submit the following reports and such other notifications and reports to the appropriate Ohio EPA District office or local air agency as are required pursuant to 40 CFR 61, Subpart FF, including the following sections:

61.357 Reporting Requirements		
a.	61.357(d); (d)(1) thru (d)5)	Annual reports required for facilities if the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 PTY). NOTE: The reporting requirements in 61.357(d)(1) through (d)(5) can be reported in the reports for emission unit P025, rather than separately for each tank.
b.	61.357(d)(6)	Quarterly reports of the certification that all of the required inspections have been carried out in accordance with this subpart.

c.	61.357(d)(7); (d)(7)(iv) and (d)(7)(iv)(F)	Quarterly reports that includes the information in 61.357(d)(7)(iv) regarding monitored control devices. For flares, each period in which the pilot flame of the flare is absent.
d.	61.357(d)(7)(v)	Quarterly reports that identifies any period in which the pressure in the waste management unit is equal to or greater than atmospheric pressure for a cover and closed-vent system monitored in accordance with 61.354(g).
e.	61.358(d)(8)	Submit annually a report that summarizes all inspections required by 61.342 through 61.354 during which detectable emissions are measured or a problem (such as a broken seal, gap or other problem) that could result in benzene emissions is identified, including information about the repairs or corrective action taken.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

1.42 tons per year VOC

Applicable compliance Method:

If required, compliance shall be demonstrated using: the latest version of Tanks, computer software, or equivalent AP-42 methodology issued by U.S. EPA for calculating tank emissions; records required by section c) of the terms and conditions for unit; and an estimated flare control efficiency of 98 percent.

b. Emission Limitation:

4.9 tons per year SO_2

Applicable compliance Method:

Divide the uncontrolled VOC emissions in tons per year by the molecular weight of VOC vapor (46.6 tons/ton-mole) and multiply by the hydrogen sulfide concentration of 5 mole percent. Multiply the previous product by the molecular weight of sulfur dioxide (64) and by the ratio of moles of sulfur dioxide to moles of hydrogen sulfide (1/1).

g) Miscellaneous Requirements

(1) None.

32. T177, IFR, PR-500757

Operations, Property and/or Equipment Description:

T177 is a 30,000 barrel storage tank identified as PR-500757. The tank has an internal floating roof with a primary mechanical shoe seal. It is classified as a Group 1 wastewater tank pursuant to 40 CFR 63.641.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-05(A)(3) (PTI 04-1066 issued 7/2/1997)	9.04 tons per year volatile organic compounds (VOC) See b)(2)a.
b.	OAC rule 3745-21-09(L)	See b)(2)b.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
d.	40 CFR Part 63, Subpart CC(40 CFR 63.640-656)[In accordance with 40 CFR 63.640(a), 63.640(c)(3) and 63.641, this emissions unit is subject to Subpart CC as part of a petroleum refining process unit located at a plant site that is a major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a tank storing Group 1 wastewater streams.]	In accordance with 63.647(a) and 63.655(a), the permittee of a Group 1 storage tank storing Group 1 Wastewater streams shall comply with the requirements of 61.340 through 61.357 of 40 CFR 61, Subpart FF. . See b)(2)c.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	40 CFR Part 61, Subpart FF (40 CFR 61.340-358) [In accordance with 40 CFR 61.340(a) and (b), this emissions unit is subject to Subpart FF as a storage vessel holding BWON regulated material at a petroleum refinery.]	In accordance with 40 CFR 61.342(c)(1)(ii), the permittee shall comply with 61.343 using the alternative in 61.351(a), which requires the permittee to install, operate and maintain a fixed roof and internal floating roof. See b)(2)d.
f.	40 CFR 60, Subpart Ka (40 CFR 60.110a – 60.115a) [The affected facility to which this subpart applies is each storage vessel with a storage capacity greater than 151,416 liters (40,000 gallons) that is used to store petroleum liquids for which construction is commenced after May 18, 1978 and prior to July 23, 1984.]	See b)(2)e.

(2) Additional Terms and Conditions

a. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Ka.

b. The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid that, as stored, has a true vapor pressure greater than 1.52 pounds per square inch absolute, unless the tank is equipped with an internal floating roof (or equivalent control approved by the Director) in accordance with the requirements of paragraph (L)(1) of OAC rule 3745-21-09 prior to storing a petroleum liquid with a higher vapor pressure.

c. In accordance with 63.641, the definition for storage vessels exempts wastewater storage tanks from the storage vessel provisions of 40 CFR 63.646, Subpart CC.

d. In accordance with 40 CFR 61.351(a)(1), the permittee shall install a fixed roof and internal floating roof meeting the requirements of 40 CFR 60.112b(a)(1).

e. The requirements of 40 CFR 60, subpart Ka are less stringent than the requirements established by 40 CFR part 63, subpart CC and 40 CFR Part 61, subpart FF.

c) Operational Restrictions

(1) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS
The permittee shall comply with the applicable restrictions required under 40 CFR 61, Subpart FF, including the following sections:

a.	61.351(a)(1)	As an alternative to the standards for tanks in 61.343, the permittee has elected to comply with a fixed-roof and internal floating roof meeting the requirements in 40 CFR 60.112b(a)(1).
b.	61.351(b)	If the permittee elects to comply with 61.351(a)(1), then the permittee is exempt from the provisions of 61.343.
40 CFR 60.112b(a) Standards for volatile organic compounds of 40 CFR 60, subpart Kb		
c.	60.112b(a)(1)	The permittee shall equip the storage vessel with a fixed roof in combination with an internal floating roof meeting the following specifications:
d.	60.112b(a)(1)(i)	The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.
e.	60.112b(a)(1)(ii)	The internal floating roof shall be equipped with one of the closure devices in 60.112b(a)(1)(ii)(A) – (C), between the wall of the storage vessel and the edge of the IFR. BP has chosen 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.
f.	60.112b(a)(1)(iii)	Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

g.	60.112b(a)(1)(iv)	Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.
h.	60.112b(a)(1)(v)	Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.
i.	60.112b(a)(1)(vi)	Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.
j.	60.112b(a)(1)(vii)	Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.
k.	60.112b(a)(1)(viii)	Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.
l.	60.112b(a)(1)(ix)	Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information for the fixed roof tank:

a. the types of petroleum liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each petroleum liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

These records shall be maintained for at least 5 years and shall be made available to the Director or his representative upon verbal or written request.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-09(L)(3)]

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart CC, including the following sections:

a.	63.655(a)	The permittee subject to the wastewater provisions in 63.647 shall comply with the recordkeeping in 61.356 of 40 CFR part 61, subpart FF unless they are complying with the wastewater provisions specified in paragraph (o)(2)(ii) of §63.640. There are no additional reporting and recordkeeping requirements for wastewater under this subpart.

(3) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 61, subpart FF, including the following sections:

61.356 Recordkeeping Requirements		
a.	61.356(k)	An owner or operator who elects to install and operate the control equipment in 61.351 of this subpart shall comply with the recordkeeping requirements in 40 CFR 60.115b.
60.113b Inspections as required by 40 CFR 60, subpart Kb		
b.	60.113b(a)(1)	*Inspections prior to filling the tank*: Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in 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, then repair the items before filling the storage vessel.
c.	60.113b(a)(2)	*Annual Inspections*: For vessels equipped with a liquid-mounted or mechanical shoe primary seal, 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. 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. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the

		inspection report required in §60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.
d.	60.113b(a)(4)	*Inspections when tank is emptied and degassed*: 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. 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 gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in 40 CFR Part 60.113b(a)(2).
e.	60.113b(a)(5)	Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by 60.113(a)(1) and (a)(4) to afford the Administrator the opportunity to have an observer present. If the inspection required by 60.113(a)(4) 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 Administrator 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 Administrator at least 7 days prior to the refilling.
60.115b(a) Recordkeeping requirements of 40 CFR 60, subpart Kb		
f.	60.115b(a)(2)	*Recordkeeping Requirements*: The permittee shall keep a record of each inspection performed as required by 40 CFR Part 60.113b(a). 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 (seals, internal floating roof, and fittings).

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

63.655 - Reporting Requirements		
a.	63.655(a)	The permittee subject to the wastewater provisions in 63.647 shall comply with the reporting provisions in 61.357 of 40 CFR part 61, subpart FF unless they are complying with the wastewater provisions specified in paragraph (o)(2)(ii) of 63.640. There are no additional reporting and recordkeeping requirements for wastewater under this subpart.

(2) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS
The permittee shall submit the following reports and such other notifications and reports to the appropriate Ohio EPA District office or local air agency as are required pursuant to 40 CFR 61, Subpart FF, including the following sections:

a.	40 CFR 61.357(f)	The permittee who elects to install and operate the control equipment in 61.351, shall comply with the reporting requirements of 60.115b.
60.115b(a) Reporting requirements of 40 CFR 60, subpart Kb		
b.	60.115b(a)(3)	If any of the conditions described in 40 CFR 60.113b(a)(2) are detected during the annual visual inspection required by 60.113b(a)(2), 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.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

9.04 tons per year VOC

Applicable compliance Method:

If required, compliance shall be demonstrated using: the latest version of Tanks, computer software, or equivalent AP-42 methodology issued by U.S. EPA for calculating tank emissions; records required by section c) of the terms and conditions for unit.

g) Miscellaneous Requirements

(1) None.

33. Emissions Unit Group -B1-B008 B009 B010 spJ sp5D: B008,B009,B010,

EU ID	Operations, Property and/or Equipment Description
B008	Iso 2 Feed Heaters: 97.4 mmBtu/hr (LHV) process heater fired with refinery fuel gas, natural gas, and/or LP gas
B009	Iso 2 Stabilizer Reboiler: 110 mmBtu/hr (LHV) process heater fired with refinery fuel gas, natural gas, and/or LP gas
B010	Iso 2 Splitter Reboiler: 110 mmBtu/hr (LHV) process heater fired with refinery fuel gas, natural gas, and/or LP gas

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) (PTI 04-01290 issued 7/25/2002, modified P0119763 issued 10/30/2015)	See b)(2)a. through b)(2)c., and term B.4. of Section B.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.
c.	OAC rule 3745-17-10(B)	Particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input
d.	OAC rule 3745-18-54(W)(1)	Sulfur dioxide (SO_2) emissions from B008 shall not exceed 0.29 pounds per million Btu of heat input. See b)(2)d.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-18-54(W)(5)	SO_2 emissions B009 and B010 shall not exceed 0.57 pounds per million Btu of heat input. See b)(2)d.
f.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	See b)(2)e.
g.	40 CFR Part 60, Subpart J (40 CFR 60.100 – 60.109) [This emissions unit is an affected facility under the requirements of this rule as a result of Permit to Install 04-01290 issued 7/25/2002, and is not due to the emissions unit being installed, modified, or reconstructed after June 11, 1973 and prior to May 14, 2007]	The emission limitation specified by this rule is equivalent to the limitation established under OAC rule 3745-31-05(D).
h.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 63.16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
i.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480 – 63.7575) [In accordance with 40 CFR 63.7575, this emissions unit is an existing process heater that is in the "units designed to burn gas 1 fuels" subcategory and subject to the applicable emissions limitations/control requirements specified in this section.]	See b)(2)f. and term B.6. of Section B. [63.7500(a) Table 3 requirements]

(2) Additional Terms and Conditions

a. Permit to Install 04-01290 issued 7/25/2002, this emissions unit is subject to the requirements of 40 CFR Part 60, Subpart J.

b. The permittee shall not burn in this emissions unit any refinery fuel gas that has a volume-weighted, rolling 3-hour average H_2S concentration greater than 0.10 grain per dry standard cubic foot, except during periods of startup, shutdown or malfunction of the refinery fuel gas amine systems provided that BP shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions.

c. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

d. The emission limitation specified by OAC rule 3745-18-54(W)(1) and (W)(5) are less stringent than the emission limitation specified pursuant to 40 CFR 60.104(a)(1).

e. 40 CFR Part 60 subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

f. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans of this Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A). This emissions unit is required to comply with the applicable periodic tune-up and one-time energy assessment requirements specified in Table 3 to this Subpart no later than January 31, 2016.

c) Operational Restrictions

(1) The permittee shall only burn natural gas, refinery fuel gas, or liquefied petroleum gas (LP gas) in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(1)]

(2) The quality of natural gas, LP gas, and/or refinery fuel gas burned in this emissions unit shall meet, on an "as burned" basis, a sulfur content that is sufficient to comply with the allowable hydrogen sulfide emission limitation of 0.10 grain per dry standard cubic foot as a volume-weighted, rolling 3-hour average.

[Authority for term: OAC rule 3745-77-07(A)(1)]

(3) [40 CFR 63.7500(a) – Table 3]
An existing process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than refinery fuel gas, LP gas, or natural gas, the permittee shall maintain a record of the type, quantity, and heating value in Btu/dscf of the fuel burned.

[Authority for term: PTI 04-01290, P0119763 and OAC rule 3745-77-07(A)(1)]

e) Reporting Requirements

(3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas, LP gas, and/or natural gas was burned in this emissions unit. Each report shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

[Authority for term: PTI 04-01290, P0119763 and OAC rule 3745-77-07(A)(1)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

The permittee shall not burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf) determined hourly on a 3-hour rolling average basis.

Applicable Compliance Method:

Ongoing compliance with the hydrogen sulfide (H_2S) emission limitation shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping in term B.4. of Section B. of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, the permittee shall demonstrate compliance with the H_2S standard according to 40 CFR 60.106(e).

a. Emission Limitation:

Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitation:

Particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9).

[Authority for rule: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

34. Emissions Unit Group -B2-B017 B022 spJ sp5D: B017,B022,

EU ID	Operations, Property and/or Equipment Description
B017	Coker II Heater (PR-562941): 80 mmBtu/hr (HHV) rated (72 mmBtu/hr LHV rated) process heater fired with refinery fuel gas, natural gas, and/or LP Gas
B022	Naphtha Treater Heater (PR-562958): 80 mmBtu/hr (HHV) rated process heater fired with refinery fuel gas, natural gas, and/or LP Gas

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) (PTI P0119763 issued 10/30/2015)	See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.
c.	OAC rule 3745-17-10(B)	Particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input
d.	OAC rule 3745-18-54(W)(1)	Sulfur dioxide (SO_2) emissions shall not exceed 0.29 pounds of SO_2 per million Btu of actual heat input. See b)(2)c.
e.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	See b)(2)d.
f.	40 CFR Part 60, Subpart J	See b)(2)e. and b)(2)f.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(40 CFR 60.100 – 60.109) [This emissions unit is an affected facility under the requirements of this rule as a result of Permit to Install 04-01290 issued 7/25/2002, and not due to the the emissions unit being installed, modified, or reconstructed after June 11, 1973 and prior to May 14, 2007.]	The emission limitation specified by this rule for fuel gas combustion devices is equivalent to the limitation established under OAC rule 3745-31-05(D).
g.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 63.16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
h.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480 – 63.7575) [In accordance with 40 CFR 63.7575, this emissions unit is an existing industrial boiler or process heater that is in the "units designed to burn gas 1 fuels" subcategory and subject to the applicable emissions limitations/control requirements specified in this section.]	See b)(2)g. and term B.6. of Section B. [63.7500(a) Table 3 requirements]

(2) Additional Terms and Conditions

a. Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), the emissions of sulfur dioxide (SO_2) from B022 (Naphtha Hydrotreater Heater) shall not exceed 6.45 tons per rolling, 12-month period.

Term B.3. of Section B. of this permit outlines the monitoring, record keeping and reporting requirements and compliance demonstration required to maintain compliance with this emissions limit.

b. Pursuant to Permit to Install 04-01290 issued 7/25/2002, this emissions unit is subject to the requirements of 40 CFR 60 Subpart J.

c. The emission limitation specified by OAC rule 3745-18-54(W)(1) is less stringent than the emission limitation specified pursuant to 40 CFR 60.104(a)(1).

d. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to this emissions unit.

e. The permittee shall not burn in this emissions unit any refinery fuel gas that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration greater than 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis, except during periods of startup, shutdown or malfunction of the refinery fuel gas amine systems provided that BPH shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. Pursuant to the fuel gas definition in 40 CFR 60.101(d), this standard is also applicable if the permittee combines and combusts natural gas or liquefied petroleum (LP) gas in any proportion with refinery fuel gas in this emissions unit.

f. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

g. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans of this Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A). This emissions unit is required to comply with the applicable periodic tune-up and one-time energy assessment requirements specified in Table 3 to this Subpart no later than January 31, 2016.

c) Operational Restrictions

(1) The permittee shall burn only refinery fuel gas, natural gas, or LP gas in this emissions unit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(2) [40 CFR 63.7500(a) – Table 3]
An existing process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than refinery fuel gas, natural gas, or LP gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

(2) The permittee shall record the following for B022 (Naphtha Hydrotreater Heater):

a. the volume of fuel gas combusted per month; and

b. the volume of fuel gas combusted per rolling, 12-month period.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

(3) The permittee shall maintain records of the monthly average H_2S of the fuel burned in this emissions unit as well as the rolling, 12-month SO_2 emissions (B022).

Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), this term and condition will become void, and the terms and conditions of term B.3.a. of Section B. will become applicable.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas, natural gas, or LP gas was burned in this emissions unit. Each report shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

The permittee shall burn no fuel gas in this emissions unit that has a volume weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis.

Applicable Compliance Method:

Ongoing compliance with the hydrogen sulfide emission limitation(s) contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping in term B.4. of Section B. of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, the permittee shall demonstrate compliance with the H_2S standard according to 40 CFR 60.106(e).

b. Emission Limitation:

Visible particulate emissions shall not exceed 20% opacity, unless otherwise specified by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using Method 9 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

c. Emission Limitation:

PE shall not exceed 0.020 pound per million Btu of heat input.

Applicable Compliance Method:

Compliance with this limit is demonstrated through Operational Restrictions permit condition c)(1), which requires the permittee to burn only refinery fuel gas, natural gas, or LP gas in this emissions unit.

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. Emission Limitation:

6.45 tons SO_2 per rolling, 12 month period for B022 (Naphtha Hydrotreater Heater)

Applicable Compliance Method:

This limit takes effect upon the completion of construction and the initial shakedown of the Coker Gas Plant (P068). Compliance with this emissions limit shall be demonstrated by using the fuel burned in this heater recorded in d)(4) above and the total sulfur value recorded in accordance with the terms and conditions of term B.3.a. of Section B. using the following calculation.

i. Multiply the monthly average total sulfur concentration of the fuel ga fired by the molecular weight of SO_2 (64 lb/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in units of lb/MMSCF
ii. Multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and
iii. Add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.
*this formula assumes that 1 mole of H_2S converts to 1 mole of SO_2

[Authority for term: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

35. Emissions Unit Group -B3-B030 B033 spJ sp5D: B030,B033,

EU ID	Operations, Property and/or Equipment Description
B030	B-GOT Furnace (PR-560001): 57.6 mmBtu per hour (LHV rated) heater fired with refinery fuel gas and/or natural gas, Process Heater for B-train gas oil hydrotreater.
B033	B-GOT Furnace 2 (PR-560010): 33 mmBtu/hr (LHV rated) heater fired with refinery fuel gas and/or natural gas, Process Heater for B-train gas oil hydrotreater

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01346 issued 1/18/2007)	Carbon monoxide (CO) emissions from B030 shall not exceed 4.74 pounds per hour. Nitrogen oxides (NO_x) emissions from B030 shall not exceed 4.03 pounds per hour. Particulate matter emissions less than or equal to 10 microns in diameter (PM_{10}) from B030 shall not exceed 0.43 pound per hour. Sulfur dioxide (SO_2) emissions from B030 shall not exceed 1.53 pounds per hour. Volatile organic compound (VOC) emissions from B030 shall not exceed 0.31 pound per hour. Carbon monoxide (CO) emissions from B033 shall not exceed 2.74 pounds per hour and 12.01 tons per rolling, 12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Nitrogen oxides (NO_x) emissions from B033 shall not exceed 0.67 pound per hour and 2.92 tons per rolling, 12-month period. Particulate matter emissions less than or equal to 10 microns in diameter (PM_{10}) from B033 shall not exceed 0.25 pound per hour and 1.09 tons per rolling, 12-month period. Sulfur dioxide (SO_2) emissions from B033 shall not exceed 0.88 pound per hour and 3.86 tons per rolling, 12-month period. Volatile organic compound (VOC) emissions from B033 shall not exceed 0.18 pound per hour and 0.79 ton per rolling, 12-month period. See b)(2)a.
b.	OAC rule 3745-31-05(D) (PTI 04-01346 issued 1/18/2007)	CO emissions from B030 shall not exceed 12.01 tons per rolling, 12-month period. PM_{10} emissions from B030 shall not exceed 1.09 tons per rolling, 12-month period. SO_2 emissions from B030 shall not exceed 3.86 tons per rolling, 12-month period. VOC emissions from B030 shall not exceed 0.79 ton per rolling, 12-month period. See b)(2)b.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-10(B)	Particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input
e.	OAC rule 3745-18-54(W)(1)	Sulfur dioxide (SO_2) emissions shall not exceed 0.29 pounds of SO_2 per million Btu of actual heat input. See b)(2)c.
f.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	See b)(2)d.
g.	40 CFR Part 60, Subpart J (40 CFR 60.100 – 60.109) [In accordance with 40 CFR 60.101, this emissions unit is a fuel gas combustion device where construction commenced after June 11, 1973 and prior to May 14, 2007 and subject to the emissions limitations/control requirements specified in this section.]	See b)(2)e., b)(2)f. and term B.4. of Section B.
h.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 63.16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
i.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480 – 63.7575) [In accordance with 40 CFR 63.7575, this emissions unit is an existing process heater in the "units designed to burn gas 1 fuels" subcategory and subject to the applicable emissions limitations/control requirements specified in this section.]	See b)(2)g. and term B.6. of Section B. [63.7500(a) Table 3 requirements]

(2) Additional Terms and Conditions

a. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart J.

b. The combined NOx emissions from B030 and B033 shall not exceed 9.0 tons per rolling, 12-month period.

c. The emission limitation specified by OAC rule 3745-18-54(W)(1) is less stringent than the emission limitation specified pursuant to 40 CFR 60.104(a)(1).

d. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to this emissions unit.

e. The permittee shall not burn fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis, except during periods of startup, shutdown, or malfunction of the refinery fuel gas amine systems provided that BPH shall to the extent practicable, maintain and operate any affected facility, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. Pursuant to the fuel gas definition in 40 CFR 60.101(d), this standard is also applicable if the permittee combines and combusts natural gas or liquefied petroleum (LP) gas in any proportion with refinery fuel gas in this emissions unit.

f. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

g. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans of this Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A). This emissions unit is required to comply with the applicable periodic tune-up and one-time energy assessment requirements specified in Table 3 to this Subpart no later than January 31, 2016.

c) Operational Restrictions

(1) The permittee shall burn only natural gas and/or refinery fuel gas in this emissions unit.

[Authority for term: PTI 04-01346 and OAC rule 3745-77-07(A)(1)]

(2) Emissions Unit B030 shall be limited to a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rate.

Compliance with the annual firing rate limitation shall be based upon a rolling, 12-month summation of the monthly firing rates.

[Authority for term: PTI 04-01346 and OAC rule 3745-77-07(A)(1)]

(3) Emissions Unit B033 shall be limited to a maximum firing rate of 291,708 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rate.

Compliance with the annual firing rate limitation shall be based upon a rolling, 12-month summation of the monthly firing rates.

[Authority for term: PTI 04-01346 and OAC rule 3745-77-07(A)(1)]

(4) [40 CFR 63.7500(a) – Table 3]
An existing process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than refinery fuel gas or natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: PTI 04-01346 and OAC rule 3745-77-07(A)(3)]

(2) The permittee shall monitor and record the daily and monthly average firing rate in terms of standard cubic feet per hour, mmBtu/hr, and mmBtu/month. Each month, the permittee shall add the monthly firing total rate to the total firing rate for the previous 11 months to determine the rolling, 12-month summation of the monthly firing rate.

[Authority for term: PTI 04-01346 and OAC rule 3745-77-07(A)(3)]

(3) The permittee shall calculate and maintain records of the monthly NO_x, emissions in units of tons per month based on the firing rate in d)(2), and the NOx emission factor determined during the most recent emission test of this emissions unit.

[Authority for term: PTI 04-01346 and OAC rule 3745-77-07(A)(3)]

(4) The permittee shall calculate and maintain records of the combined NOx emissions from B030 and B033 in units of tons per month. Each month, the permittee shall add the combined monthly NOx emissions from B030 and B033 to the total combined NOx emissions from B030 and B033 for the previous 11 months to determine the rolling, 12-month summation of NOx emissions.

[Authority for term: PTI 04-01346 and OAC rule 3745-77-07(A)(3)]

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas and/or natural gas was burned in this emissions unit. Each report shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

[Authority for term: PTI 04-01346 and OAC rule 3745-77-07(A)(3)]

(2) The permittee shall submit quarterly deviation/excursion reports that identify:

a. each period in which the firing rate for B030 identified in c)(2) was exceeded;

b. each period in which the firing rate for B033 identified in c)(3) was exceeded;

c. each period in which the combined NOx emissions from B030 and B033 exceeded 9.0 tons per rolling, 12-month period.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: PTI 04-01346 and OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

CO emissions from B030 shall not exceed 4.74 pounds per hour. CO emissions from B033 shall not exceed 2.74 pounds per hour

Applicable Compliance Method:

Multiply the AP-42 CO emission factor of 84 lb/mmcf of fuel gas burned times the daily average fuel gas burned per hour times the fuel gas heating value correction factor. The heating value correction factor is equal to the ratio of the actual fuel gas heat content to the AP-42 heat content of 1020 Btu/scf. If required, compliance shall be demonstrated based upon the procedures specified in Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

b. Emission Limitation:

CO emissions shall not exceed 12.01 tons per rolling, 12-month period

Applicable Compliance Method:

Annual allowable emissions are based on the hourly emission rate and operation at a maximum capacity of 291,708 mmBtu per rolling 12-month period. Therefore, compliance with the hourly CO limit and the firing rate restriction under c) constitutes compliance with the annual CO limit.

c. Emission Limitation:

NO_x emissions from B033 shall not exceed 2.92 tons per rolling, 12-month period

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the rolling, 12-month firing rate as recorded in d)(2) by the NOx emission factor in units of lb/mmBtu determined during the most recent stack test at B033.

Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

d. Emission Limitation:

NO_x emissions from B030 shall not exceed 4.03 pounds per hour. NO_x emissions from B033 shall not exceed 0.67 pound per hour

Applicable Compliance Method:

Multiply the NOx emission factor in units of lb/mmBtu determined during the most recent stack test by the daily average fuel gas burned per hour to determine the hourly NOx emissions. If required, compliance shall be demonstrated based upon the procedures specified in Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

e. Emission Limitation:

The combined NOx emissions from B030 and B033 shall not exceed 9.0 tons per rolling 12-month period

Applicable Compliance Method:

The monitoring and recordkeeping requirements of d)(2) through d)(4) shall serve as demonstration of compliance with this emission limitation.

f. Emission Limitation:

PM_{10} emissions from B030 shall not exceed 0.43 pound per hour. PM_{10} emissions from B033 shall not exceed 0.25 pound per hour.

Applicable Compliance Method:

Multiply the AP-42 particulate matter emission factor of 7.6 lb/mmcf of fuel gas burned times the daily average fuel gas burned per hour times the fuel gas heating value correction factor. The heating value correction factor is equal to the ratio of the actual fuel gas heat content to the AP-42 heat content of 1020 Btu/scf. If required, compliance shall be demonstrated based upon the procedures specified in Methods 201 and 202 of 40 CFR Part 51, Appendix M, and the procedures specified in OAC rule 3745-17-03(B)(9).

Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

g. Emission Limitation:

PM_{10} emissions shall not exceed 1.09 tons per rolling, 12-month period from B030

Applicable Compliance Method:

Annual allowable emissions are based on the hourly emission rate and operation at a maximum capacity of 291,708 mmBtu per rolling 12-month period. Therefore, compliance with the hourly PM_{10} limit and the firing rate restriction under c) constitutes compliance with the annual PM_{10} limit.

h. Emission Limitation:

SO_2 emissions from B030 shall not exceed 1.53 pounds per hour. SO_2 emissions from B033 shall not exceed 0.88 pound per hour

Applicable Compliance Method:

The hourly emission limitation is based on operation at maximum capacity at the maximum H_2S concentration of 0.10 grain/dscm (160 ppm) allowed by 40 CFR Part 60, Subpart J. Therefore compliance with the 0.10 grain H_2S per dry standard cubic foot of fuel gas burned as a volume-weighted, rolling, 3-hour average emission limitation constitutes compliance with the hourly SO_2 emission limitation.

i. Emission Limitation:

SO_2 emissions shall not exceed 3.86 tons per rolling, 12-month period from each unit

Applicable Compliance Method:

Annual allowable emissions are based on the hourly emission rate and operation at a maximum capacity of 291,708 mmBtu per rolling 12-month period and a fuel gas H_2S content of 0.10 grain/dscf. Therefore, prior to the start-up of the Coker Gas Plant (P068), compliance with the hourly SO_2 limit and the firing rate restriction under c) constitutes compliance with the annual SO_2 limit.

Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), compliance with the annual SO_2 limit shall be demonstrated by using the total sulfur value recorded for the refinery fuel gas fired in accordance with the terms and conditions in term B.3. of Section.

Each month multiply the average sulfur concentration by the molecular weight* of SO_2 (64 lbs/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in units of lb/mmscf for that month. Multiply the SO_2 emission factor by the monthly fuel gas burned to estimate lbs SO_2 per month, and add the monthly total to the total for the previous 11 calendar months to determine the 12-month total SO_2 emissions.

*this formula assumes that 1 mole of sulfur converts to 1 mole of SO_2

j. Emission Limitation:

VOC emissions from B030 shall not exceed 0.31 pound per hour. VOC emissions from B033 shall not exceed 0.18 pound per hour

Applicable Compliance Method:

Multiply the AP-42 VOC emission factor of 5.5 lb/mmcf of fuel gas burned corrected for heating value by the daily average fuel gas burned per hour. The heating value correction factor is equal to the ratio of the actual fuel gas heat content to the AP-42 heat content of 1020 Btu/scf. If required, compliance shall be demonstrated based upon the procedures specified in Methods 1 through 4 and 25 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

k. Emission Limitation:

VOC emissions shall not exceed 0.79 ton per rolling, 12-month period from B030

Applicable Compliance Method:

Annual allowable emissions are based on the hourly emission rate and operation at a maximum capacity of 291,708 mmBtu per rolling 12-month period. Therefore, compliance with the hourly VOC limit and the firing rate restriction under c) serves as compliance with the annual VOC limit.

l. Emission Limitation:

The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis

Applicable Compliance Method:

Ongoing compliance with the hydrogen sulfide emission limitation(s) contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be

demonstrated through the data collected as required in the Monitoring and Recordkeeping in term B.4. of Section B. of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, the permittee shall demonstrate compliance with the H_2S standard according to 40 CFR 60.106(e).

m. Emission Limitation:

Visible PE shall not exceed 20% opacity, unless otherwise specified by the rule

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in Method 9 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

n. Emission Limitation:

PE shall not exceed 0.020 pound per million Btu of heat input

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

[Authority for term: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

36. Emissions Unit Group -B4-B034 B035 sp Db J sp 5D: B034,B035,

EU ID	Operations, Property and/or Equipment Description
B034	East Alstom Boiler (PR-562969): 353 mmBtu/hr heater fired with refinery fuel gas and/or natural gas with ultra low NOx burners
B035	West Alstom Boiler (PR-562970): 353 mmBtu/hr heater fired with refinery fuel gas and/or natural gas with ultra low NOx burners

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) Terms d)(10), d)(11), d)(12), d)(13) and e)(6)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI P0119763 issued 10/30/2015)	Carbon monoxide (CO) emissions from each unit shall not exceed 38.48 pounds per hour and 168.53 tons per rolling, 12-month period. Nitrogen oxides (NOx) emissions from each unit shall not exceed 12.71 pounds per hour. PM_{10} emissions from each unit shall not exceed 2.63 pound per hour and 11.52 tons per rolling, 12-month period. Sulfur dioxide (SO_2) emissions shall not exceed the rate specified in b)(2)a. Volatile organic compounds (VOC) emissions from each unit shall not exceed 1.90 pound per hour and 8.34 ton per rolling, 12-month period. Sulfuric acid mist (H_2SO_4) emissions from each unit shall not exceed 1.01 ton per rolling, 12 month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)a, b., and c; and see term B.3. of Section B.
b.	OAC rule 3745-31-05(D) (PTI P0119763 issued 10/30/2015)	See b)(2)d.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.
d.	OAC rule 3745-17-10(B)	See b)(2)e.
e.	OAC rule 3745-18-54(W)(1)	See b)(2)e.
f.	OAC rule 3745-109	See b)(2)f.
g.	OAC rule 3745-14	See b)(2)g.
h.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	40 CFR Part 60 subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60. See b)(2)h.
i.	40 CFR Part 60, Subpart Db (40 CFR 60.40b – 60.49b) [In accordance with 40 CFR 60.40b(a) and as defined in 60.41b with a low heat release rate (70,000 Btu/hr-ft^3), this emission unit is a steam generating unit that has a heat capacity from fuels combusted in the steam generating unit greater than 100 million British thermal units per hour (mmBtu/hr)]	0.10 pound of NO_x (expressed as NO_2) per mmBtu heat input determined on a 30-day rolling average basis including during periods of startup, shutdown or malfunction [60.44b(a), 60.44b(i) and 60.44b(h)] See b)(2)i.
j.	40 CFR Part 60, Subpart J (40 CFR 60.100 – 60.109) [In accordance with 40 CFR 60.100(a) and as defined in	See b)(2)c. and term B.4. of Section B.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	60.101(g), this emission unit is a fuel gas combustion device in a petroleum facility.]	
k.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 63.16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
i.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480 – 63.7575) [In accordance with 40 CFR 63.7575, this emissions unit is an existing industrial boiler or process heater in the "units designed to burn gas 1 fuels" subcategory, located at a major source of HAP emissions and subject to the applicable emissions limitations/control requirements specified in this section.]	See b)(2)j. and term B.6. in Section B.
j.	ORC 3704.03(F)(4)(c) (Air Toxics)	See d)(10), d)(11), d)(12), d)(13) and e)(6).

(2) Additional Terms and Conditions

a. Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), the combined emissions of B034 and B035 shall comply with the sulfur dioxide (SO_2) emissions limit of 34.7 tons SO_2 per rolling 12-months and demonstrate compliance using the monitoring, record keeping and reporting requirements of terms B.3.a) through 9.c) of Section B. of this permit. Prior to the completion of construction and initial shakedown of the Coker Gas Plant (P068), combined emissions of B034 and B035 shall comply with the sulfur dioxide (SO_2) emissions limit of 22.0 tons per rolling 12-months and demonstrate compliance as specified in section f)(1)d. of this permit.

b. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart J.

c. [40 CFR 60.104(a)(1)]
The permittee shall not burn in this emissions unit any refinery fuel gas that has a volume-weighted, rolling, 3-hour average H_2S concentration greater than 230 milligrams per dry standard cubic meter (0.10 grain per dry standard cubic foot) or a rolling 3-hour average SO_2 concentration of 20 parts per million by volume, dry basis, adjusted to 0% excess air, depending on which monitoring system is chosen.

d. The combined CO, NO_x, $PM_{10,}$ VOC and H_2SO_4 emissions from B034 and B035 shall not respectively exceed 205.29, 38.5, 14.03, 16.67, 34.7, and 1.59 tons per rolling 12-month period.

e. The emission limitation specified by OAC rule 3745-17-10(B) and OAC rule 3745-18-54(W)(1) is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

f. The permittee shall ensure that any emissions unit(s) subject to the Clean Air Interstate Rule (CAIR) complies/comply with the requirements of the Ohio Administrative Code (OAC) Chapter 3745-109, which includes submitting timely permit applications.

[Authority for term: OAC rule 3745-77-07(A)(5)]

g. In accordance with OAC rule 3745-14-01(c)(2), these units are exempt from OAC rule 3745-14 because they are subject to OAC rule 3745-109 (Ohio's CAIR program). The non-power generating (non-EGU) requirements of 40 CFR Part 75 are applicable to this emissions unit.

h. The permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NO_x monitoring system, designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard(s). Except as allowed below, the plan shall follow the requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct relative accuracy test audits for the continuous NO_x monitoring system in accordance with the frequencies required pursuant to 40 CFR Part 60 and 40 CFR Part 75; or may follow relative accuracy test audit frequency requirements for monitoring systems subject to 40 CFR 75, Appendix B, in lieu of frequencies required in 40 CFR Part 60. In either case, results shall be recorded and reported in units of the applicable standard(s) in accordance with 40 CFR Part 60.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits pursuant to 40 CFR Part 60, and linearity checks pursuant to 40 CFR Part 75; however, linearity checks completed pursuant to 40 CFR Part 75, Appendix B, may be substituted for the quarterly cylinder gas or relative accuracy audits required per 40 CFR Part 60.

i. Thepermittee shall comply with all applicable requirements of 40 CFR Part 60, Subpart Db.

j. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans of this Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A). This emissions unit is required to comply with the applicable periodic tune-up and one-time energy assessment requirements specified in Table 3 to this Subpart no later than January 31, 2016.

c) Operational Restrictions

(1) The permittee shall only burn natural gas and/or refinery fuel gas in this emissions unit.

[Authority for rule: OAC rule 3745-77-07(A)(1)]

(2) The combined heat input to two boilers (B034 and B035) shall be limited to a maximum firing rate of 3,766,800 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rate.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(3) The permittee shall operate and maintain equipment to continuously monitor and record the NOx emissions from this emissions unit when combusting natural gas and/or refinery fuel gas.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(4) [40 CFR 63.7500(a) – Table 3]
A new or existing boiler or process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the process heater as specified in 40 CFR 63.7540. Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than refinery fuel gas and/or natural gas, the permittee shall maintain a record of the type, quantity, and heating value in Btu/dscf of the fuel burned.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(2) The permittee shall monitor and record the daily and monthly average firing rate in terms of standard cubic feet per hour, mmBtu/hr, and mmBtu/month for this emission unit. Each month, the permittee shall add the monthly firing total rate to the total firing rate for the previous 11 months to determine the rolling, 12-month summation of the monthly firing rate. Also during the first 12 calendar months of operation, the permittee shall record the cumulative firing rate for each calendar month.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(3) The permittee shall monitor and record the daily and monthly average firing rate in terms of standard cubic feet per hour, mmBtu/hr and mmBtu/month for B034 and B035 combined. Each month, the permittee shall add the monthly total firing rate to the total firing rate for the previous 11 months to determine the rolling, 12 month summation of the monthly firing rate. Also during the first 12 calendar months of operation, the permittee shall record the cumulative firing rate for each calendar month.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

(4) The permittee shall maintain records of the monthly CO, NO_x, PM_{10}, SO_2, and VOC emissions from each emissions unit and from B034 and B035 combined. Each month the permittee shall add the monthly CO, NO_x, PM_{10}, SO_2, and VOC emissions total to the total for the previous 11 months to determine the rolling, 12-month summation of emissions from each emissions unit and B034 and B035 combined.

[Authority for term: PTI P0119763 and OAC rule 3745-77-07(A)(1)]

NOx CEM REQUIREMENTS:

(5) The permittee shall maintain a written quality assurance/quality control plan for the continuous hydrogen sulfide monitoring system, designed to ensure continuous valid and representative readings of nitrogen oxide (NOx) emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix F]

(6) The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[Authority for term: 40 CFR 60.2 and/or 40 CFR 63.2 and Appendix F to 40 CFR Part 60]

(7) The permittee shall maintain on site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous NOx monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

[40 CFR 60.13] and [40 CFR Part 60, Appendix B]

(8) The permittee shall maintain records of data obtained by the continuous NO_x monitoring system including, but not limited to:

a. emissions of NO_x in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f);

b. emissions of NO_x in pounds per hour, pounds per million Btu, and in units of the applicable standard(s) over the appropriate averaging period, pursuant to 60.49b(g)(2) and 60.13(h)(2);

c. results of quarterly cylinder gas audits or linearity checks if applicable;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous NO_x monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NO_x monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous NO_x monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in g. and h., above.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

[Authority for term: 40 CFR Part 60.7]

(9) [40 CFR 60, Subpart Db] STANDARDS OF PERFORMANCE FOR INDUSTRIAL-COMMERCIAL-INSTITUITIONAL STEAM GENERATING UNITS

The permittee shall comply with the applicable monitoring and recordkeeping requirements under this Subpart, including the following sections:

60.48b Emission Monitoring for Nitrogen Oxides		
a.	60.48b(b)	the permittee subject to a NOx standard under 60.44b shall comply with either 60.48b(b)(1) or (b)(2): (1) Install, calibrate, maintain, and operate CEMS for measuring NOx and O_2 emissions discharged to the

		atmosphere, and shall record the output of the system; or (2) If the permittee has installed a NOx emission rate CEMS to meet the requirements of part 75 of this chapter and is continuing to meet the ongoing requirements of part 75 of this chapter, that CEMS may be used to meet the requirements of this section, except that the owner or operator shall also meet the requirements of 60.49b. Data reported to meet the requirements of 60.49b shall not include data substituted using the missing data procedures in subpart D of part 75 of this chapter, nor shall the data have been bias adjusted according to the procedures of part 75 of this chapter.
b.	60.48b(c)	The CEMS required under60.48b(b) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.
c.	60.48b(d)	The 1-hour average NOx emission rates measured by the continuous NOx monitor required by 60.48b(b) of this section and required under 60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under 60.44b. The 1-hour averages shall be calculated using the data points required under 60.13(h)(2).
d.	60.48b(e)	The procedures under 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems. (e)(2) For affected facilities combusting natural gas, the span value for NOX is 500 ppm. As an alternative, the permittee may elect to use the NOx span values determined according to section 2.1.2 in appendix A to part 75 of this chapter. (e)(3) All span values for combusting mixtures of regulated fuels are rounded to the nearest 500 ppm. Span values computed under the alternative stated above, shall be rounded off according to section 2.1.2 in appendix A to part 75 of this chapter.
e.	60.48b(f)	When NOx emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of this part, Method 7A of appendix A of this part, or other

		approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.
60.49b Recordkeeping Requirements		
f.	60.49b(d)	The permittee shall record and maintain records as specified in 60.49b(d)(1) of this section. (d)(1) Record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for natural gas for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.
g.	60.49b(g)	Maintain records of the following information for each steam generating unit operating day: (1) Calendar date; (2) The average hourly NOX emission rates (expressed as NO2) (ng/J or lb/MMBtu heat input) measured or predicted; (3) The 30-day average NOX emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days; (4) Identification of the steam generating unit operating days when the calculated 30-day average NOX emission rates are in excess of the NOX emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken; (5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken; (6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data; (7) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted; (8) Identification of the times when the pollutant

		concentration exceeded full span of the CEMS; (9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and (10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.
h.	60.49b(p)	The permittee of an affected facility described in 60.44b(j) shall maintain records of the following information for each steam generating unit operating day: (1) Calendar date; (2) The number of hours of operation; and (3) A record of the hourly steam load.

AIR TOXICS

(10) The permit to install for the emissions units (B034) and (B035) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's “Review of New Sources of Air Toxic Emissions” ("Air Toxic") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the “worst case” pollutant(s) for the each emissions unit:

Pollutant: Hexane

TLV (mg/m3): 180

Maximum Hourly Emission Rate (lbs/hr): 1.27

Predicted 1-Hour Maximum Ground-Level

Concentration (ug/m3): 1.47

MAGLC (ug/m3): 4286

The permittee, has demonstrated that emissions of hexane, from emissions unit(s) B034/B035, are calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall

not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[Authority for Term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(11) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final Permit to Install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[Authority for Term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(12) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[Authority for Term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

(13) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[Authority for Term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas and/or natural gas was burned in this emissions unit. Each report shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

[Authority for term: OAC rule 3745-77-07(A)(1)]

(2) The permittee shall submit quarterly deviation/excursion reports that identify:

a. each period in which the firing rates for B034 and B35 identified in Section c)(2) were exceeded;

b. each period in which combined CO emission limitation under b((1)a. was exceeded;

c. each period in which combined NO_x emission limitation under b)(1)a. was exceeded;

d. each period in which combined PM_{10} emission limitation under b((1)a. was exceeded;

e. each period in which combined SO_2 emission limitation under b)(1)a. was exceeded; and,

f. each period in which combined VOC emission limitation under b)(1)a. was exceeded.

The quarterly deviation (excursion) reports may be submitted in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

[Authority for term: OAC rule 3745-77-07(A)(1)]

(3) H2S CEM: Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the reporting requirements for the H_2S CEM in term B.4 of Section B. are as stringent as or more stringent than the reporting requirements contained in Permit to Install P0119763, issued on 10/30/2015: e)(3) through e)(5). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)]

(4) NOx CEM: The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NO_x emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall include the following:

i. the date, commencement and completion times, duration, and magnitude of each excedence,

ii. the reason (if known) and the corrective actions taken (if any) for each excedence.

iii. Whether the excedence was concurrent with a startup, shutdown, or malfunction of an affected facility or control system; and

iv. For any periods for which monitoring data are not available, any changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

v. A written statement, signed by a responsible official, certifying the accuracy and completeness of the information contained in the report.

Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous NO_x and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total NO_x emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous NO_x monitoring system while the emissions unit was in operation;

viii. unless previously submitted in the Quarterly Data Assessment Report (DAR) results and date of quarterly cylinder gas audits;

ix. unless previously submitted in the Quarterly Data Assessment Report (DAR), results and date of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted in the Quarterly Data Assessment Report (DAR), the results of any relative accuracy test audit showing the continuous NO_x monitor out-of-control and the compliant results following any corrective actions;

xi. total duration** of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility [pursuant 40 CFR 60.7(d)(1)];

xii. total duration** of CEM downtime for the reporting period, and if the total period CEM downtime is greater than 5% of the total operating time of

the period, then the report should also include the date, time, and duration of any downtime*** of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation [pursuant 40 CFR 60.7(d)(1)]; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in b.xi. and b.xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* Where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report.

** Per OEPA request, the refinery agrees to include in each quarterly CEMS report the date, time, and duration of each excess emission event and the date, time and duration of each downtime event.

*** Downtime is time when the unit emission source is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

[Authority for term: PTI 04-0117988 and 40 CFR 60.7]

(5) [40 CFR 60, Subpart Db] STANDARDS OF PERFORMANCE FOR INDUSTRIAL-COMMERCIAL-INSTITUITIONAL STEAM GENERATING UNITS

The permittee shall comply with the applicable reporting requirements under this subpart, including the following sections:

60.49b Reporting Requirements		
a.	60.49b(b)	The permittee of each affected facility subject to the NOx emission limits under 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B of this part. The permittee subject to 60.44b(j) shall submit to the Administrator the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the affected facility.
b.	60.49b(h)	The permittee of any affected facility in any category listed in 40 CFR 60.46b(h)(2) is required to submit excess emission reports for any excess emissions that occurred during the reporting period. (h)(2) Any affected facility that is subject to the NOx

60.49b Reporting Requirements		
		standard of 60.44b, and that: (i) Combusts natural gas, distillate oil, gasified coal, or residual oil with a nitrogen content of 0.3 weight percent or less.
c.	60.49b(i)	The permittee of any affected facility subject to the continuous monitoring requirements for NOx under 60.48b shall submit reports containing the information under 60.48b(g).
c.	60.49b(o)	All records required under this section shall be maintained by the permittee of the affected facility for a period of 2 years following the date of such record. NOTE: Term A.25. of Section A requires records for 5 years.
d.	60.49b(v)	The permittee may submit electronic quarterly reports for NOx in lieu of submitting the written reports required under 40 CFR 60.49b(h), (i), (j), (k) or (l). The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the permittee shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.
e.	60.49b(w)	The reporting period for the reports required under this subpart is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

(6) AIR TOXICS REPORTING: The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the quarterly deviation (excursion) reports. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

0.10 grain H_2S per dry standard cubic foot of fuel gas burned as a volume-weighted, rolling, 3-hour average or 20 parts per million SO_2, in the stack gas, as a volume weighted dry basis, adjusted to 0% excess air, rolling, 3-hour average

Applicable Compliance Method:

Ongoing compliance shall be demonstrated based upon the data collected through the monitoring and record keeping requirements of term B.4.a) of Section B. and through demonstration of compliance with the quality assurance/ quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, compliance shall also be demonstrated based upon the methods and procedures of 40 CFR 60.104a(j).

c. Emission Limitation:

34.7 tons per rolling, 12-month period of SO_2 from B034 and B035 combined

Applicable Compliance Method:

After the completion of the construction and the initial shakedown of the Coker Gas Plant (P068), this limit will be effective. Compliance shall be based on the following:

i. Multiply the monthly average total sulfur concentration recorded in term B.3. of Section B. by the molecular weight of SO_2 (64 lb/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in units of lb/mmscf

ii. Multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and

iii. Add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.

iv. Sum the SO_2 emissions for B034 and B035.

*this formula assumes that 1 mole of total sulfur converts to 1 mole of SO_2

d. Emission Limitation:

22 tons per rolling, 12-month period of SO_2 from B034 and B035 combined.

Applicable Compliance Method:

This limit only applies prior to the start-up of the Coker Gas Plant (P068). Compliance shall be based on the following:

i. Multiply the monthly average H_2S concentration by the molecular weight of SO_2 (64 lb/lbmol) and divide by the ideal gas conversion factor of 379 scf/lb-mole to obtain the SO_2 emission factor in units of lb/mmscf

ii. Multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and

iii. Add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.

*this formula assumes that 1 mole of H_2S converts to 1 mole of SO_2

After the completion and construction and the initial shakedown of the Coker Gas Plant (P068), this limit will no longer be in effect, and the limit in f)(1)c. above, will be in effect.

e. Emission Limitation:

38.48 pounds per hour CO

Applicable Compliance Method:

Multiply the vendor supplied emission factor of 0.109 lb/mmBtu times the maximum firing rate (353 mmBtu/hr). If required, the permittee shall demonstrate compliance using Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

a. Emission Limitation:

168.53 tons per rolling, 12-month period CO

Applicable Compliance Method:

Annual allowable emissions are based on operation at maximum capacity for 8760 hours per year. Compliance with the hourly CO limit constitutes compliance with the annual CO limit.

f. Emission Limitation

205.29 tons per rolling, 12 month period combined CO emissions from B034 and B035

Applicable Compliance Method:

The monitoring and record keeping requirements under the recordkeeping requirements, section d) shall serve as demonstration of compliance with this emission limitation.

g. Emission Limitation:

2.63 pounds per hour PM_{10} emissions

Applicable Compliance Method:

Multiply the AP-42 section 1.4 particulate matter emission factor dated July 1998 of 7.6 lb/mmscf of fuel gas burned times the daily average fuel gas burned per hour times the fuel gas heating value correction factor. The heating value correction factor is equal to the ratio of the actual fuel gas heat content to the AP-42 heat content of 1020 Btu/scf. If required, compliance shall be demonstrated based upon the procedures specified in Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

h. Emission Limitation:

11.52 tons per rolling, 12-month period of PM_{10} emissions

Applicable Compliance Method:

Annual allowable emissions are based on operation at maximum capacity for 8760 hours per year. Compliance with the hourly particulate emission limit constitutes compliance with the annual particulate emission limit.

i. Emission Limitation

14.03 tons per rolling, 12 month period combined PM_{10} emissions from B034 and B035

Applicable Compliance Method:

The monitoring and record keeping requirements under section d) shall serve as demonstration of compliance with this emission limitation.

j. Emission Limitation:

12.71 pounds per hour NO_x

Applicable Compliance Method:

Ongoing compliance shall be demonstrated based upon the data collected through the monitoring and record keeping requirements of d), and through demonstration of compliance with the quality assurance/ quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, the permittee shall demonstrate compliance using methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved methods may be used with prior approval from Ohio EPA.

k. Emission Limitation

38.5 tons per rolling, 12 month period combined NO_x emissions from B034 and B035

Applicable Compliance Method:

The monitoring and record keeping requirements under section d) shall serve as demonstration of compliance with this emission limitation.

l. Emission Limitation:

1.90 pounds per hour VOC emissions

Applicable Compliance Method:

Multiply the AP-42 section 1.4 VOC emission factor dated July 1998 of 5.5 lb/mmscf of fuel gas burned corrected for heating value by the daily average fuel gas burned per hour. The heating value correction factor is equal to the ratio of the actual fuel gas heat content to the AP-42 heat content of 1,020 Btu/scf. If required, the permittee shall demonstrate compliance using Methods 1 through 4 and 25 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

m. Emission Limitation:

8.34 tons per rolling, 12-month period VOC emissions

Applicable Compliance Method:

Annual allowable emissions are based upon operation at maximum capacity for 8760 hours per year. Compliance with the hourly VOC emissions limit constitutes compliance with the annual limit.

n. Emission Limitation:

16.67 tons per rolling, 12 month period combined VOC emissions from B034 and B035

Applicable Compliance Method:

The monitoring and record keeping requirements under section d) shall serve as demonstration of compliance with this emission limitation.

o. Emission Limitation:

1.01 tons per year H_2SO_4 emissions

Applicable Compliance Method:

The permittee established that 3% of the SO_2 emissions are converted to H_2SO_4. Compliance shall be demonstrated by multiplying the maximum annual SO_2 emissions rate (22 tons/yr) by 0.03 multiplied by the molecular weight of H_2SO_4 and divided by the molecular weight of SO_2. After the completion and construction and the initial shakedown of the Coker Gas Plant (P068), this limit will no longer be in effect, and the limit in f)(1)q. will be in effect .

p. Emission Limitation:

1.59 tons per year H_2SO_4 combined B034 and B035

Applicable Compliance Method

After the completion and construction and the initial shakedown of the Coker Gas Plant (P068), this limit will be effective. Compliance shall be demonstrated by multiplying the maximum annual combined SO_2 emissions rate (34.7 tons/yr) by 0.03 multiplied by the molecular weight of H_2SO_4 and divided by the molecular weight of SO_2. Compliance with the annual combined SO_2 limit for B034 and B035 of 34.7 ton/yr SO_2 demonstrates compliance with this limit.

q. Emission Limitation:

0.10 lb NOx/mmBtu (expressed as NO_2)

Applicable Compliance Method:

Ongoing compliance shall be demonstrated based upon the data collected through the monitoring and record keeping requirements of d), and through demonstration of compliance with the quality assurance/ quality control plan, which shall meet the requirements of 40 CFR Part 60 and the procedures outlined in 40 CFR 60.46b(e)(3).

[Authority for rule: OAC rule 3745-77-07(C)(1)]

(2) [40 CFR 60, Subpart Db] STANDARDS OF PERFORMANCE FOR INDUSTRIAL-COMMERCIAL-INSTITUITIONAL STEAM GENERATING UNITS

The permittee shall comply with the applicable testing requirements under this subpart, including the following sections:

60.46b Compliance and Performance Test Methods and Procedures for Nitrogen Oxides		
a.	60.46b(c)	Compliance with the NOx emission standards under 60.44b shall be determined through performance testing under under 60.46b(g) and (h) of this section, as applicable.
b.	60.46b(e)	To determine compliance with the emission limits for NOx required under 60.44b, the permittee shall conduct the performance test as required under 60.8 using the continuous system for monitoring NOx under 60.48(b). See 60.46b(e)(1) through (5), as applicable.

g) Miscellaneous Requirements

(1) None.

37. Emissions Unit Group -P1-P021 P022 P023 Alkyl Units: P021,P022,P023,

EU ID	Operations, Property and/or Equipment Description
P021	Alky 1/Alkylation Unit process converts light hydrocarbons (butanes) in the presence of sulfuric acid into high -octane gasoline blending stock. Alky 1 Unit has blowdown emissions sent to the hydrocarbon flare, where their emissions are included. Unit fugitive emissions are included in this emissions unit.
P022	Alkyl 2/Alkylation Unit process converts light hydrocarbons (butanes) in the presence of sulfuric acid into high -octane gasoline blending stock. Alky 2 /Alkylation Unit vented to the Alkyl 2 (P022) blowdown drum. Emissions from the Alkyl 2 blowdown drum are sent to the hydrocarbon flare, where their emissions are included. Unit fugitive emissions are included in this emission unit.
P023	Alky 3/Alkylation Unit process converts light hydrocarbons (butanes) in the presence of sulfuric acid into high-octane gasoline blending stock. Alky 3 /Alkylation Unit vented to the Alkyl 2 (P022) blowdown drum. The blowdown emissions are sent to the Hydrocarbon flare system (P003/P004), where their emissions are included. Unit fugitive emissions are included in this emission unit.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-21-09(T)	See b)(2)a.
b.	OAC rule 3745-21-09(UU)(2)	See b)(2)b. and b)(2)c.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
d.	*Equipment Leaks* 40 CFR Part 63, Subpart CC	See b)(2)d.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(40 CFR 63.640-656) [In accordance with 40 CFR 63.640(c)(4) and 63.648(a)(1), this emissions unit has equipment in organic HAP service and is subject to the Refinery MACT LDAR program]	
e.	*Miscellaneous Process Vents* 40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(c)(1) and 63.648(a), this emissions unit has equipment in organic HAP service and is subject to the Refinery MACT miscellaneous process vent provisions]	See b)(2)c., b)(2)e. and b)(2)f.
f.	*For P022 and P023*: 40 CFR Part 60, subpart GGG	See b)(2)g.

(2) Additional Terms and Conditions

a. The permittee shall comply with the requirements for equipment leaks in OAC rule 3745-21-09(T). See term B.2 of Section B. of the permit for the applicable leak detection and repair requirements.

[Note: Consistent with the U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with the equipment leak standards in 40 CFR Part 63, Subpart CC for both equipment in organic HAP service and equipment not in organic HAP service. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T).]

b. [OAC rule 3745-21-09(UU)(2)]
All VOC emissions from the Alky 1 blowdown drum (P021) and the Alky 2 blowdown drum (P022) shall be vented to a flare that complies with the requirements of OAC rule 3745-21-09 (DD)(10)(d), (DD)(10)(e), and (DD)(10)(f) of this rule.

c. The flare requirements applicable to these emissions units are subsumed into the terms for emissions units for the east and west hydrocarbon flares, P003 and P004.

d. The leak detection and repair requirements stated in 40 CFR Part 63, subpart CC applicable to this emissions unit are subsumed into the facility-wide leak detection and repair requirements stated in term B.2. of Section B. of this permit.

e. [63.643(a)(1)]
The blowdown vents from these systems are considered Group 1 miscellaneous process vents under 40 CFR 63, subpart CC. The permittee shall comply with the applicable emission limits and operating requirements of 40 CFR Part 63, subpart CC by reducing the emissions of organic HAP's using a flare that meets the requirements of 40 CFR 63.11(b) of subpart A.

f. [63.641] Definition of a Group 1 Miscellaneous Process Vent
Group 1 miscellaneous process vent means a miscellaneous process vent for which the total organic HAP concentration is greater than or equal to 20 parts per million by volume, and the total volatile organic compound emissions are greater than or equal to 33 kilograms per day for existing sources at the outlet of the final recovery device (if any) and prior to any control device and prior to discharge to the atmosphere.

g. In accordance with 40 CFR Part 63.640(p)(1), equipment leaks that are subject to the provisions of both 40 CFR Part 60, subpart GGG and 40 CFR Part 63, subpart CC are required to comply only with the provisions specified in 40 CFR Part 63, subpart CC. (See term B.2. of Section B. for the LDAR terms)

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart CC, including the following sections:

63.644 Monitoring provisions for miscellaneous process vents		
a.	63.644(a)	The permittee has chosen to install the monitoring equipment specified in paragraph 63.644(a)(2). All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately. NOTE: The flare requirements for control of a Group 1 Miscellaneous Process vent are subsumed into the terms

		and conditions for emissions units for the east and west hydrocarbon flares, P003 and P004.
b.	63.644(a)(2)	Where a flare is used, a device (including but not limited to a thermocouple, an ultraviolet beam sensor, or an infrared sensor) capable of continuously detecting the presence of a pilot flame is required. Table 10 - Hourly records of whether the monitor was continuously operating and whether a pilot flame was continuously present during each hour.
c.	63.644(e)	Operate the control device (flare) by the procedure required to be monitored (flame). Operation of the control device in a manner that constitutes a period of excess emissions, as defined in 63.655(g)(6), or failure to perform procedures required by this section shall constitute a violation of the applicable emission standard of this subpart.
63.655(i) Recordkeeping		
d.	63.655(i)(2)	Each permittee required to report the results of performance tests under 63.655(f) and (g)(7) shall retain a record of all reported results as well as a complete test report, as described in 63.655(f)(2)(ii) for each emission point tested.
e.	63.655(i)(3)	Each permittee required to continuously monitor operating parameters under 63.644 for miscellaneous process vents shall keep the records specified in 63.655(i)(3)(i) through (i)(3)(v) of this section unless an alternative recordkeeping system has been requested and approved under paragraph 63.655(h) of this section.
f.	63.655(i)(3)(i)	The monitoring system shall measure data values at least once every hour.
g.	63.655(i)(3)(ii)	The owner or operator shall record either: (A) Each measured data value; or (B) Block average values for 1 hour or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

63.655 Reporting Requirements		
a.	63.655(g)	Submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the compliance exceptions specified in 63.655(g)(1) through (g)(6) occur.
b.	63.655(g)(6)(i)(B)	For miscellaneous process vents for which continuous parameter monitors are required by this subpart, periods of excess emissions shall be identified in the Periodic Reports and shall be used to determine compliance with the emission standards. Periods of excess emission include an operating day when all pilot flames of a flare are absent (NOTE: See P003/P004 for monitoring, recordkeeping and reporting for flares).
c.	63.655(g)(6)(ii) and 40 CFR 63 Subpart CC, Table 10	For miscellaneous process vents, excess emissions shall be reported for the operating parameters specified in table 10 of this subpart unless other site-specific parameter(s) have been approved by the operating permit authority. From Table 10 (See P003/P004 for monitoring, recordkeeping and reporting for flares): -Record and report the presence of a flame at the pilot light over the full period of the compliance determination. - Record the times and durations of all periods when all pilot flames for a flare are absent or the monitor is not operating. - Report the times and durations of all periods when all pilot flames for a flare are absent or the monitor is not operating.
d.	63.655(g)(6)(iii)	Periods of startup and shutdown that meet the definition of 63.641, and malfunction that meet the definition in 63.2 and periods of performance testing and monitoring system calibration shall not be considered periods of excess emissions. Malfunctions may include process unit, control device, or monitoring system malfunctions.
e.	63.655(g)(7)	If a performance test for determination of compliance for a new emission point subject to this subpart or for an emission point that has changed from Group 2 to Group 1

		is conducted during the period covered by a Periodic Report, the results of the performance test shall be included in the Periodic Report.
f.	63.655(h)(1)	Reports of startup, shutdown, and malfunctions required by 40 CFR 63.10(d)(5).

(2) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: None.

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable testing requirements in 40 CFR 63, subpart CC, including the following sections:

63.645 Test Methods and Procedures for Misc. Process Vents		
a.	63.645(a), (b), and (c)	To demonstrate compliance with the miscellaneous process vent provisions in 63.643, using a flare as the control device, the permittee shall test for visible emissions, net heating value and exit velocity per 63.116 except for 63.116 of 40 CFR 63, subpart G. NOTE: Flare testing requirements are included under the P003/P004 Testing requirements.
b.	63.645(g)	Engineering assessment, including the information detailed in 63.645(g)(1), may be used to determine the TOC emission rate for the representative operating condition expected to yield the highest daily emission rate.

g) Miscellaneous Requirements

(1) None.

38. Emissions Unit Group -P2-P028 P029 A&B Hydrotreaters: P028,P029,

EU ID	Operations, Property and/or Equipment Description
P028	"A" Train Diesel Hydrotreater with feed drum (MACT CC Group 1 Process Vent) controlled by the East Hydrocarbon flare (P003).
P029	"B" Train Diesel Hydrotreater with feed drum (MACT CC Group 1 Process Vent) controlled by the West Hydrocarbon flare (P004).

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (P028: PTI P0119763 as modified on 10/30/2015) (P029): PTI P0108950 as modified on 5/4/2012)	*Emissions Unit P028:* 22.03 tons per year volatile organic compounds (VOC) emissions (from equipment leaks) *Emissions Unit P029*: 22.08 tons per year volatile organic compounds (VOC) emissions (from equipment leaks) See b)(2)a. and b)(2)b.
b.	OAC rule 3745-21-09(T)	See b)(2)c.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
d.	*Equipment Leaks* 40 CFR Part 63, Subpart CC (40 CFR 63.640-656)	See b)(2)d.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 40 CFR 63.640(c)(4) and 63.648(a)(1), this emissions unit has equipment in organic HAP service and is subject to the Refinery MACT LDAR program]	
e.	*Miscellaneous Process Vents* 40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(c)(1) and 63.648(a), this emissions unit has equipment in organic HAP service that is subject to the Refinery MACT miscellaneous process vent provisions]	See b)(2)e., b)(2)f. and b)(2)g.
f.	40 CFR Part 60, Subpart A (40 CFR 60.1 - 60.19)	40 CFR 40 Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.
g.	*For P028 only:* 40 CFR Part 60, Subpart GGG (40 CFR 60.590 – 60.593) [In accordance with 40 CFR 60.590(a), this emissions unit is a process unit located at a petroleum refinery which has equipment defined by 40 CFR 60.591, andsubject to the emissions limitations/control measures specified in this section]	See b)(2)d. and b)(2)(i)
h.	*For P029 only:* 40 CFR Part 60, Subpart GGGa (40 CFR 60.590a – 60.593a) In accordance with 40 CFR 60.590a(a), this emissions unit is a process unit located at a petroleum refinery which has equipment defined by 40 CFR 60.591a,	See b)(2)d. and b)(2)(i.)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	andsubject to the emissions limitations/control measures specified in this section]	
i.	*VOC Emissions from Wastewater* 40 CFR Part 60, Subpart QQQ (40 CFR 60.690 – 60.699) [In accordance with 40 CFR 60.690(a), this emissions unit is a process unit located at a petroleum refinery which has equipment defined by 40 CFR 60.691, and subject to the emissions limitations/control measures in this section.]	See b)(2)j.

(2) Additional Terms and Conditions

a. The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-09(T) and 40 CFR Part 60, Subparts A, GGG (P028), GGGa (P029), QQQ, and 40 CFR Part 63, Subpart CC.

b. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

c. The permittee shall comply with the requirements for equipment leaks referencing OAC rule 3745-21-09(T). See term B.2 of Section B. of the permit for the applicable leak detection and repair requirements.

[Note: Consistent with the U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with the equipment leak standards in 40 CFR Part 63, Subpart CC for both equipment in organic HAP service and equipment not in organic HAP service. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T).]

d. The leak detection and repair requirements stated in 40 CFR Part 63, Subpart CC applicable to this emissions unit are subsumed into the facility-wide leak detection and repair requirements stated in term B.2. of Section B. of this permit. NOTE: Pursuant to 40 CFR 63.648(a) the permittee complies with the requirements of 40 CFR 60, subpart VV as an existing source.

e. [63.643(a)(1)]
The ADHT (P028) and BGOT (P029) feed drum pressure control vents from these process units are considered a Group 1 miscellaneous process vents under 40 CFR 63, Subpart CC and are controlled by the hydrocarbon flare system at the refinery (P003 and P004). The permittee shall comply with the applicable emission limits and operating requirements of 40 CFR Part 63, Subpart CC by reducing the emissions of organic HAP's using a flare that meets the requirements of 40 CFR 63.11(b) of Subpart A.

f. [63.641] Definition of a Group 1 Miscellaneous Process Vent
Group 1 miscellaneous process vent means a miscellaneous process vent for which the total organic HAP concentration is greater than or equal to 20 parts per million by volume, and the total volatile organic compound emissions are greater than or equal to 33 kilograms per day for existing sources at the outlet of the final recovery device (if any) and prior to any control device and prior to discharge to the atmosphere

g. The flare requirements applicable to this emissions unit are subsumed into the terms for emissions units for the East and West Hydrocarbon Flares, P003 and P004.

h. Pursuant to 40 CFR 63.640(p)(1), equipment leaks that are subject to the provisions of both 40 CFR Part 60, Subpart GGG and 40 CFR Part 63, Subpart CC are required to comply only with the provisions specified in 40 CFR Part 63, Subpart CC. Note that 40 CFR 60 Subpart GGG only applies to P028.

i. Pursuant to 40 CFR 63.640(p)(2), equipment leaks that are subject to the provisions of both 40 CFR Part 60, Subpart GGGa and 40 CFR Part 63, Subpart CC are required to comply only with the provisions specified in 40 CFR Part 60, Subpart GGGa. Note that 40 CFR 60 Subpart GGGa only applies to P029.

j. In accordance with 40 CFR Part 60, Subpart QQQ, the permittee shall meet the individual drain system monitoring, inspection, record keeping and reporting program as outlined in the terms and conditions for emissions unit P025 (Refinery Wastewater System). This condition is in reference to the water drains in this emissions unit.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart CC, including the following sections:

63.644 Monitoring provisions for miscellaneous process vents		
a.	63.644(a)	The permittee has choosen to install the monitoring equipment specified in 63.644(a)(2). All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately. NOTE: The flare requirements applicable to this emissions unit are subsumed into the terms of the East and West Hydrocarbon Flares, P003 and P004.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

63.655 Reporting Requirements		
a.	63.655(g)	Submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the compliance exceptions specified in 63.655(g)(1) through (g)(6) occur..
b.	63.655(g)(6)(i)(B)	For miscellaneous process vents for which continuous parameter monitors are required, periods of excess emissions shall be identified in the Periodic Reports and shall be used to determine compliance with the emission standards. Periods of excess emission include an operating day when all pilot flames of a flare are absent (See P003/P004 for monitoring, record keeping and reporting for flares).
c.	63.655(g)(6)(ii)	For miscellaneous process vents, excess emissions shall be reported for the operating parameters specified in table 10 of this subpart unless other site-specific parameter(s) have been approved by the operating permit authority. From Table 10 (See P003/P004 for monitoring, recordkeeping and reporting for flares): -Record and report the presence of a flame at the pilot light over the full period of the compliance determination. - Record and report the times and durations of all periods when all pilot flames for a flare are absent or the monitor is

		not operating.
d.	63.655(g)(6)(iii)	Periods of startup and shutdown that meet the definition of 63.641, and malfunction that meet the definition in 63.2 and periods of performance testing and monitoring system calibration shall not be considered periods of excess emissions. Malfunctions may include process unit, control device, or monitoring system malfunctions.
e.	63.655(g)(7)	If a performance test for determination of compliance for a new emission point subject to this subpart or for an emission point that has changed from Group 2 to Group 1 is conducted during the period covered by a Periodic Report, the results of the performance test shall be included in the Periodic Report.
f.	63.655(h)(1)	Reports of startup, shutdown, and malfunctions required by 40 CFR 63.10(d)(5).

(2) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

22.03 tons per year VOC emissions from equipment leaks (P028)

22.08 tons per year VOC emissions from equipment leaks (P029)

Applicable Compliance Method:

These emissions limits were established to reflect the potential to emit for this emissions unit using the procedures specified in Protocol for Equipment Leak Emission Estimates (EPA document 453/R-95-017, subsequent updates to Protocol for Equipment Leak Emission Estimates, or alternative emission factor approved by Ohio EPA) to calculate the VOC emissions from equipment leaks. A summary of the calculations was submitted to Ohio EPA in Application for P0112686 for P028 and P0108950 for P029.

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES

The permittee shall comply with the applicable testing requirements in 40 CFR 63, Subpart CC, including the following sections:

63.645 Test Methods and Procedures for Misc. Process Vents		
a.	63.645(a), (b), and (c)	To demonstrate compliance with the miscellaneous process vent provisions in 63.643 using a flare as the control device, the permittee shall test for visible emissions, net heating value and exit velocity per 40 CFR 63.116 of 40 CFR 63, Subpart G. NOTE: Flare testing requirements are included under P003/P004 flare testing requirements.
b.	63.645(g)	Engineering assessment, including the information detailed in 63.645(g)(1), may be used to determine the TOC emission rate for the representative operating condition expected to yield the highest daily emission rate.

g) Miscellaneous Requirements

(1) None.

39. Emissions Unit Group -P3-P041 P043 spCC 21-09(T): P041,P043,

EU ID	Operations, Property and/or Equipment Description
P041	Cracking of heavy feed stocks to gasoline and kerosene. Isocracker 2 first and second stage feed surge drums are vented to the hydrocarbon flare, where the drum emissions are included. Unit fugitive emissions are included in this emission unit.
P043	The Cat Poly process absorbs H_2S and salts from sour fuel gas. Poly Plant flash drum sent to the hydrocarbon flare, where its emissions are included. All fugitive emissions from the Poly Plant are included with this emissions unit.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	*Equipment Leaks* OAC rule 3745-21-09(T)	See b)(2)a.
b.	*For Emission Unit P043:* OAC rule 3745-21-09(UU)(1)	See b)(2)b.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
d.	*Equipment Leaks* 40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR	In accordance with 40 CFR 63.648(a), the permittee shall comply with the applicable equipment leak provisions of 40 CFR Part 60, subpart VV. See b)(2)c.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	63.640(c)(4) and 63.648(a)(1), this emissions unit has equipment in organic HAP service and is subject to the Refinery MACT LDAR program]	
e.	*Miscellaneous Process Vents* 40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(c)(1) and 63.648(a), this emissions unit has equipment in organic HAP service and is subject to the Refinery MACT miscellaneous process vent provisions]	See b)(2)d.
f.	*Equipment Leaks* 40 CFR Part 60, subpart GGG	See b)(2)e.
g.	*Equipment Leaks* 40 CFR Part 60, subpart GGGa	See b)(2)f.

(2) Additional Terms and Conditions

a. The permittee shall comply with the requirements for equipment leaks in OAC rule 3745-21-09(T). See term B.2 of Section B. of the permit for the applicable leak detection and repair requirements.

b. [OAC rule 3745-21-09(UU)(1)] – *Applies to EU P043*:
All VOC emissions from the POLY water wash flash drum shall be vented to a flare that complies with the requirements of paragraphs (DD)(10)(d), (DD)(10)(e), and (DD)(10)(f) of this rule. (NOTE: Flare requirements are outlined under the terms and conditions of EU's P003 & P004)

c. The leak detection and repair requirements applicable to this emissions unit are subsumed into the facility-wide leak detection and repair requirements stated in term B.2. of Section B. of this permit.

d. [63.643(a)(1)] *(applicable to EU's P041 & P043)*
The Isocracker 2 first and second stage feed surge drum vents and the Poly water wash flash drum vent are considered Group 1 miscellaneous process vent

under 40 CFR 63, subpart CC. The permittee shall comply with the applicable emission limits and operating requirements of 40 CFR Part 63, subpart CC by reducing the emissions of organic HAP's using a flare that meets the requirements of 40 CFR 63.11(b) of subpart A (NOTE: Flare requirements are outlined under the terms and conditions of EU's P003 & P004).

e. In accordance with 40 CFR Part 63.640(p)(1), equipment leaks that are subject to the provisions of both 40 CFR Part 60, subpart GGG and 40 CFR Part 63, subpart CC are required to comply only with the provisions specified in 40 CFR Part 63, subpart CC. (See term B.2. of Section B. for the LDAR terms)

f. In accordance with 40 CFR 63.640(p)(2) of Subpart CC, equipment leaks that are subject to the provisions of both 40 CFR Part 60, Subpart GGGa and 40 CFR Part 63, Subpart CC are required to comply only with the provisions specified in 40 CFR Part 60, Subpart GGGa (See term B.2. of Section B. for the LDAR Terms).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart CC, including the following sections: *NOTE: applicable to EU's P041, P043*

63.644 Monitoring provisions for miscellaneous process vents		
a.	63.644(a)	The permittee has chosen to install the monitoring equipment specified in paragraph 63.644(a)(2). All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately. NOTE: The flare requirements applicable to this emissions unit are subsumed into the terms for emissions units P003 and P004, the East and West Hydrocarbon Flares.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections: *NOTE: applicable to EU's P041, P043*

63.655 Reporting Requirements		
a.	63.655(g) and (g)(6)(i)(B)	Submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the compliance exceptions specified in 63.655(g)(1) through (g)(6) occur. (g)(6)(i) and (i)(B) – Period of excess emission means an operating day when all pilot flames of a flare are absent. (g)(6)(i) and (i)(B) – Period of excess emission means an operating day when all pilot flames of a flare are absent. (See P003/P004 for monitoring, record keeping and reporting for flares).
b.	63.655(g)(6)(ii) and 40 CFR 63, subpart CC, Table 10	For miscellaneous process vents, excess emissions shall be reported for the operating parameters specified in table 10 of this subpart unless other site-specific parameter(s) have been approved by the operating permit authority. From Table 10 (See P003/P004 for monitoring, record keeping, and reporting for flares): -Record and report the presence of a pilot flame over the full period of the compliance determination. - Record the times and durations of all periods when all pilot flames for a flare are absent or the monitors are not operating. - Report the times and durations of all periods when all pilot flames for a flare are absent or the monitors are not operating.
c.	63.655(g)(6)(iii)	Periods of startup and shutdown that meet the definition of 63.641, and malfunctions that meet the definition in 63.2 and periods of performance testing and monitoring system calibration shall not be considered periods of excess emissions. Malfunctions may include process unit, control device, or monitoring system malfunctions.
d.	63.655(g)(7)	If a performance test for determination of compliance for a new emission point subject to this subpart, or for an emission point that has changed from Group 2 to Group 1, is conducted during the period covered by a Periodic Report, the results of the performance test shall be included in the Periodic Report.
e.	63.655(h)(1)	Reports of startup, shutdown, and malfunctions required by 40 CFR 63.10(d)(5).

(2) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. None.

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable testing requirements in 40 CFR 63, subpart CC, including the following sections: *NOTE: applicable to EU's P041, P043*

63.645 Test Methods and Procedures for Misc. Process Vents		
a.	63.645(a), (b), (c), (d)	To demonstrate compliance with 63.643, the permittee shall follow 40 CFR 63.116 except for 63.116 (a)(1), (d) and (e) of subpart G of this part except as provided in 63.645(b) through (d) and paragraph (i) of this section.
b.	63.645(g) and (g)(1)	Engineering assessment may be used to determine the TOC emission rate for the representative operating condition expected to yield the highest daily emission rate.
NOTE: The 40 CFR 63.116 of subpart G requirements in 63.116(a) as referenced in 63.645 above are included in the hydrocarbon flare terms in EU P003/P004.		

g) Miscellaneous Requirements

(1) None.

40. Emissions Unit Group -P4-P003 P004 Hydrocarbon Flares: P003,P004,

EU ID	Operations, Property and/or Equipment Description
P003	The East Hydrocarbon flare is part of the refinery's hydrocarbon flare system that controls both routine, emergency, safety & SSM venting from various refinery process units. The East flare is connected to the West Flare (P004) through a flare balance line. The Hydrocarbon Flare system includes a flare gas to the fuel gas system recovery compressor system. Emissions from process releases and pilot gas usage are included under this emissions unit. Fugitive equipment leaks from the East hydrocarbon flare equipment are included in this emissions unit.
P004	The West Hydrocarbon flare is part of the refinery's hydrocarbon flare system that controls both routine, emergency, safety & SSM venting from various refinery process units. The West flare is connected to the East Flare (P003) through a flare balance line. The Hydrocarbon Flare system includes a flare gas to the fuel gas system recovery compressor system. Emissions from process releases and pilot gas usage are included under this emissions unit. Fugitive equipment leaks from the West hydrocarbon flare equipment are included in this emissions unit.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-21-09(DD)(10)	See b)(2)a. and g)(1)
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, see c)(1) and g)(1)
c.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(c)(1) and 63.644(a)(2), this emissions unit acts as a control device for equipment subject to	The permittee shall reduce the emissions of organic HAP's using a flare meeting the requirements of 40 CFR 63.11(b). See c)(1) and g)(1)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	Subpart CC pertaining to miscellaneous process vents.]	
d.	40 CFR Part 63, Subpart UUU (40 CFR 63.1560-1579) [In accordance with 40 CFR 63.1566(a)(2), this emissions unit acts as a control device for equipment subject to Subpart UUU pertaining to catalytic reforming units.]	The permittee shall reduce the emissions of organic HAP's using a flare meeting the requirements of 40 CFR 63.11(b). See c)(1) and g)(1)
e.	40 CFR Part 60, Subpart A (40 CFR 60.1-18)	no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, see c)(1) and g)(1)
f.	40 CFR Part 60, Subpart Ja (40 CFR 60.100a-109a) [In accordance with 40 CFR 60.100a(a), this emissions unit is an affected facility in a petroleum refinery: flares.]	See b)(2)b. thru b)(2)d. and g)(1)
g.	40 CFR Part 60, Subpart VV (40 CFR 60.480-489) [In accordance with 60.481, this emissions unit acts as a control device that is referenced by other rules under NSPS.]	In accordance with 40 CFR 60.482-10(d), the flare should comply with the requirements of 40 CFR Part 60.18.
h.	40 CFR Part 61, Subpart FF (40 CFR 61.340-358) [In accordance with 61.341, this emissions unit is a control device serving a closed vent system subject to 40 CFR Part 61, subpart FF standards.]	In accordance with 40 CFR 61.349(a)(2)(iii), the flare should comply with the requirements of 40 CFR Part 60.18.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
i.	Director's Final Findings and Orders issued August 19,1987	Smokeless operations, except during reliefs, which exceed the steam assist capabilities of the flare. Smokeless is defined as no visible emissions, as determined by U.S. EPA Reference Method 22, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours See d)(11) and e)(7)

(2) Additional Terms and Conditions

a. Consistent with the U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(DD)(10) by demonstrating compliance with the flare standards in 40 CFR Part 63.11(b). The MACT requirements of 40 CFR 63.11(b) are generally more stringent than the requirements of OAC rule 3745-21-09(DD)(10).

b. [40 CFR 60.100a(b)]
For flares, the provisions of 40 CFR 60 subpart Ja, apply only to flares which commence construction, modification or reconstruction after June 24, 2008. For the purposes of this subpart, a modification to a flare commences when a project that includes any of the activities in 40 CFR 60.100a(c)(1) or (2) is commenced.

i. [40 CFR 60.100a(c)(1) and (c)(2)] except as described in 60.100a(c)(1)(i) through (vii), a modification to a flare occurs as provided below:

(a) Any new piping from a refinery process unit, including ancillary equipment, or a fuel gas system is physically connected to the flare (e.g., for direct emergency relief or some form of continuous or intermittent venting).

(b) A flare is physically altered to increase the flow capacity of the flare.

c. [40 CFR 60.103a(f) of subpart Ja]
Modified flares shall comply with the requirements of 40 CFR 60.103a(c) through (e) by November 11, 2015 or at startup of the modified flare, whichever is later. Modified flares that were not affected facilities subject to subpart J of this part prior to becoming affected facilities under 40 CFR 60.100a shall comply with the requirements of 40 CFR 60.103a(h) and the requirements of 60.107a(a)(2) by November 11, 2015 or at startup of the modified flare, whichever is later.

d. [40 CFR 60.103a(h) of subpart Ja]
The permittee shall not burn in any affected flare any fuel gas that contains H_2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this limit.

e. [40 CFR 60.107a(e)(2), 40 CFR 60.13 and 40 CFR Part 60, Appendix F]
Each continuous hydrogen sulfide (H_2S) monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. At least 45 days before commencing certification testing of the continuous hydrogen sulfide monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of hydrogen sulfide emissions from the continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

f. [40 CFR 60.13 and 40 CFR Part 60, Appendix F]
Each continuous total sulfur (TS) monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 5. At least 45 days before commencing certification testing of the continuous total sulfur monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of total sulfur emissions from the continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the total sulfur monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

g. [40 CFR 60.2 and/or 40 CFR 63.2 and Appendix F to 40 CFR Part 60]
The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

c) Operational Restrictions

(1) [60.18 and 63.11] FLARE REQUIREMENTS - 40 CFR Parts 60 and 63, Subpart A
The permittee shall comply with the applicable operational restrictions in 40 CFR Parts 60 and 63, Subpart A, including, the following sections (NOTE: quoted language below and internal references are specific to 40 CFR 63, Subpart A):

a.	63.11(a)(2) and 60.18(a)	*Control device requirements*: *Applicability.* 40 CFR 63.11 contains requirements for control devices used to comply with provisions in relevant standards referring directly or indirectly to this section.
b.	63.11(b)(1)	Permittees shall monitor flares to assure that they are operated and maintained in conformance with their designs.
c.	60.18(c)(1), 63.11(b)(4)	Flares shall be designed for and operated with no visible emissions as determined by the methods specified in 60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
d.	63.11(b)(2) and 60.18(c)(6)	Flares shall be steam-assisted, air-assisted, or non-assisted.
e.	63.11(b)(3); 60.18(c)(2); 60.18(e); 63.1566(a)(2) – Subpart UUU, Table 16, option 1; 40 CFR 60.482-10(m) of subpart VV	Flares shall be operated at all times when emissions may be vented to them.
f.	63.11(b)(5), 60.18(c)(2) and (f)(2)	Flares shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
g.	63.11(b)(6); 60.18(b)(3)	The permittee has the choice of adhering to the heat content specifications in 40 CFR Part 63.11(b)(6)(ii) 960.18(c)(3)(ii)0, and the maximum tip velocity specifications in 63.11(b)(7) (60.18(c)(4)) or adhering to the requirements in 63.11(b)(6)(i) (60.18(c)(3)(i)) (non-assisted flare).
h.	63.11(b)(6)(ii), 60.18(c)(3)(ii) and 60.18(f)(3)	Flares shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted. The net heating value of the gas being combusted in a flare shall be calculated using the equation found in 40 CFR

		Part 63.11(b)(6)(ii) (the same as in 60.18(f)(3)). NOTE: heating value can be calculated using a continuous BTU analyzer that is operated, maintained and calibrated according to manufacture recommendations.
i.	63.11(b)(7)(i), 60.18(c)(4)(i) and 60.18(f)(4)	Steam-assisted and non-assisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec), except as provided in 40 CFR Part 63.11(b)(7)(ii) and (b)(7)(iii). The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Test Methods 2, 2A, 2C, or 2D in Appendix A to 40 CFR Part 60, of this chapter, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip. NOTE: An Alternative Monitoring Plan (AMP) approved by U.S. EPA (letter dated April 5, 2013) allows the use of ultrasonic flow meters or optical flow meters that are calibrated and maintained to measure the flow rate for determining the flare exit velocity. This AMP would be an alternative to Method 2, 2A, 2C, or 2D. The flow meters are acceptable for measuring flare gas flow rate provided the calibration sheets are included in test reports to verify that meter calibration is current.
j.	63.11(b)(7)(ii) and 60.18(c)(4)(ii)	Steam-assisted flares with an exit velocity, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec), are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).
k.	63.11(b)(7)(iii) and 60.18(e)(5	Steam-assisted flares operated with an exit velocity, less than the velocity V_{max}, as determined by the method specified in this paragraph, but less than 122 m/sec (400 ft/sec) are allowed. The maximum permitted velocity, V_{max}, for flares complying with this paragraph shall be determined by the equation stated in 63.11(b)(7)(iii).

(2) [60.103a] FLARE REQUIREMENTS - 40 CFR Parts 60 Subpart Ja
The permittee shall comply with the applicable operational restrictions in 40 CFR Parts 60 Subpart Ja, including, the following sections:

60.103a - Design, equipment, work practice or operational standards

a.	60.103a(a)	The permittee of a modified flare must develop and implement the flare management plan by no later than November 11, 2015 or upon startup of the modified flare, whichever is later. The flare management plan must include the information described in 60.103a(a)(1) through (7).
b.	60.103a(c)(1)	The permittee shall conduct a root cause analysis and a corrective action analysis for each of the following conditions: (i) Any time the SO_2 emissions exceed 227 kilograms (kg) (500 lb) in any 24-hour period; or (ii) Any discharge to the flare in excess of 14,160 standard cubic meters (m^3) (500,000 standard cubic feet (scf)) above the baseline, determined in 60.103a(a)(4), in any 24-hour period; or (iii) If the monitoring alternative in 60.107a(g) is elected, any period when the flare gas line pressure exceeds the water seal liquid depth, except for periods attributable to compressor staging that do not exceed the staging time specified in 60.103a(a)(3)(vii)(C).

(3) [40 CFR 61, Subpart FF] NATIONAL EMISSION STANDARD FOR BENZENE WASTE OPERATIONS

The permittee shall comply with the applicable operating requirements under 40 CFR Part 61, Subpart FF including the following sections:

61.349 Standards: Closed-vent systems and control devices.		
a.	61.349(b)	Each closed-vent system and control device used to comply with this subpart shall be operated at all times when waste is placed in the waste management unit vented to the control device except when maintenance or repair of the waste management unit cannot be completed without a shutdown of the control device
b.	61.349(d)	The permittee shall demonstrate compliance of each flare in accordance with 60.18
c.	61.349(h)	The permittee shall monitor the flare in accordance with 61.354(c).

d) Monitoring and/or Recordkeeping Requirements

(1) SIMILAR FLARE REQUIREMENTS in the REGULATIONS
The permittee shall comply with the applicable monitoring and recordkeeping requirements in 40 CFR Parts 60 and 63, Subpart A ; 40 CFR 63 subpart UUU; and 40 CFR 60 subpart VV, including, the following sections:

a.	63.11(b)(1), 60.18(d), 60.18(f)(2), and 40 CFR 60.482-10(e)	Permittees using flares shall monitor these control devices to assure that they are operated and maintained in conformance with their designs.

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart CC, including the following sections for emission units subject to the Group 1 Miscellaneous Process Vents:

63.644 Monitoring provisions for miscellaneous process vents		
a.	63.644(a)(2)	Where a flare is used, a device (including but not limited to a thermocouple, an ultraviolet beam sensor, or an infrared sensor) capable of continuously detecting the presence of a pilot flame is required.
b.	40 CFR 63, subpart CC – Table 10	1. Maintain hourly records of whether the monitor was continuously operating and whether a pilot flame was continuously present during each hour. 2. Record and report the presence of a flame at the pilot light over the full period of the compliance determination. 3. Record the times and durations of all periods when all pilot flames for a flare are absent or the monitor is not operating.

c.	63.644(e)	Operate the control device (flare) by the procedure required to be monitored (flame). Operation of the control device in a manner that constitutes a period of excess emissions, as defined in 63.655(g)(6), or failure to perform procedures required by this section shall constitute a violation of the applicable emission standard of this subpart.
63.655(i) Recordkeeping		
d.	63.655(i)(2)	Each permittee required to report the results of performance tests under 63.655(f) and (g)(7) shall retain a record of all reported results as well as a complete test report, as described in 63.655(f)(2)(ii) for each emission point tested.

(3) [40 CFR 63, Subpart UUU] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and recordkeeping requirements under this subpart including the following sections:

63.1566 - Requirements for Organic HAP Emissions from Catalytic Reforming Units		
a.	40 CFR 63.1566(b)(1) and Table 17, option 1	Install a flare that meets the requirements for control devices in 63.11(b). Install and operate this type of continuous monitoring device such as a thermocouple, an ultraviolet beam sensor, or infrared sensor to continuously detect the presence of a pilot flame.
b.	40 CFR 63.1566(c)(1) and Table 21, option 1	Collecting flare monitoring data according to 63.1572; and recording for each 1-hour period whether the monitor was continuously operating and the pilot light was continuously present during each 1-hour period.
63.1572 - Monitoring, Operation, and Maintenance Requirements		
c.	63.1572(d) and (d)(1)	The permittee must monitor and collect data according to the requirements in paragraphs (d)(1) and (2) of this section: (1) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), the permittee must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times the affected source is operating.

d.	63.1572(d)(2)	The permittee may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities for purposes of this regulation, including data averages and calculations, for fulfilling a minimum data availability requirement, if applicable. The permittee must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

(4) [60.103a] FLARE REQUIREMENTS - 40 CFR Parts 60 Subpart Ja
The permittee shall comply with the applicable monitoring and recordkeeping requirements in 40 CFR Parts 60 Subpart Ja, including, the following sections by no later than November 11, 2015:

60.103a Design, Equipment, Work Practice Standards		
a.	60.103a(d)	Except as provided in 40 CFR 60.103a(f), a root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a discharge meeting one of the conditions specified in 60.103a(c)(1) through (3). Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in 60.103a(d)(1) through (5).
b.	60.103a(d)(1)	If a single continuous discharge meets any of the conditions specified in 60.103a(c)(1) through (3) for 2 or more consecutive 24-hour periods, a single root cause analysis and corrective action analysis may be conducted.
c.	60.103a(d)(2)	If a single discharge from a flare triggers a root cause analysis based on more than one of the conditions specified in 60.103a(c)(1)(i) through (iii), a single root cause analysis and corrective action analysis may be conducted.
d.	60.103a(d)(3)	If the discharge from a flare is the result of a planned startup or shutdown of a refinery process unit or ancillary equipment connected to the affected flare and the procedures in 60.103a(a)(5) were followed, a root cause analysis and corrective action analysis is not required; however, the discharge must be recorded as described in 60.108a(c)(6) and reported as described in 60.108a(d)(5).
e.	60.103a(d)(4)	If both the primary and secondary flare in a cascaded flare system meet any of the conditions specified in paragraphs 60.103a(c)(1)(i) through (iii), in the same 24-hour period, a single root cause analysis and corrective action analysis

		may be conducted.
f.	60.103a(d)(5)	Except as provided in 60.103a(d)(4) above, if discharges occur that meet any of the conditions specified in 60.103a(c)(1) through (3) for more than one affected facility in the same 24-hour period, initial root cause analyses shall be conducted for each affected facility. If the initial root cause analyses indicate that the discharges have the same root cause(s), the initial root cause analyses can be recorded as a single root cause analysis and a single corrective action analysis may be conducted.
g.	60.103a(e)	Except as provided in 60.103a(f), each permittee shall implement the corrective action(s) identified in the corrective action analysis conducted pursuant to paragraph 60.103a(d) in accordance with the applicable requirements in 60.103a(e)(1) through (3).
h.	60.103a(e)(1)	All corrective action(s) must be implemented within 45 days of the discharge for which the root cause and corrective action analyses were required or as soon thereafter as practicable. If an permittee concludes that corrective action should not be conducted, the permittee shall record and explain the basis for that conclusion no later than 45 days following the discharge as specified in 60.108a(c)(6)(ix).
i.	60.103a(e)(2)	For corrective actions that cannot be fully implemented within 45 days following the discharge for which the root cause and corrective action analyses were required, the owner or operator shall develop an implementation schedule to complete the corrective action(s) as soon as practicable.
j.	60.103a(e)(3)	No later than 45 days following the discharge for which a root cause and corrective action analyses were required, the permittee shall record the corrective action(s) completed to date, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates as specified in 60.108a(c)(6)(x).
60.107a Monitoring of emissions and operations for fuel gas combustion devices and flares		
k.	60.107a(a)(2)	A flare that is subject to the H_2S concentration requirement in 60.103a(h) shall install, operate, calibrate and maintain an instrument for continuously monitoring and recording the concentration by volume (dry basis) of H_2S in the fuel

		gases before being burned in any fuel gas combustion device or flare.
l.	60.107a(a)(2)(i)	The permittee shall install, operate and maintain each H_2S monitor according to Performance Specification 7 of Appendix B to part 60. The span value for this instrument is 300 ppmv H_2S.
m.	60.107a(a)(2)(ii)	The permittee shall conduct performance evaluations for each H_2S monitor according to the requirements of 60.13(c) and Performance Specification 7 of appendix B to part 60. The permittee shall use Method 11, 15, or 15A of appendix A-5 to part 60 or Method 16 of appendix A-6 to part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 15A of Appendix A-5 to part 60.
n.	60.107a(a)(2)(iii)	The permittee shall comply with the applicable quality assurance procedures in appendix F to part 60 for each H_2S monitor.
o.	60.107a(a)(2)(iv)	Fuel gas combustion devices or flares having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H_2S in the fuel gas being burned in the respective fuel gas combustion devices or flares.
p.	60.107a(a)(2)(v)	The permittee of a flare subject to 60.103a(c) through (e) may use the instrument required in 60.107a(e)(1) to demonstrate compliance with the H_2S concentration requirement in 60.103a(h) if the permittee complies with the requirements of 60.107a(e)(1)(i) through (iv) and if the instrument has a span (or dual span, if necessary) capable of accurately measuring concentrations between 20 and 300 ppmv. If the instrument required in 60.107a(e)(1) is used to demonstrate compliance with the H_2S concentration requirement, the concentration directly measured by the instrument must meet the numeric concentration in 60.103a(h).
q.	60.107a(a)(2)(vi)	The permittee of a modified flare that meets all three criteria in 60.107a(a)(2)(vi)(A) through (C) shall comply with the requirements of 60.107a(a)(2)(i) through (v) no later than November 11, 2015. The permittee shall comply with the approved alternative monitoring plan or plans pursuant to 60.13(i) until the flare is in compliance with

		requirements of 60.107a(a)(2)(i) through (v).
r.	60.107a(a)(3) and (4)	The permittee is not required to comply with 60.107a(a)(1) or (2) of this section for fuel gas streams that are exempt under 60.103a(h) or, for fuel gas streams combusted in a process heater, other fuel gas combustion device or flare that are inherently low in sulfur content. Fuel gas streams meeting one of the requirements in 60.107a(a)(3)(i) through (iv) will be considered inherently low in sulfur content. (a)(3)(i) Pilot gas for flares. (a)(3)(iii) Fuel gas streams produced in process units that are intolerant to sulfur contamination, such as fuel gas streams produced in the hydrogen plant, catalytic reforming unit, isomerization unit, and HF alkylation process units. (a)(3)(iv) Other fuel gas streams that an owner or operator demonstrates are low-sulfur according to the procedures in 60.107a(b). 60.107a(a)(4) If the composition of an exempt fuel gas stream changes, the permittee must follow the procedures in 60.107a(b)(3).
s.	60.107a(e)(1)	Total sulfur (TS) monitoring requirements. The permittee shall install, operate, calibrate and maintain an instrument for continuously monitoring and recording the concentration of total sulfur in gas discharged to the flare.
t.	60.107a(e)(1)(i)	The permittee shall install, operate and maintain each total sulfur monitor according to Performance Specification 5 of Appendix B to part 60. The span value should be determined based on the maximum sulfur content of gas that can be discharged to the flare (e.g., roughly 1.1 to 1.3 times the maximum anticipated sulfur concentration), but may be no less than 5,000 ppmv. A single dual range monitor may be used to comply with the requirements of this paragraph and 60.107a(a)(2) provided the applicable span specifications are met.
u.	60.107a(e)(1)(iii)	The permittee shall comply with the applicable quality assurance procedures in Appendix F to part 60 for each total sulfur monitor.
v.	60.107a(e)(2)	H_2S monitoring requirements. The permittee shall install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration of

		H_2S in gas discharged to the flare according to the requirements in60.107a(e)(2)(i) through (iii) and shall collect and analyze samples of the gas and calculate total sulfur concentrations as specified in 60.107a(e)(2)(iv) through (ix).
w.	60.107a(f) and (f)(1)	*Flow monitoring for flares*. Except as provided in §60.107a(f)(2) and (h), the permittee shall install, operate, calibrate and maintain a flow monitor according to the manufacturer's procedures and specifications and the requirements in 60.107a(f)(1)(i) through (v), a CPMS to measure and record the flow rate of gas discharged to the flare. If a flow monitor is not already in place, the permittee of a modified flare shall comply with the requirements of this paragraph by no later than November 11, 2015 or upon startup of the modified flare, whichever is later.
x.	60.107a(f)(1)(i)	Locate the monitor in a position that provides a representative measurement of the total gas flow rate.
y.	60.107a(f)(1)(ii)	Use a flow sensor with a measurement sensitivity of no more than 5 percent of the flow rate or 10 cubic feet per minute, whichever is greater.
z.	60.107a(f)(1)(iii)	Use a flow monitor that is maintainable online, is able to continuously correct for temperature and pressure and is able to record flow in standard conditions (as defined in §60.2) over one-minute averages.
aa.	60.107a(f)(1)(iv)	At least quarterly, perform a visual inspection of all components of the monitor for physical and operational integrity and all electrical connections for oxidation and galvanic corrosion if the flow monitor is not equipped with a redundant flow sensor.
bb.	60.107a(f)(1)(v)	Recalibrate the flow monitor in accordance with the manufacturer's procedures and specifications biennially (every two years) or at the frequency specified by the manufacturer.
cc.	60.107a(f)(2)	Emergency flares, secondary flares and flares equipped with flare gas recovery systems designed, sized and operated to capture all flows except those resulting from startup, shutdown or malfunction are not required to install continuous flow monitors; provided, however, that for any such flare, the permittee shall comply with the monitoring alternative in 60.107a(g) of this section
dd.	60.107a(g)	*If applicable, Alternative monitoring for certain flares equipped with water seals.* The permittee subject to

		60.103a(c) through (e) that can be classified as either an emergency flare, a secondary flare or a flare equipped with a flare gas recovery system designed, sized and operated to capture all flows except those resulting from startup, shutdown or malfunction may, as an alternative to the sulfur and flow monitoring requirements of 60.107a(e) and (f), install, operate, calibrate and maintain, in accordance with the requirements in 60.107a(g)(1) through (7) of this section, a CPMS to measure and record the pressure in the flare gas header between the knock-out pot and water seal and to measure and record the water seal liquid level. If the required monitoring systems are not already in place, the permittee of a modified flare shall comply with the requirements of this paragraph by no later than November 11, 2015 or upon startup of the modified flare, whichever is later.
60.108a Recordkeeping Requirements		
ee.	60.108a(c)(1)	The permittee shall maintain a copy of the flare management plan.
ff.	60.108a(c)(6)	Records of discharges greater than 500 lb SO_2 in any 24-hour period from any affected flare, discharges greater than 500 lb SO_2 in excess of the allowable limits from discharges to an affected flare in excess of 500,000 scf above baseline in any 24-hour period as required by 60.103a(c).
gg.	60.108a(c)(6)(i - iv)	The following information shall be recorded no later than 45 days following the end of a discharge exceeding the thresholds for a flare: (i) A description of the discharge. (ii) The date and time the discharge was first identified and the duration of the discharge. (iii) The measured or calculated cumulative quantity of gas discharged over the discharge duration. If the discharge duration exceeds 24 hours, record the discharge quantity for each 24-hour period. For a flare, record the measured or calculated cumulative quantity of gas discharged to the flare over the discharge duration. If the discharge duration exceeds 24 hours, record the quantity of gas discharged to the flare for each 24-hour period. (iv) For each discharge greater than 500 lb SO_2 in any 24-hour period from a flare, the measured total sulfur concentration or both the measured H2S concentration

		and the estimated total sulfur concentration in the fuel gas at a representative location in the flare inlet.
hh..	60.108a(c)(6)(vii - xi)	The following information shall be recorded no later than 45 days following the end of a discharge exceeding the thresholds for a flare: (vii) For each discharge greater than 500 lb SO_2 in any 24-hour period from any affected flare, the cumulative quantity of H_2S and SO_2 released into the atmosphere. For releases controlled by flares, assume 99-percent conversion of reduced sulfur or total sulfur to SO_2. (viii) The steps that the permittee took to limit the emissions during the discharge. (ix) The root cause analysis and corrective action analysis conducted as required in §60.103a(d), including an identification of the affected facility, the date and duration of the discharge, a statement noting whether the discharge resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under §60.103a(e). (x) For any corrective action analysis for which corrective actions are required in §60.103a(e), a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates. (xi) For each discharge from any affected flare that is the result of a planned startup or shutdown of a refinery process unit or ancillary equipment connected to the affected flare, a statement that a root cause analysis and corrective action analysis are not necessary because the permittee followed the flare management plan.
60.7 Ja	*Recordkeeping Requirements from 40 CFR 60, subpart A as required by subpart*	
ii.	60.7(f)	The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent

		form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
jj.	60.7(f)(1)	This paragraph applies to permittees required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under 60.7(f) of this section, the permittee shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.
kk.	60.7(f)(3)	The Administrator or delegated authority, upon notification to the source, may require the permittee to maintain all measurements as required by 60.7(f), if the Administrator determines these records are required to more accurately assess the compliance status of the affected source.

(5) [40 CFR 61, Subpart FF] NATIONAL EMISSION STANDARD FOR BENZENE WASTE OPERATIONS
The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR Part 61, Subpart FF including the following sections:

61.354 Monitoring of operations		
a.	61.354(c)(3)	The permittee shall install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor the control device operation as specified in the following paragraphs, unless alternative monitoring procedures or requirements are approved for that facility by the Administrator. The permittee shall inspect at least once each operating day the data recorded by the monitoring equipment (e.g., temperature monitor or flow indicator) to ensure that the control device is operating properly. - For a flare, a monitoring device in accordance with 40 CFR 60.18(f)(2) equipped with a continuous recorder

b.	61.354(e)	An alternative operation or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.
61.356 Recordkeeping Requirements		
c.	61.356(f)	The permittee using a closed-vent system and control device (flare) in accordance with 61.349 shall maintain the following records. The documentation shall be retained for the life of the control device.
d.	61.356(f)(1)	Maintain records of a statement signed and dated by the owner or operator certifying that the closed-vent system and control device is designed to operate at the documented performance level when the waste management unit vented to the control device is or would be operating at the highest load or capacity expected to occur.
e.	61.356(f)(2)(i)(D)	(2) If engineering calculations are used to determine control device performance in accordance with 61.349(c), then a design analysis for the control device that includes for example: (i) Specifications, drawings, schematics, and piping and instrumentation diagrams prepared by the permittee or the control device manufacturer or vendor that describe the control device design based on acceptable engineering texts. The design analysis shall address the following vent stream characteristics and control device operating parameters: (D) For a flare, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also consider the requirements specified in 40 CFR 60.18 of subpart A.
f.	61.356(f)(3)	(3) If performance tests are used to determine control device performance in accordance with 61.349(c) of this subpart: (i) A description of how it is determined that the test is conducted when the waste management unit or treatment process is operating at the highest load or capacity level. This description shall include the estimated or design flow rate and organic content of each vent stream and definition of the acceptable operating ranges of key process and

		control parameters during the test program. (ii) A description of the control device including the type of control device, control device manufacturer's name and model number, control device dimensions, capacity, and construction materials. (iii) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis. (iv) All test results.
g.	61.356(j)	For each control device, the permittee shall maintain documentation that includes the following information regarding the control device operation: (1) Dates of startup and shutdown of the closed-vent system and control device. (2) A description of the operating parameter (or parameters) to be monitored to ensure that the control device will be operated in conformance with these standards and the control device's design specifications and an explanation of the criteria used for selection of that parameter (or parameters). This documentation shall be kept for the life of the control device. (3) Periods when the closed-vent system and control device are not operated as designed including all periods and the duration when: (i) Any valve car-seal or closure mechanism required under 61.349(a)(1)(ii) is broken or the by-pass line valve position has changed. (ii) The flow monitoring devices required under 61.349(a)(1)(ii) indicate that vapors are not routed to the control device as required. (7) If a flare is used, then the owner or operator shall maintain continuous records of the flare pilot flame monitoring and records of all periods during which the pilot flame is absent.
61.349 Standards: Closed-vent systems and control devices		

h.	61.349(f)	Each closed-vent system and control device shall be visually inspected initially and quarterly thereafter. The visual inspection shall include inspection of ductwork and piping and connections to covers and control devices for evidence of visible defects such as holes in ductwork or piping and loose connections
i.	61.349(g)	Except as provided in 61.350 of this subpart, if visible defects are observed during an inspection, or if other problems are identified, or if detectable emissions are measured, a first effort to repair the closed-vent system and control device shall be made as soon as practicable but no later than 5 calendar days after detection. Repair shall be completed no later than 15 calendar days after the emissions are detected or the visible defect is observed.

(6) Hydrogen Sulfide (H_2S) CEM Requirements:
Prior to the installation of the continuous hydrogen sulfide monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 7. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous hydrogen sulfide monitoring system meets the requirements of Performance Specification 7. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

(7) Hydrogen Sulfide (H_2S) CEM Requirements:
The permittee shall install, calibrate, maintain, and operate continuous monitoring systems as follows:

a. an instrument for continuously monitoring and recording the concentration (dry basis) of H_2S in fuel gases before being burned in any fuel gas combustion device.

i. The span value for this instrument is 425 mg/dscm H_2S (300 ppm H_2S).

ii. Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H_2S in the fuel gas being burned.

iii. The performance evaluations for this H_2S monitor under 40 CFR 60.13(c) shall use Performance Specification 7. Method 11, 15, 15A, or 16 shall be used for conducting the relative accuracy evaluations.

[Authority for term: 40 CFR 60.105(a)(4)(i) and 40 CFR 60.107a(a)(2)(i)]

b. The permittee shall operate and maintain equipment to continuously monitor and record hydrogen sulfide content of the gases burned in these flares in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous hydrogen sulfide monitoring system including, but not limited to:

i. Concentration of hydrogen sulfide in the gases discharged to the flare, in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;

ii. Concentration of hydrogen sulfide in the gases discharged to the flare, in units of the applicable standard(s) and in the appropriate averaging period;

iii. results of quarterly cylinder gas audits;

iv. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

v. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

vi. hours of operation of the flare, continuous hydrogen sulfide monitoring system;

vii. the date, time, and hours of operation of the flare unit without the continuous hydrogen sulfide monitoring system;

viii. the date, time, and hours of operation of the flare during any malfunction of the continuous hydrogen sulfide monitoring system; and

ix. the reason (if known) and the corrective actions taken (if any) for each such event in b.vii. and b.viii., above.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F]

TOTAL SULFUR (TS) CEM REQUIREMENTS

(8) Prior to the installation of the continuous total sulfur monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 5. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous total sulfur monitoring system meets the requirements of Performance Specification 5. Once received, the letter/document of certification shall be

maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendix B]

(9) The permittee shall install, calibrate, maintain, and operate continuous monitoring systems as follows:

a. The owner or operator shall install, operate and maintain each total sulfur monitor according to Performance Specification 5 of Appendix B to part 60.

i. The span value should be determined based on the maximum sulfur content of gas that can be discharged to the flare (e.g., roughly 1.1 to 1.3 times the maximum anticipated sulfur concentration), but may be no less than 5,000 ppmv. A single dual range monitor may be used to comply with the requirements of this paragraph and 60.107a(a)(2) provided the applicable span specifications are met.

ii. The permittee shall conduct performance evaluations of each total sulfur monitor according to the requirements in 60.13(c) and Performance Specification 5 of Appendix B to part 60. For flares that routinely have flow, the permittee of each total sulfur monitor shall use EPA Method 15A of Appendix A-5 to part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10-1981 (incorporated by reference-see 60.17) is an acceptable alternative to EPA Method 15A of Appendix A-5 to part 60. The alternative relative accuracy procedures described in section 16.0 of Performance Specification 2 of Appendix B to part 60 (cylinder gas audits) may be used for conducting the relative accuracy evaluations.

[Authority for term: 40 CFR 60.13(c) and 40 CFR 60.107a(e)]

(10) The permittee shall operate and maintain equipment to continuously monitor and record total sulfur from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous total sulfur monitoring system including, but not limited to:

a. Concentration of total sulfur in parts per million in the gas discharged to the flare for each cycle time of the analyzer pursuant to 40 CFR Part 60.7' ;

b. Concentration of total sulfur in the gases discharged to the flare, in units of the applicable standard(s) and in the appropriate averaging period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s), if applicable;

f. hours of operation of the flare and continuous total sulfur monitoring system;

g. the date, time, and hours of operation of the flare without the continuous total sulfur monitoring system;

h. the date, time, and hours of operation of the flare during any malfunction of the continuous total sulfur monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in g. and h. above.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

[Authority for term: 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F]

(11) FINDINGS AND ORDERS:
The following monitoring and recordkeeping requirements are required by special order of the Director in the August 19, 1987 Director's Final Findings and Orders. The permittee shall maintain records which provide the following information for each known relief which results in non-smokeless operation of the flare(s):

a. the date, time and duration of the relief;

b. the flare(s) involved;

c. the process unit(s) associated with the relief;

d. the cause of the relief; and

e. an explanation of why the relief was non-smokless.

(12) ALTERNATIVE MONITORING PLAN (AMP):

a. Approved use of Infra-red (IR) and Ultraviolet (UV) camera as a backup to pilot thermocouples:

On October 17, 2013, U.S. EPA approved an Alternative Monitoring Parameter (AMP) request submitted on August 9, 2013, to use two IR monitors and one UV camera per flare as a permanent back-up in case the primary monitoring by pilot thermocouples are not operating properly.

b. Approved use of ultrasonic flow meter to determine velocity in place of Test Methods 2, 2A, 2C, or 2D in Appendix A to 40 CFR Part 60:

On October 13, 2010, EPA approved BP-Husky's request submitted on August 2, 2010 to use an ultrasonic flow meter to determine flare gas velocity in place of

Test Methods 2, 2A, 2C, or 2D in Appendix A to 40 CFR Part 60, On April 5, 2013, EPA approved BP-Husky's request submitted March 25, 2013 to also use an optical flow meter.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP From PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

63.655 – Reporting Requirements		
a.	63.655(g)	Submit Periodic Reports no later than 60 days after the end of each month period when any of the compliance exceptions specified in 63.655(g)(1) through (g)(6) occur.
b.	63.655(g)(6)(i)(B)	For miscellaneous process vents, periods of excess emissions shall be identified in the Periodic Reports and shall be used to determine compliance with the emission standards. (6)(i)(B) Period of excess emission include an operating day when all pilot flames of a flare are absent.
c.	63.655(g)(6)(ii) and 40 CFR 63, Table 10	For miscellaneous process vents, excess emissions shall be reported for the operating parameters specified in table 10 of this subpart unless other site-specific parameter(s) have been approved by the operating permit authority. From Table 10: Report the times and durations of all periods when all pilot flames for a flare are absent or the monitor is not operating.

(2) [40 CFR 63, Subpart UUU] NATIONAL EMISSION STANDARDS FOR HAPS FOR PETROLEUM REFINERIES
The permittee shall comply with the applicable reporting requirements under this subpart including the following sections:

a.	63.1575(a) and Table 43	Submit the semiannual compliance report in accordance with 63.1575(b). If there are not deviations from any emission limitation or work practice standard that applies to the permittee, a statement that there were no deviations from the standards during the reporting period and that no continuous emission monitoring system was inoperative, inactive, out-of-control, repaired, or adjusted; and if the permittee has a deviation from any emission limitation or

		work practice standard during the reporting period, the report must contain the information in 63.1575(d) or (e)
b.	63.1575(b)	Each semi-annual report shall be submitted as required in (b)(1) through (b)(5).
c.	63.1575(c)(1) thru (c)(4)	The compliance report must contain the information required in paragraphs (c)(1) through (4) of this section. (1) Company name and address. (2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report. (3) Date of report and beginning and ending dates of the reporting period. (4) If there are no deviations from any emission limitation that applies to you and there are no deviations from the requirements for work practice standards, a statement that there were no deviations from the emission limitations or work practice standards during the reporting period and that no continuous emission monitoring system or continuous opacity monitoring system was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted
d.	63.1575(d)	For each deviation from an emission limitation and for each deviation from the requirements for work practice standards that occurs at an affected source where you are not using a continuous opacity monitoring system or a continuous emission monitoring system to comply with the emission limitation or work practice standard in this subpart, the compliance report must contain the information in 63.1575(c)(1) through (3) of this section and the information in 63.1575(d)(1) through (3) of this section.
e.	63.1575(d)(1) thru (d)(3)	(1) The total operating time of each affected source during the reporting period. (2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken. (3) Information on the number, duration, and cause for monitor downtime incidents (including unknown cause, if applicable, other than downtime associated with zero and span and other daily calibration checks).

(3) [60.103a] FLARE REQUIREMENTS - 40 CFR Parts 60 Subpart Ja
The permittee shall comply with the applicable reporting requirements in 40 CFR Parts 60 Subpart Ja, including, the following sections by no later than November 11, 2015:

60.103a - Design, equipment, work practice or operational standards		
a.	60.103a(b)(1)	The permittee required to develop and implement a written flare management plan as described in 60.103a(a) must submit the plan to the Administrator as described in 60.103a(b)(1) through (3) of this section. (1) The permittee of a modified flare must develop and implement the flare management plan by no later than November 11, 2015 or upon startup of the modified flare, whichever is later.
b.	60.103a(b)(2)	The permittee must comply with the plan as submitted by the date specified in 60.103a(b)(1). The plan should be updated periodically to account for changes in the operation of the flare, such as new connections to the flare or the installation of a flare gas recovery system, but the plan need be re-submitted to the Administrator only if the permittee adds an alternative baseline flow rate, revises an existing baseline as described in 60.103a(a)(4), installs a flare gas recovery system or is required to change flare designations and monitoring methods as described in 60.107a(g). The permittee must comply with the updated plan as submitted.
c.	60.103a(b)(3)	All versions of the flare management plan submitted to the Administrator shall also be submitted to the following address: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, U.S. EPA Mailroom (E143-01), Attention: Refinery Sector Lead, 109 T.W. Alexander Drive, Research Triangle Park, NC 27711. Electronic copies in lieu of hard copies may also be submitted to refinerynsps@epa.gov.
60.107a – Moniotoring of Emissions and Operations for Flares		
d.	60.107a(i) and (i)(2)(i)	*Excess Emissions.* For the purpose of reports required by 60.7(c), periods of excess emissions for flares subject to the concentration requirement in 60.103a(h) are defined as specified in 60.107a(i)(1) through (5). Determine a rolling 3-hour or a rolling daily average as the arithmetic average of the applicable 1-hour averages (e.g., a rolling 3-hour average is the arithmetic average of three contiguous 1-

		hour averages). (i)(2)(i) *H_2S concentration limits for flares*. (i) Each rolling 3-hour period during which the average concentration of H_2S as measured by the H_2S continuous monitoring system required under 60.107a(a)(2) exceeds 162 ppmv.
60.108a – Reporting Requirements		
e.	60.108a(d)	The permittee shall submit an excess emissions report for all periods of excess emissions according to the requirements of 60.7(c) except that the report shall contain the information specified in 60.108a(d)(1) through (7) of this section. NOTE: The information required by 40 CFR 60.7(c) is covered under Ohio EPA's CEM language for the H_2S CEM.
f.	60.108a(d)(1)-(7)	The excess emissions report shall include the following: (1) The date that the excedence occurred; (2) An explanation of the excedence; (3) Whether the excedence was concurrent with a startup, shutdown, or malfunction of an affected facility or control system; and (4) A description of the action taken, if any. (5) The information described in 60.108a(c)(6) for all discharges listed in paragraph (c)(6). (6) For any periods for which monitoring data are not available, any changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability. (7) A written statement, signed by a responsible official, certifying the accuracy and completeness of the information contained in the report.
g.	60.7(a)(3) – (a)(5)	The permittee shall submit notifications of initial startup, notification of physical or operational changes, and notification of demonstration with continuous monitoring

		system by the time period specified in 60.7(a)(3) – (a)(5).

(4) [40 CFR 61, Subpart FF] NATIONAL EMISSION STANDARD FOR BENZENE WASTE OPERATIONS
The permittee shall submit reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 61, Subpart FF, including the following sections:

a.	61.357(d)(7) and (d)(7)(iv)(F)	The permittee shall submit a quarterly report to the Administrator that includes: (d)(7)(iv)(F) For a control device monitored in accordance with 61.354(c) of this subpart, each period of operation monitored during which any of the following conditions occur, as applicable to the control device: each period in which the pilot flame of a flare is absent.

(5) Hydrogen Sulfide (H_2S) CEM Reports
The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous hydrogen sulfide monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of hydrogen sulfide emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each excedence, as well as, the reason (if known) and the corrective actions taken (if any) for each excedence. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous hydrogen sulfide and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total hydrogen sulfide emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted, the results of any relative accuracy test audit showing the continuous hydrogen sulfide monitor out-of-control and the compliant results following any corrective actions;

xi. total duration** of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility [pursuant 40 CFR 60.7(d)(1)];

xii. total duration** of CEM downtime for the reporting period, and if the total period CEM downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime*** of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation [pursuant 40 CFR 60.7(d)(1)]; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in b.xi. and b.xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* Where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report.

** Per OEPA request, the refinery agrees to include in each quarterly CEMS report the date, time, and duration of each excess emission event and the date, time and duration of each downtime event.

*** Downtime is time when the unit emission source is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

[Authority for term: 40 CFR 60.7]

(6) Total Sulfur (TS) CEM Reports
The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous total sulfur monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of total sulfur emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-73, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each excedence, as well as, the reason (if known) and the corrective actions taken (if any) for each excedence. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

xiv. the facility name and address;

xv. the manufacturer and model number of the continuous total sulfur and other associated monitors;

xvi. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

xvii. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

xviii. the total sulfur emissions for the calendar quarter (tons);

xix. the total operating time (hours) of the emissions unit;

xx. the total operating time of the continuous total sulfur monitoring system while the emissions unit was in operation;

xxi. results and dates of quarterly cylinder gas audits;

xxii. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s)), if applicable;

xxiii. unless previously submitted, the results of any relative accuracy test audit showing the continuous total sulfur monitor out-of-control and the compliant results following any corrective actions;

xxiv. total duration** of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility [pursuant 40 CFR 60.7(d)(1)];

xxv. total duration** of CEM downtime for the reporting period, and if the total period CEM downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime*** of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation [pursuant 40 CFR 60.7(d)(1)]; and

xxvi. the reason (if known) and the corrective actions taken (if any) for each event in b.xi. and b.xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* Where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report.

** Per OEPA request, the refinery agrees to include in each quarterly CEMS report the date, time, and duration of each excess emission event and the date, time and duration of each downtime event.

*** Downtime is time when the unit emission source is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

[Authority for term: 40 CFR 60.7]

(7) [FINDINGS AND ORDERS]
The following reporting requirements are required by special order of the Director in the August 19, 1987 Director's Findings and Orders. The permittee shall submit reports which provide the information in the records required under the Monitoring and Recordkeeping section for each known relief which results in non-smokeless operation of the flare(s).

These reports should be submitted within 15 days of the end of each calendar quarter.

(8) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

No visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours

Applicable Compliance Method:

If required, compliance shall be demonstrated through visible emission observations performed in accordance with Method 22 of 40 CFR Part 60, Appendix A. The observation period shall be 2 hours.

b. Emission Limitation, applies by November 11, 2015:

The permittee shall not burn in any fuel gas combustion device any fuel gas that contains a hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf).

Applicable Compliance Method:

The monitoring and recordkeeping requirements in d) shall be used to demonstrate compliance. If required, the permittee shall demonstrate compliance using the methods and procedures of 40 CFR 60.106a(j). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

c. Emission Limitation:

Demonstration that the minimum heating value of the gas being combusted in each flare is greater than 300 Btu/scf

Applicable Compliance Method:

If required, the net heating value of the gas being combusted in a flare may be calculated using a continuous BTU analyzer that is operated, maintained and calibrated according to manufacturer recommendations.

Net heating valu may also be determined by the following equation:

$$H_T = K\sum_{i=1}^{n} C_i H_i$$

Where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25°C and 760 mmHg, but the standard temperature for determining the volume corresponding to one mole is 20 °C.

K = Constant = $1.740\times10^{-7}\left(\frac{1}{ppmv}\right)\left(\frac{\text{g-mole}}{\text{scm}}\right)\left(\frac{\text{MJ}}{\text{kcal}}\right)$

where the standard temperature for (g-mole/scm) is 20 °C.

C_i = Concentration of sample component i in ppmv on a wet basis, as measured for organics by Test Method 18 and measured for hydrogen and carbon monoxide by American Society for Testing and Materials (ASTM) D1946-77 or 90 (Reapproved 1994) (incorporated by reference as specified in 63.14).

H_i = Net heat of combustion of sample component i, kcal/g-mole at 25°C and 760 mmHg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in 63.14) if published values are not available or cannot be calculated.

n = number of sample components

[Authority for term: 40 CFR Part 63.11(b)(6)(ii) and 40 CFR Part 60.18(f)(3)]

d. Emission Limitation:

the maximum exit velocity requirement of less than 60 feet per second for each flare

Applicable Compliance Method:

If required, in accordance with 40 CFR 63.11(b)(7)(i), steam-assisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec). The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60 of this chapter, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

NOTE: An Alternative Monitoring Plan (AMP) approved by U.S. EPA (letter dated April 5, 2013) allows the use of ultrasonic flow meters or optical flow meters that are calibrated and maintained to measure the flow rate for determining the flare exit velocity. This AMP would be an alternative to Method 2, 2A, 2C, or 2D. The flow meters are acceptable for measuring flare gas flow rate provided the

calibration sheets are included in test reports to verify that meter calibration is current.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) [40 CFR 63] FLARE REQUIREMENTS - 40 CFR Part 63, Subpart A
The permittee shall comply with the applicable testing requirements in 40 CFR Part 63, Subpart A, including, the following sections:

a.	63.11(b)(4)	Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Test Method 22 in appendix A of part 60 of this chapter shall be used to determine the compliance of flares with the visible emission provisions of this part. The observation period is 2 hours and shall be used according to Method 22.

(3) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable testing requirements in 40 CFR 63, subpart CC, including the following sections for equipment subject to the Group 1 Miscellaneous Process Vents requirements:

63.645 Test Methods and Procedures for Misc. Process Vents		
a.	63.645(a), (b), and (c)	To demonstrate compliance with the miscellaneous process vent provisions in 63.643, using a flare as the control device, the permittee shall test for visible emissions, net heating value and exit velocity per 63.116 except for 63.116 of 40 CFR 63, subpart G. NOTE: Heating value can be calculated using a continuous BTU analyzer that is operated, maintained and calibrated according to manufacturer's recommendations.
From 40 CFR 63.116 of subpart G as referenced in 63.645 above		
b.	63.116(a)	When a flare is used to comply with 63.643(a)(1), the permittee shall comply with 63.116(a)(1) through (3). The permittee is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration.
c.	63.116(a)(1)	Conduct a visible emission test using the techniques specified in 63.11(b)(4).
d.	63.116(a)(2)	Determine the net heating value of the gas being combusted using the techniques specified in 63.11(b)(6).

		Heating value can be calculated using a continuous BTU analyzer that is operated, maintained and calibrated according to manufacturer's recommendations.
e.	63.116(a)(3)	Determine the exit velocity using the techniques specified in either 63.11(b)(7)(i) (and 63.11(b)(7)(iii), where applicable) or 63.11(b)(8), as appropriate. NOTE: EPA approved BP-Husky's AMP request to use an ultrasonic or an optical flow meter in place of the Test Methods 2, 2A, 2C, or 2D in Appendix A to 40 CFR Part 60.

(4) [40 CFR 60, Subpart Ja] STANDARDS OF PERFORMANCE FOR PETROLEUM REFINERIES for WHICH CONSTRUCTION, RECONSTRUCTION, or MODIFICATION COMMENCED AFTER MAY 14, 2007.
The permittee shall comply with the applicable testing requirements required under 40 CFR Part 60, Subpart Ja including, but not limited to, the following sections by no later than November 11, 2015:

a.	60.104a(j)(1) – (3)	The permittee shall determine compliance with the applicable H_2S emissions limit in 60.102a(g)(1) for a fuel gas combustion device or the concentration requirement in 60.103a(h) for a flare according to the following test methods and procedures: (1) Method 1 of appendix A-1 to part 60 for sample and velocity traverses; (2) Method 2 of appendix A-1 to part 60 for velocity and volumetric flow rate; (3) Method 3, 3A, or 3B of appendix A-2 to part 60 for gas analysis. The method ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see 60.17) is an acceptable alternative to EPA Method 3B of appendix A-2 to part 60;
b.	60.104a(j)(4)	(4) EPA Method 11, 15 or 15A of Appendix A-5 to Part 60 or EPA Method 16 of Appendix A-6 to Part 60 for determining the H_2S concentration for affected facilities using an H_2S monitor as specified in 60.107a(a)(2). The method ANSI/ASME PTC 19.10-1981 (incorporated by reference—see 60.17) is an acceptable alternative to EPA Method 15A of Appendix A-5 to Part 60. The permittee may demonstrate compliance based on the mixture used in the fuel gas combustion device or flare or for each individual fuel gas stream used in the fuel gas combustion device or flare.

		(i) For Method 11 of Appendix A-5 to Part 60, the sampling time and sample volume must be at least 10 minutes and 0.010 dscm (0.35 dscf). Two samples of equal sampling times must be taken at about 1-hour intervals. The arithmetic average of these two samples constitutes a run. For most fuel gases, sampling times exceeding 20 minutes may result in depletion of the collection solution, although fuel gases containing low concentrations of H2S may necessitate sampling for longer periods of time. (ii) For Method 15 of Appendix A-5 to Part 60, at least three injects over a 1-hour period constitutes a run. (iii) For Method 15A of appendix A-5 to part 60, a 1-hour sample constitutes a run. The method ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see 60.17) is an acceptable alternative to EPA Method 15A of Appendix A-5 to Part 60. (iv) If monitoring is conducted at a single point in a common source of fuel gas as allowed under 60.107a(a)(2)(iv), only one performance test is required. That is, performance tests are not required when a new affected fuel gas combustion device or flare is added to a common source of fuel gas that previously demonstrated compliance.
c.	60.107a(e)(1)(ii)	The permittee shall conduct performance evaluations of each total sulfur monitor according to the requirements in 60.13(c) and Performance Specification 5 of Appendix B to Part 60. For flares that routinely have flow, the permittee of each total sulfur monitor shall use EPA Method 15A of Appendix A-5 to part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10-1981 (incorporated by reference-see 60.17) is an acceptable alternative to EPA Method 15A of Appendix A-5 to Part 60. The alternative relative accuracy procedures described in Section 16.0 of Performance Specification 2 of Appendix B to Part 60 (cylinder gas audits) may be used for conducting the relative accuracy evaluations. For flares that do not receive routine flow, the alternative relative accuracy procedures described in Section 16.0 of Performance Specification 2 of Appendix B to Part 60 (cylinder gas audits) may be used for conducting the relative accuracy evaluations, except that it is not necessary to include as much of the sampling probe or sampling line as practical.

(5) Hydrogen Sulfide (H_2S) CEMs Testing Requirements
The permittee shall conduct certification tests (see note below) of the continuous hydrogen sulfide monitoring system in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specification 7 and ORC Section 3704.03(I).

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous hydrogen sulfide monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7 and ORC Section 3704.03(I).

Ongoing compliance with the hydrogen sulfide emission limitation(s) contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60, Appendix F.

NOTE: The permittee is required to be in compliance with 40 CFR Part 60 Subpart Ja by November 11, 2015.

[Authority for Term: 40 CFR 60.8; 40 CFR 60.13, 40 CFR Part 60, Appendices B & F and 60.107a(e)(2)]

(6) Total Sulfur (TS) CEM Testing Requirements
The permittee shall conduct certification tests (see Note below) of the continuous total sulfur monitoring system pursuant to 40 CFR Part 60, Appendix B, Performance Specification 5 and ORC Section 3704.03(I).

Personnel from the Ohio EPA, Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. The test results shall be submitted to Ohio EPA, through Air Services eBusiness Center, pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous total sulfur monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 5 and ORC Section 3704.03(I).

Ongoing compliance with the total sulfur emissions limitation(s) contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping section of this permit;

and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

NOTE: The permittee is required to be in compliance with 40 CFR Part 60 Subpart Ja by November 11, 2015.

[Authority for Term: 40 CFR 60.8; 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F]

g) Miscellaneous Requirements

(1) The table below summarizes which emissions units are controlled by the Hydrocarbon flare system and which rule(s) apply:

Process Requirements	OAC 3745-21-09(UU)	40 CFR 63 CC – G1 process vent	40 CFR 63 UUU		40 CFR 60 subpart Ja
Flare Requirements	OAC 3745-21-09(DD)(10)(d)	40 CFR 63.11	40 CFR 63.11	40 CFR 60.18	
P017 Coker 2 (shared blowdown drum w/Coker 3)	X	X			
P021 Alky 1	X	X			
P022 Alkyl 2	X	X			
P023 Alkyl 3 (vented through Alkyl 2 blowdown drum)	X	X			
P025 Oily Water System (includes benzene stripper)	X			(40 CFR 61 subpart FF)	
P028 ADHT		X			
P029 BGOT		X			
P036 Coker 3 (shared blowdown drum with Coker 2)		X			
P041 Isocracker 2		X			
P043 Poly Plant flash drum	X	X			
P007 FCCU Feed drum vent		X			
P803 Reformer 3 process unit			X		X

Note to above table: Throughout the refinery, there are pump and compressor seals that are vented to the flare system to comply with 40 CFR 63 Subpart CC (Refinery MACT I) or 40 CFR 60 Subpart GGG or GGGa leak detection and repair requirements. These seals must be vented to a flare that complies with 40 CFR 60.18. Both hydrocarbon flares comply with 60.18 or with identical requirements in 63.11. The process units containing such seals are not specifically listed in the above table.

41. Emissions Unit Group -P5-P055-P058 Cooling Towers: P055,P056,P057,P058,

EU ID	Operations, Property and/or Equipment Description
P055	CT#1- 40000 gpm non-contact cooling tower
P056	CT#3- 13000 gpm non-contact cooling tower
P057	CT#4 - 22000 gpm non-contact Cooling tower
P058	DHT 9840 gpm non-contact cooling tower

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by rule. See b)(2)a.
b.	OAC rule 3745-17-11(B)	*P055*: 111.5 lbs/hr of particulate emissions *P056*: 93.9 lbs/hr of particulate emissions *P057*: 101.9 lbs/hr of particulate emissions *P058*: 89.8 lbs/hr of particulate emissions
c.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a) and 63.640(c)(8), this emissions unit is subject to Subpart CC as a heat exchange system	In accordance with 63.640(h), the permittee of heat exchange systems subject to 40 CFR Part 63, Subpart CC, shall be in compliance with the existing source standards in 63.654 no later than

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	located at a plant site that is a major source as defined in section 112(a) of the Clean Air Act	October 29, 2012. See b)(2)b.
d.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)c.

(2) Additional Terms and Conditions

a. In accordance with OAC rule 3745-17-07(A)(2), it shall not be deemed a violation of OAC 3745-17-07(A) where the presence of uncombined water is the only reason for failure of a stack emission to meet the requirements of this rule.

b. The permittee of a heat exchanger system that meets the criteria of 40 CFR 63.640(c)(8) must comply with the requirements of paragraphs (c) through (g) of section 63.654.

c. Table 6 of 40 CFR 63, Subpart CC specifies the provisions of Subpart A that apply and those that do not apply to owners and operators of sources subject to 40 CFR 63, Subpart CC.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall test and record the TDS concentration, in mg/l, of the cooling water at least once per quarter as long as the reading is less than 10,000 mg/l. If a reading shows greater than 10,000 mg/l, then monitoring shall be increased to at least every week until 8 consecutive weeks show a TDS concentration below this level. The TDS concentration shall be measured using one of the following methods: 1) a conductivity meter, 2) Method 2540 C, "Total Dissolved Solids Dried at 180 Degrees C" from the most recent edition of "Standard Methods for the Examination of Water and Wastewater", or 3) other equivalent method approved by USEPA or Toledo Environmental Services.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) Quarterly, the permittee shall calculate and record the particulate emissions, in pounds per hour, using the equations specified in f)(1)b. through f)(1)f. of this permit for any TDS reading during that quarter which exceeds the limit stated in the table (mg/l) (if any). (TDS concentrations below the maximum TDS level stated below (mg/)l would not cause an excedence of the allowable lb/hr limit.)

Emission Unit	Max. TDS Level (mg/l)
P055	27,500
P056	72,000
P057	46,000
P058	91,000

[Authority for term: OAC rule 3745-77-07(C)(1)]

(3) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart CC, including the following sections, briefly summarized:

63.654 Heat Exchange Systems		
a.	63.654(c)	Perform monthly monitoring to identify leaks of total strippable VOC using the procedures in 63.654(c)(1) and (c)(2).
b.	63.654(c)(1)(ii)	For each closed loop recirculating heat exchange system, collect and analyze a sample from each cooling tower return line or any representative riser within the cooling tower prior to exposure to air for each heat exchange system.
c.	63.654(c)(3)	Determine the total strippable hydrocarbon concentration (in parts per million by volume (ppmv) as methane) at each monitoring location using the "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" Revision Number One, dated January 2003, Sampling Procedures Manual, Appendix P: Cooling Tower Monitoring, prepared by Texas Commission on Environmental Quality, January 31, 2003 (incorporated by reference—see 63.14) using a flame ionization detector (FID) analyzer for on-site determination as described in Section 6.1 of the Modified El Paso Method.
d.	63.654(c)(4)(i)	For a heat exchange system at an existing source, the permittee must comply with the monitoring frequency and leak action level as defined in 63.654(c)(4)(i) or comply with the monitoring frequency and leak action level as defined in

		63.654(c)(4)(ii). BPH has chosen 63.654(c)(4)(i) - Monitor monthly using a leak action level defined as a total strippable hydrocarbon concentration (as methane) in the stripping gas of 6.2 ppmv.
e.	63.654(c)(6)(ii)	For BPH heat exchange systems, a leak is defined in 63.654(c)(6)(ii) and is detected if a measurement value of the sample taken from a location specified in either 63.654(c)(1)(i), (c)(1)(ii), or (c)(2)(i) equals or exceeds the leak action level defined in 63.654(c)(4)(i)
f.	63.654(d)	If leaks are detected, repair the leak as soon as practicable but no later than 45 days, except as specified in 63.654(e) and (f). Actions for repair are cited in 63.654(d)(1) through (d)(5).
g.	63.654(e)	Optional additional monitoring requirements on cooling tower return lines when a leak is detected. See 63.654(c)(1).
h.	63.654(f)	Delay of Repair requirements. The permittee may delay the repair of a leaking heat exchanger when one of the conditions in 63.654(f)(1) or (f)(2) are met and the leak is less than the delay of repair action level specified in 63.654(f)(3). The owner or operator must determine if a delay of repair is necessary as soon as practicable, but no later than 45 days after first identifying the leak.
i.	63.654(g)	To delay the repair under 63.654(f), the permittee must record the information in 63.654(g)(1) through (4).
j.	63.655(i)	*Recordkeeping Requirements*: The owner or operator of a heat exchange system subject to the monitoring requirements in 63.654 (above), then comply with the recordkeeping requirements in 63.655(i)(4)(i) through (vi).

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation reports that identify all exceedances of the allowable particulate emission limitation stated in term b)(1)b. in pounds per hour.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES

The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections briefly summarized:

a.	63.655(e)	Submit a Notification of Compliance Status report within 150 days after the compliance dates specified in 63.640(l)(3) as described in 63.655(f) and submit periodic reports no later than 60 days after the end of each 6-month period as required by 40 CFR 63.655(g)(9).
b.	63.655(f) and (f)(1)(vi)	Info for the Notification of Compliance Status report that identifies those heat exchangers subject to this subpart.
c.	63.655(g)(9)(i)	For heat exchange systems, Periodic Reports must include the number of heat exchange systems at the plant site subject to the monitoring requirements in 63.654.
d.	63.655(g)(9)(ii)	For heat exchange systems, Periodic Reports must include the number of heat exchange systems at the plant site found to be leaking.
e.	63.655(g)(9)(iii)	For each monitoring location where the total strippable hydrocarbon concentration was determined to be equal to or greater than the applicable leak definitions specified in 63.654(c)(6), include the identification of the monitoring location (e.g., unique monitoring location or heat exchange system ID number), the measured total strippable hydrocarbon concentration, the date the leak was first identified, and, if applicable, the date the source of the leak was identified;
f.	63.655(g)(9)(iv)	For leaks that were repaired during the reporting period (including delayed repairs), include the identification of the monitoring location associated with the repaired leak, the total strippable hydrocarbon concentration measured during re-monitoring to verify repair, and the re-monitoring date (i.e., the effective date of repair); and
g.	63.655(g)(9)(v)	For each delayed repair, include the identification of the monitoring location associated with the leak for which repair is delayed, the date when the delay of repair began, the date the repair is expected to be completed (if the leak is not repaired during the reporting period), the total strippable hydrocarbon concentration and date of each monitoring event conducted on the delayed repair during the reporting period, and an estimate of the potential strippable hydrocarbon emissions over the reporting period associated with the delayed repair.

(3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation *for all cooling towers*:

Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitation for P055:

111.5 lbs/hr of particulate emissions

Applicable Compliance Method:

The particulate emissions shall be calculated as follows: [(actual gallons/hour) x (mg/liter TDS) x (0.0002) x (3.785 liters/gallon)] ÷ (453,592mg/lb) = particulate emissions, in lbs/hr

where:

Actual gallons/hour = the actual water flow rate;
mg/liter = the measured TDS level;
0.0002 = the maximum drift loss factor (based on AP42 1/95 edition);
60 min/hr = conversion factor for minutes to hours;
3.785 liters/gallon = conversion factor for liters to gallons; and
453,592 mg/lb = conversion factor for milligrams to pounds.

c. Emission Limitation for P056:

93.9 lbs/hr of particulate emissions

Applicable Compliance Method:

The particulate emissions shall be calculated as follows: (actual gallons/hour) x (mg/liter TDS) x (0.0002) x (3.785 liters/gallon) ÷ (453,592 mg/lb) = particulate emissions, in lbs/hr

where:

Actual gallons/hour = the actual water flow rate;
mg/liter = the measured TDS level;
0.0002 = the maximum drift loss factor (based on AP42 1/95 edition);
60 min/hr = conversion factor for minutes to hours;
3.785 liters/gallon = conversion factor for liters to gallons; and
453,592 mg/lb = conversion factor for milligrams to pounds.

d. Emission Limitation for P057:

101.9 lbs/hr of particulate emissions

Applicable Compliance Method:

The particulate emissions shall be calculated as follows: (actual gallons/hour) x (mg/liter TDS) x (0.0002) x (3.785 liters/gallon) ÷ (453,592 mg/lb) = particulate emissions, in lbs/hr

where:

Actual gallons/hour = the actual water flow rate;
mg/liter = the measured TDS level;
0.0002 = the maximum drift loss factor (based on AP42 1/95 edition);
60 min/hr = conversion factor for minutes to hours;
3.785 liters/gallon = conversion factor for liters to gallons; and
453,592 mg/lb = conversion factor for milligrams to pounds.

e. Emission Limitation for P058:

89.8 lbs/hr of particulate emissions

Applicable Compliance Method:

The particulate emissions shall be calculated as follows: (Actual gallons/hour) x (mg/liter TDS) x (0.0002) x (60 min/hr) x (3.785 liters/gallon) ÷ (453,592 mg/lb) = particulate emissions, in lbs/hr

where:

Actual gallons/hour = the actual water flow rate;
mg/liter = the measured TDS level;
0.0002 = the maximum drift loss factor (based on AP42 1/95 edition);

60 min/hr = conversion factor for minutes to hours;
3.785 liters/gallon = conversion factor for liters to gallons; and
453,592 mg/lb = conversion factor for milligrams to pounds.

[Authority for term: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

42. Emissions Unit Group -P6-P059 P060 P063 Fugitives Only: P059,P060,P063,

EU ID	Operations, Property and/or Equipment Description
P059	Sat Gas Plant Fugitives. The Sat Gas Unit stabilizes feed (gasoline boiling range material) from the Naphtha Treater, The Sat Gas Unit also separates the propane and butane from a gasoline fraction. Emissions from the Naphtha Treater and butane vapor recovery (Z003) are reported under this emissions unit. The Naphtha Treater removes sulfur and nitrogen from its feed as well as hydrogenating some of the feed stocks in preparation for processing in the Sat Gas Plant.
P060	Unsat Gas Plant Fugitives: Unsat Gas Plant takes FCC stripper tower bottoms, and separates the light ends C3 and C4 from the gasoline fractions, and treats the gasoline fractions to remove odor, water and salts. The only emissions are from equipment fugitives.
P063	LPG Unit Fugitives: LPG Unit stores and cools dried propane and propylene for testing and loading into trucks. The storage facilities include 12 product drums, 2 caustic treater drums, a cooler, pumps, and a 55,000-barrel propylene cavern. The only emissions are from equipment fugitives.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	*Equipment Leaks* OAC rule 3745-21-09(T)	See b)(2)a.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
c.	*Equipment Leaks* 40 CFR Part 63, Subpart CC (40 CFR 63.640-656)	In accordance with 40 CFR 63.648(a), the permittee shall comply with the applicable equipment leak provisions of 40 CFR 60, Subpart VV.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 40 CFR 63.640(c)(4) and 63.648(a)(1), this emissions unit has equipment in organic HAP service and is subject to the Refinery MACT LDAR program]	See b)(2)b.
d.	*Equipment Leaks (Applies to EU P059)* 40 CFR Part 60, Subpart GGG	See b)(2)c.
e.	*Equipment Leaks (Applies to EU's P060 and P063)* 40 CFR Part 60, Subpart GGGa	See b)(2)d.

(2) Additional Terms and Conditions

a. The leak detection and repair requirements stated in OAC rule 3745-21-09(T), applicable to this emissions unit are subsumed into the facility-wide leak detection and repair requirements stated in term B.2. of Section B. of this permit.

b. The leak detection and repair requirements stated in 40 CFR Part 63 subpart CC, applicable to this emissions unit are subsumed into the facility-wide leak detection and repair requirements stated in term B.2. of Section B. of this permit.

c. (*applicable to EU P059)*
In accordance with 40 CFR Part 63.640(p)(1), equipment leaks that are subject to the provisions of both 40 CFR Part 60, Subpart GGG and 40 CFR Part 63, Subpart CC are required to comply only with the provisions specified in 40 CFR Part 63, subpart CC. (See term B.2. of Section B. for the LDAR terms)

d. (*applicable to EU's P060 and P063)*
In accordance with 60.592a, the permittee shall comply with 60.482-1a to 60.482-10a of 40 CFR 60 Subpart VVa, except as provided in 60.593a.

In accordance with 40 CFR Part 63.640(p)(2), equipment leaks that are subject to the provisions of both 40 CFR Part 60 Subpart GGGa and 40 CFR Part 63 Subpart CC are required to comply only with the provisions specified in 40 CFR Part 60 Subpart GGGa. (See term B.2. of Section B. for the LDAR terms)

c) Operational Restrictions

(1) See term B.2.c) of Section B. for the LDAR terms.

d) Monitoring and/or Recordkeeping Requirements

(1) See term B.2.d). of Section B. for the LDAR terms.

e) Reporting Requirements

(1) See term B.2.e). of Section B. for the LDAR terms.

f) Testing Requirements

(1) See term B.2.f). of Section B. for the LDAR terms.

g) Miscellaneous Requirements

(1) None.

43. Emissions Unit Group -P7-P044 P045 Emergency Diesel Engines #1 and #2

EU ID	Operations, Property and/or Equipment Description
P044	Diesel Engine #1: Emergency fire water pump powered by Cummins diesel engine with a maximum rated input capacity of 1.7 mmBtu/hr (688 hp)
P045	Diesel Engine #2: Emergency fire water pump powered by Cummins diesel engine with a maximum rated input capacity of 1.7 mmBtu/hr (688 hp)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
b.	OAC rule 3745-17-11(B)(5)(b)	Particulate emissions (PE) shall not exceed 0.062 lb/mmBtu of actual heat input.
c.	OAC rule 3745-18-06(B)	Exempt, see b)(2)a.
d.	40 CFR Part 63 Subpart ZZZZ (40 CFR 63.6580 to 63.6675) [In accordance with 40 CFR 63.6585, this emissions unit is a stationary internal combustion engine (ICE) subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines. This unit is an	Exempt, see b)(2)b. and b)(2)c.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	existing emergency stationary compression ignition (CI) reciprocating internal combustion engine (RICE), located at a major source for hazardous air pollutants (HAPs) greater than 500 horsepower (hp)]	

(2) Additional Terms and Conditions

a. Pursuant to OAC rule 3745-18-06(B), stationary internal combustion engines which have rated heat input capacities equal to, or less than, ten MM Btu per hour total rated capacity are exempt from OAC rule 3745-18-06(G) (0.5 pounds of sulfur dioxide per mmBtu actual heat input).

b. Pursuant to 40 CFR Part 63.6590(b)(3)(iii), existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR Part 63.6640(f)(2)(ii) and (iii) do not have to meet the requirements of this subpart and of 40 CFR Part 63, subpart A, including initial notification requirements.

c. In accordance with 40 CFR 63.6675, emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in b)(2)c.i. through iii, below. All emergency stationary RICE must comply with the requirements specified in 63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in 63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

i. The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

ii. The stationary RICE is operated under limited circumstances for situations not included in b)(2)(i) of this definition, as specified in 63.6640(f).

iii. The stationary RICE operates as part of a financial arrangement with another entity in situations not included in b)(2)(i) of this definition only as allowed in 63.6640(f)(2)(ii) or (iii) and 63.6640(f)(4)(i) or (ii).

[Authority for term: 40 CFR 63.6675 – definition of emergency stationary RICE]

c) Operational Restrictions

(1) The permittee shall only burn diesel fuel in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(1)]

(2) The emergency stationary RICE must be operated according to the following requirements in order to be considered an emergency stationary RICE under Part 63 Subpart ZZZZ, otherwise it shall meet all of the requirements for non-emergency engines.

a. The emergency stationary RICE may be used at the facility in emergency situations with no restriction on time.

b. On May 1, 2015, U.S. Court of Appeals vacated 63.6640(f)(2), which is the basis for this term c)(2)b. The court remanded 63.6640(f)(2) to EPA for further action. If and when further action is completed, this source will be subject to 63.6640(f)(2).

[Authority for term: 40 CFR 63.6640(f)(1) and (2)]

(3) The emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations includes engine maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[Authority for term: 40 CFR 63.6640(f)(3)]

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than diesel, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(2) The permittee shall maintain records or a log for the operation of the engine in emergency and non-emergency service, as recorded through the non-resettable hour meter. The records shall include the number or hours spent in emergency operation, including what classified the operation as an emergency; the number or hours spent in maintenance checks and readiness testing; and the number or hours spent in non-

emergency operations. If the RICE is operated as part of a demand response operation, the permittee shall keep records of the notification of the emergency situation and the time the engine was operated as part of the demand response.

[Authority for term: 40 CFR 63.6655(f) for 40 CFR 63.6640(f)]

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than diesel was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed twenty 20% opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Reference Method 9 in 40 CFR, Part 60, Appendix A.

[Authority for term: OAC rule 3745-17-07(A)(1)]

b. Emission Limitation:

0.062 lb PE/mmBtu

Applicable Compliance Method:

The particulate emission limitation is from OAC rule 3745-17-11(B)(5) for small stationary internal combustion engines.

If required, the permittee shall demonstrate compliance with the emission limitations through exhaust emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

[Authority for term: OAC rule 3745-17-11(B)(5)(a)]

g) Miscellaneous Requirements

(1) None.

44. Emissions Unit Group -T1-FR Grp2 soCC 21-09(L): T078,T080,T081,T082,T086,T087,T088,T092,T100,T107,T108,T109,T110,T111,T175,T176,T182,T183,T184,T190,

EU ID	Operations, Property and/or Equipment Description
T078	T078 is a 6,709.74 barrel fixed roof storage vessel identified as tank number PR-500109. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641. NOTE: All fugitive emissions from Asphalt Plant #1 are included with this emissions unit.
T080	T080 is a 80,676.92 barrel fixed roof storage vessel identified as tank number PR-500111. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T081	T081 is a 80,000 barrel fixed roof storage vessel identified as tank number PR-500112. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T082	T082 is a 30,056.59 barrel fixed roof storage vessel identified as tank number PR-500118. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T086	T086 is a 78,994.84 barrel fixed roof storage vessel identified as tank number PR-500140. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T087	T087 is a 79,568.3 barrel fixed roof storage vessel identified as tank number PR-500141. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T088	T088 is a 80,799.17 barrel fixed roof storage vessel identified as tank number PR-500142. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T092	T092 is a 119,238 barrel fixed roof storage vessel identified as tank number PR-500517. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T100	T100 is a 2,538.08 barrel fixed roof storage vessel identified as tank number PR-500402. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.64.
T107	T107 is a 10,106.74 barrel fixed roof storage vessel identified as tank number PR-500704. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.64.
T108	T108 is a 10,106.74 barrel fixed roof storage vessel identified as tank number PR-500705. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T109	T109 is a 20,120 barrel fixed roof storage vessel identified as tank number PR-500706. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T110	T110 is a 54,126.29 barrel fixed roof storage vessel identified as tank number PR-500761. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T111	T111 is a 42,731.97 barrel fixed roof storage vessel identified as tank number PR-500775. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.64.
T175	T175 is a 10,000 barrel fixed roof storage vessel identified as tank number PR-500091. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T176	T176 is a 10,000 barrel fixed roof storage vessel identified as tank number PR-500096. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T182	T182 is a 900 barrel fixed roof storage vessel identified as tank number PR-500275. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641

EU ID	Operations, Property and/or Equipment Description
T183	T183 is a 3,798 barrel fixed roof storage vessel identified as tank number PR-500599. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T184	T184 is a 997.1 barrel fixed roof storage vessel identified as tank number PR-500735. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T190	T190 is a 190,000 bbl fixed roof storage tank with conservation breather vent and nitrogen blanket Identified as tank number PR-500218. It is classified as a group 2 storage vessel pursuant to 40 CFR 63.641.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (*For T175*: PTI 04-1044 issued 8/29/1997) (*For T176*: PTI 04-1044 issued 8/29/1997)	T175: Volatile Organic Compounds (VOC) shall not exceed 17 tons per year. T176: Volatile Organic Compounds (VOC) shall not exceed 17 tons per year.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001 (*For T190:* PTI P0107114 issued 2/28/2011)	T190: Volatile Organic Compounds (VOC) shall not exceed 9.99 tons per year. See b)(2)a.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/2006 (*For T190:* PTI P0107114 issued 2/28/2011)	See b)(2)b.
d.	40 CFR Part 60, Subpart Kb	For T175, T176: Exempt per 60.110b(b), This subpart does not apply to storage vessels with a capacity greater than or

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(40 CFR 60.110b – 117b)	equal to 151 m^3 storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa).
Applies to each tank:		
e.	OAC rule 3745-21-09(L)	See b)(2)c.
f.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
g.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(2) and 63.641, this emissions unit is subject to Subpart CC as a Group 2 storage vessel; it is associated with petroleum refining process units located at a plant site and that is a major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a Group 2 storage vessel as defined in 63.641.]	40 CFR 63, Subpart CC, establishes no emission limitation or control measures for Group 2 storage vessels. See e)(1) – 63.640(m)

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA

approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limits/control measures no longer apply.

[OAC rule 3745-31-05(A)(3), as effective 11/30/01]

b. This paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from emissions unit T190 since the uncontrolled potential to emit for VOC is less than 10 tons per year.

c. Consistent with U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(L) by demonstrating compliance with the storage tank standards in 40 CFR Part 63, Subpart CC. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the requirements of OAC rule 3745-21-09(L).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information for the fixed roof tank:

a. the types of petroleum liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each petroleum liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

These records shall be maintained for at least 5 years and shall be made available to the Director or his representative upon verbal or written request.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-09(L)(3)]

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart CC, including the following sections:

a.	63.655(i)(1)(iv)]	Maintain a record of any data, assumptions, and procedures used to make the determination that this storage vessel is Group 2, e.g., that the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent.
b.	63.642(e)	The permittee shall keep copies of all applicable reports and records required by this permit for at least 5 years except as otherwise specified in this permit. All applicable records shall be maintained in such a manner that they can

		be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

a.	63.640(m)	The permittee shall submit a compliance schedule in a periodic report describing any operational process change to this emission unit that causes it to change from a group 2 to a group 1 emission unit. (m)(1) The permittee shall submit to the Director and Administrator for approval a compliance schedule, along with a justification for the schedule. (m)(2) The compliance schedule shall be submitted within 180 days after the change is made, unless the compliance schedule has been previously submitted to the permitting authority. If it is not possible to determine until after the change is implemented whether the emission point has become Group 1, the compliance schedule shall be submitted within 180 days of the date when the affect of the change is known to the source. The compliance schedule may be submitted in the next Periodic Report if the change is made after the date the Notification of Compliance Status report is due. (m)(3) The Administrator shall approve or deny the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification. Approval is automatic if not received from the Administrator within 120 calendar days of receipt.
b.	63.655(f)(6)	Notification of Compliance Status reports required by 63.640(l)(3) and for storage vessels subject to the compliance dates specified in 63.640(h)(4) shall be submitted no later than 60 days after the end of the 6-month period during which the change or addition was made that resulted in the Group 1 emission point or the existing Group 1 storage vessel was brought into compliance, and may be combined with the periodic report. Six-month periods shall be the same 6-month periods

		specified in paragraph (g) of this section. The Notification of Compliance Status report shall include the information specified in paragraphs (f)(1) through (f)(5) of this section. This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, as part of the periodic report, or in any combination of these four. If the required information has been submitted before the date 60 days after the end of the 6-month period in which the addition of the Group 1 emission point took place, a separate Notification of Compliance Status report is not required within 60 days after the end of the 6-month period. If an owner or operator submits the information specified in paragraphs (f)(1) through (f)(5) of this section at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

T175: VOC emissions shall not exceed 17 tons per year.

T176: VOC emissions shall not exceed 17 tons per year.

T190: VOC emissions shall not exceed 9.99 tons per year.

Applicable Compliance Method:

Compliance shall be determined by estimating emissions using the most recent version of EPA's Tanks computer software or the most recent emission factors contained in AP-42 Chapter 7, using the actual annual throughput and annual average vapor pressure.

g) Miscellaneous Requirements

(1) None.

45. Emissions Unit Group -T2-FR Grp2 spCC spK 21-09(L): T113,T114,T115,T116,

EU ID	Operations, Property and/or Equipment Description
T113	T113 is a 10,206 barrel fixed roof storage vessel identified as tank number PR-500890. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T114	T114 is a 15,469 barrel fixed roof storage vessel identified as tank number PR-500891. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T115	T115 is a 139,200 barrel fixed roof storage vessel identified as tank number PR-500892. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T116	T116 is a 139,345 barrel fixed roof storage vessel identified as tank number PR-500893. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-1066 as issued on 7/2/1997)	For T113: 21.21 tons per year volatile organic compounds (VOC) For T114: 26.22 tons per year VOC For T115: 38.93 tons per year VOC For T116: 36.54 tons per year VOC See b)(2)c.
b.	OAC rule 3745-21-09(L)	See b)(2)a.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(2) and 63.641, this emissions unit is subject to Subpart CC as a Group 2 storage vessel; it is associated with petroleum refining process units located at a plant site that is a major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a Group 2 storage vessel as defined in 63.641.]	40 CFR 63, Subpart CC, establishes no emission limitation or control measures for Group 2 storage vessels. See e)(1)
e.	40 CFR Part 60, subpart K (40 CFR 60.110-113)	See b)(2)b.

(2) Additional Terms and Conditions

a. Consistent with U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(L) by demonstrating compliance with the storage tank standards in 40 CFR Part 63, Subpart CC. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the requirements of OAC rule 3745-21-09(L).

b. As specified under 40 CFR 63.640(n)(7) of 40 CFR Part 63, subpart CC, a Group 2 storage vessel that is subject to the provisions of 40 CFR Part 60, Subpart K, but not to the control requirements of K, is required to only comply with the provisions of 40 CFR Part 63, Subpart CC.

c. Unless otherwise indicated, BAT pursuant to PTI 04-01066, consists of the use of a submerged fill in the storage tanks. The submerged fill pipe(s) are to be installed within six (6) inches of the bottom of the storage tank.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information:

a. the types of petroleum liquids stored in the tank;

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid that has a maximum true vapor pressure greater than 1.0 psia.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05 (PTI 04-1066)]

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart CC, including the following sections:

a.	63.655(i)(1)(iv)]	Maintain a record of any data, assumptions, and procedures used to make the determination that this storage vessel is Group 2, e.g., that the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent.
b.	63.642(e)	The permittee shall keep copies of all applicable reports and records required by this permit for at least 5 years except as otherwise specified in this permit. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

a.	63.640(m)	The permittee shall submit a compliance schedule in a periodic report describing any operational process change to this emission unit that causes it to change from a group 2 to a group 1 emission unit. (m)(1) The permittee shall submit to the Director and Administrator for approval a compliance schedule, along with a justification for the schedule. (m)(2) The compliance schedule shall be submitted within 180 days after the change is made, unless the compliance schedule has been previously submitted to the permitting authority. If it is not possible to determine until after the change is implemented whether the emission point has become Group 1, the compliance schedule shall be submitted within 180 days of the date when the affect of the

		change is known to the source. The compliance schedule may be submitted in the next Periodic Report if the change is made after the date the Notification of Compliance Status report is due. (m)(3) The Administrator shall approve or deny the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification. Approval is automatic if not received from the Administrator within 120 calendar days of receipt.
b.	63.655(f)(6)	Notification of Compliance Status reports required by 63.640(l)(3) and for storage vessels subject to the compliance dates specified in 63.640(h)(4) shall be submitted no later than 60 days after the end of the 6-month period during which the change or addition was made that resulted in the Group 1 emission point or the existing Group 1 storage vessel was brought into compliance, and may be combined with the periodic report. Six-month periods shall be the same 6-month periods specified in paragraph (g) of this section. The Notification of Compliance Status report shall include the information specified in paragraphs (f)(1) through (f)(5) of this section. This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, as part of the periodic report, or in any combination of these four. If the required information has been submitted before the date 60 days after the end of the 6-month period in which the addition of the Group 1 emission point took place, a separate Notification of Compliance Status report is not required within 60 days after the end of the 6-month period. If an owner or operator submits the information specified in paragraphs (f)(1) through (f)(5) of this section at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation for T113:

T113: 21.21 tons per year VOC

T114: 26.22 tons per year VOC

T115: 38.93 tons per year VOC

T116: 36.54 tons per year VOC

Applicable Compliance Method:

Compliance shall be determined by estimating emissions using the most recent version of EPA's Tanks computer software or the most recent emission factors contained in AP-42 Chapter 7, using the actual annual throughput and annual average vapor pressure.

g) Miscellaneous Requirements

(1) None.

46. Emissions Unit Group -T3 FR Grp2 soCC 21-09(L): T089,T153,T154,T155,T156,T157,T161,

EU ID	Operations, Property and/or Equipment Description
T089	T089 is a 79,570.35 barrel fixed roof storage vessel identified as tank number PR-500151. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T153	T153 is a 88,870 barrel fixed roof storage vessel identified as tank number PR-500175. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T154	T154 is a 88,870 barrel fixed roof storage vessel identified as tank number PR-500174. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T155	T155 is a 88,000 barrel fixed roof storage vessel identified as tank number PR-500172. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T156	T156 is a 80,600 barrel fixed roof storage vessel identified as tank number PR-500171. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T157	T157 is a 80,600 barrel fixed roof storage vessel identified as tank number PR-500002. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T161	T161 is a 80,574 barrel fixed roof storage vessel identified as tank number PR-500003. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI P0110087, modified on 2/18/2014 for EU's T153, T154, T156, T157 PTI P0107416 modified on 5/8/2012 for EU's T155 and T161	For T153: 7.49 tons per year volatile organic compounds (VOC) For T154: 7.49 tons per year VOC For T155: 6.28 tons per year VOC For T156: 7.49 tons per year VOC For T157: 5.63 tons per year VOC

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		For T161: 10.13 tons per year VOC See b)(2)a.
b.	OAC rule 3745-21-09(L)	See b)(2)b.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
d.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(2) and 63.641, this emissions unit is subject to Subpart CC as a Group 2 storage vessel; it is associated with petroleum refining process units located at a plant site that is a major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a Group 2 storage vessel as defined in 63.641.]	40 CFR 63, Subpart CC, establishes no emission limitation or control measures for Group 2 storage vessels. See e)(1) – 63.640(m)
e.	40 CFR Part 60, Subpart Kb (40 CFR 60.110b – 117b)	For T153, T154, T155, T156, T157, T161: Exempt per 60.110b(b), This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa).
f.	40 CFR Part 60, subpart QQQ (40 CFR 60.690 – 60.699)	For T153, T154, T155, T156, T157 and T161: See b)(2)c.
g.	40 CFR Part 61, subpart FF (40 CFR 61.340 – 61.359)	For T089: See b)(2)d.

(2) Additional Terms and Conditions

a. OAC rule 3745-31-05(A)(3) requirements for BAT are satisfied by use of submerged fill.

b. Consistent with U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(L) by demonstrating compliance with the storage tank standards in 40 CFR Part 63, Subpart CC. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the requirements of OAC rule 3745-21-09(L).

c. The tank water draw drains at T153, T154, T155, T156, T157, and T161 are subject to the requirements of 40 CFR 60 Subpart QQQ, specifically 40 CFR 60.692-2 - Standards: Individual Drain Systems and uses a water seal to comply. These requirements are included under the emission unit specific requirements for P025, the Wastewater Treatment Facility.

d. The tank drain at T089 is subject to the requirements of 40 CFR 61 Subpart FF, specifically, 40 CFR 61.346 - Standards: Individual Drain Systems and uses a water seal to comply. These requirements are detailed under the emission unit specific requirements for P025, The Wastewater Treatment Facility.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information:

a. the types of petroleum liquids stored in the tank;

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid that has a maximum true vapor pressure greater than 1.0 psia.

These records shall be maintained for at least 5 years and shall be made available to the director or his representative upon verbal or written request.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-09(L)(3)]

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart CC, including the following sections:

a.	63.655(i)(1)(iv)]	Maintain a record of any data, assumptions, and procedures used to make the determination that this storage vessel is Group 2, e.g., that the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent.

b.	63.642(e)	The permittee shall keep copies of all applicable reports and records required by this permit for at least 5 years except as otherwise specified in this permit. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

e) Reporting Requirements

(1) If the permittee places, stores, or holds, in the fixed roof tank, any petroleum liquid with a true vapor pressure that is greater than 1.52 pounds per square inch absolute and such tank does not comply with the requirements of paragraph (L)(1) of OAC rule 3745-21-09, the permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days of becoming aware of the occurrence. The date that such petroleum liquid was first stored in the tank, the date removed (if removed), the total gallons throughput of each petroleum liquid exceeding this vapor pressure, and the proposed method of compliance shall be included in the report.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-09(L)(4)]

(2) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

a.	63.640(m)	The permittee shall submit a compliance schedule in a periodic report describing any operational process change to this emission unit that causes it to change from a group 2 to a group 1 emission unit. (m)(1) The permittee shall submit to the Director and Administrator for approval a compliance schedule, along with a justification for the schedule. (m)(2) The compliance schedule shall be submitted within 180 days after the change is made, unless the compliance schedule has been previously submitted to the permitting authority. If it is not possible to determine until after the change is implemented whether the emission point has become Group 1, the compliance schedule shall be submitted within 180 days of the date when the affect of the change is known to the source. The compliance schedule may be submitted in the next Periodic Report if the change is made after the date the Notification of Compliance Status report is due.

		(m)(3) The Administrator shall approve or deny the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification. Approval is automatic if not received from the Administrator within 120 calendar days of receipt.
b.	63.655(f)(6)	Notification of Compliance Status reports required by 63.640(l)(3) and for storage vessels subject to the compliance dates specified in 63.640(h)(4) shall be submitted no later than 60 days after the end of the 6-month period during which the change or addition was made that resulted in the Group 1 emission point or the existing Group 1 storage vessel was brought into compliance, and may be combined with the periodic report. Six-month periods shall be the same 6-month periods specified in paragraph (g) of this section. The Notification of Compliance Status report shall include the information specified in paragraphs (f)(1) through (f)(5) of this section. This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, as part of the periodic report, or in any combination of these four. If the required information has been submitted before the date 60 days after the end of the 6-month period in which the addition of the Group 1 emission point took place, a separate Notification of Compliance Status report is not required within 60 days after the end of the 6-month period. If an owner or operator submits the information specified in paragraphs (f)(1) through (f)(5) of this section at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

T153: VOC emissions shall not exceed 7.49 tons per year.

T154: VOC emissions shall not exceed 7.49 tons per year.

T155: VOC emissions shall not exceed 6.28 tons per year.

T156: VOC emissions shall not exceed 7.49 tons per year.

T157: VOC emissions shall not exceed 5.63 tons per year.

T161: VOC emissions shall not exceed 10.13 tons per year.

Applicable Compliance Method:

Compliance shall be determined by estimating emissions using the most recent version of EPA's Tanks computer software or the most recent emission factors contained in AP-42 Chapter 7, using the actual annual throughput and annual average vapor pressure.

g) Miscellaneous Requirements

(1) None.

47. Emissions Unit Group -T4 IFR Grp1 spCC 21-09(L): T010,T011,T012,T013,T014,T051,

EU ID	Operations, Property and/or Equipment Description
T010	T010 is a 69,193.9 barrel storage tank identified as PR-500152. The tank has an internal floating roof with a flexible wiper primary seal. It is currently operated as a Group 1 storage vessel under 40 CFR Part 63, Subpart CC.
T011	T011 is a 80,232.05 barrel storage tank identified as PR-500153. The tank has an internal floating roof with a mechanical shoe primary seal. It is currently operated as a Group 1 storage vessel under 40 CFR Part 63, Subpart CC.
T012	T012 is a 2,538.08 barrel storage tank identified as PR-500403. The tank has an internal floating roof with a primary seal. It is currently operated as a Group 1 storage vessel under 40 CFR Part 63, Subpart CC.
T013	T013 is a 54,593.71 barrel storage tank identified as PR-500124. The tank has an internal floating roof with a primary seal. It is currently operated as a Group 1 storage vessel under 40 CFR Part 63, Subpart CC.
T014	T014 is a 2,100 barrel storage tank identified as PR-500079. The tank has an internal floating roof with a mechanical shoe primary seal. It is currently operated as a Group 1 storage vessel under 40 CFR Part 63, Subpart CC.
T051	T051 is a 1,480 barrel storage tank identified as PR-500697. The tank has an internal floating roof with a primary seal. It is currently operated as a Group 1 storage vessel under 40 CFR Part 63, Subpart CC.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-21-09(L)	See b)(2)a. and b)(2)b.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		that are applicable to this emissions unit.
c.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(2) and 63.641, this emissions unit is subject to Subpart CC as a Group 1 storage vessel; it is associated with petroleum refining process units located at a plant site and that is a major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a Group 1 storage vessel as defined in 63.641.]	In accordance with 63.646(a) the permittee of a Group 1 storage vessel subject to 40 CFR Part 63, Subpart CC shall comply with the requirements of 63.119 through 63.121 of 40 CFR 63, Subpart G, except as provided in 63.646(b) through 63.646(l). See b)(2)c. through b)(2)h.
d.	40 CFR 61, Subpart FF	For T010 and T011: See b)(2)i.

(2) Additional Terms and Conditions

a. No fixed roof tank can store a petroleum liquid with a true vapor pressure greater than1.52 psi unless it is equipped with an internal floating roof.

b. Consistent with U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(L) by demonstrating compliance with the storage tank standards in 40 CFR Part 63, Subpart CC. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the requirements of OAC rule 3745-21-09(L) except for the requirements pertaining to all openings.

c. MACT status (Group 1 or Group 2) is determined by the type of material being stored in the tank as defined by 40 CFR 63.641. If an existing tank changes from a Group 1 to Group 2 storage vessel where the material stored is less than 1.51 psia (maximum true vapor pressure) or 4% by weight of HAPS, then the tank is only subject to the recordkeeping requirements of 40 CFR 63.123(a) of Subpart G and 63.655(i)(1)(iv) of Subpart CC and is not required to comply with any other provisions in 40 CFR 63.119 through 63.123 of Subpart G.

d. In accordance with 40 CFR 63.119(a)(1) of Subpart G, the permittee shall reduce the emissions of HAPs to the atmosphere by operating and maintaining an internal floating roof in compliance with the applicable requirements in 63.119(b).

e. [63.646(a)]
Each permittee of a Group 1 storage vessel subject to 40 CFR 63, subpart CC, shall comply with the requirements of 40 CFR 63.119 through 63.121 of subpart G except as provided in 63.646(b) through (l) of subpart CC.

f. [63.646(c)]
The following paragraphs do not apply to storage vessels at existing sources subject to 40 CFR 63, subpart CC: 63.119 (b)(5), (b)(6), (c)(2), and (d)(2).

g. [63.646(h)]
References in 40 CFR 63.119 through 63.121 to 63.122(g)(1), 63.151, and references to initial notification requirements of do not apply.

h. [63.646(g)]
Failure to perform inspections and monitoring required by 40 CFR Part 63.646, Subpart CC shall constitute a violation.

i. The tank water draw drains at tanks T010 and T011 are subject to the requirements of 40 CFR 61 Subpart FF, specifically 40 CFR 61.346 - Standards: Individual Drain Systems and uses a water seal to comply. These requirements are included under the emission unit specific requirements for P025, the Wastewater Treatment Facility.

c) Operational Restrictions

(1) The permittee shall install the following equipment and shall maintain tank vents, seals, and or covers as follows:

a. All openings, except stub drains, shall be equipped with a cover, seal or lid which is to be in a closed position at all times except when in actual use for tank gauging or sampling.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-21-09(L)(1)]

(2) 40 CFR 63, Subpart CC – NESHAP FROM PETROLEUM REFINERIES - STORAGE VESSEL PROVISIONS
The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart CC, including the following sections:

a.	63.646(f)(1)	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. This conditions is less stringent than the requirement of OAC 3745-21-09(L)(1)(c) included above.
b.	63.646(f)(2)	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.

c.	63.646(f)(3)	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.

(3) [40 CFR 63, Subpart G] STORAGE VESSEL PROVISIONS [63.119(b)]
The permittee shall comply with the applicable restrictions required under 40 CFR Part 63, Subpart G, including the following sections:

a.	63.119(b)	For a fixed roof and an internal floating roof, comply with the requirements specified in 63.119(b)(1) and (b)(4), as provided in 63.646(c) of subpart CC. *Note*: The intent of 40 CFR Part 63.119(b)(1) and (b)(2) of Subpart G is to avoid having a vapor space between the floating roof and the stored liquid for extended periods. Storage vessels may be emptied for purposes such as routine storage vessel maintenance, inspections, petroleum liquid deliveries, or transfer operations. Storage vessels where liquid is left on walls, as bottom clingage, or in pools due to floor irregularity are considered completely empty.
b.	63.119(b)(1)	The internal floating roof shall be floating on the liquid surface at all times except during the periods listed in 63.119(b)(1)(i) through (iii).
c.	63.119(b)(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.
d.	63.119(b)(3)	Each internal floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device shall consist of one of the following devices: a liquid-mounted seal; a metallic shoe seal or two seals mounted one above the other. The lower seal may be vapor-mounted, but both must be continuous seals.
e.	63.119(b)(4)	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.

d) Monitoring and/or Recordkeeping Requirements

(1) Compliance with the tank repair requirements in 40 CFR Part 63, Subpart CC has been determined to be as stringent or more stringent as the tank repair requirements of OAC rule 3745-21-09(L).

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall maintain a record of any period of time in which all openings other than stub drains were not maintained as required in this permit and per the rules.

[Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-21-09(L)(1)(b) and (c)]

(3) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart CC, including the following sections:

a.	63.642(e)	Requirements for keeping all applicable reports and records required by this subpart for at least 5 years except as otherwise specified in this permit and be readily accessed within 24 hours.
b.	63.646(b), (b)(1) and (b)(2)	*Storage Vessel Provisions:* All terms not defined in 63.641 shall have the meaning given them in 40 CFR Part 63, Subparts A or G. The Group 1 storage vessel definition presented in 40 CFR Part 63.641 apply in lieu of the Group 1 storage vessel definitions presented in tables 5 and 6 of 40 CFR Part 63.119 of Subpart G. Use good engineering judgment or test results to determine the stored liquid weight percent total organic HAP. Method 18 of 40 CFR Part 60, Appendix A shall be used to determine the average weight percent of organic HAP in the liquid if the permittee and Administrator do not agree on whether the annual average weight percent organic HAP's in the stored liquid is above or below 4 percent.
c.	63.646(e)	When complying with the inspection requirements of 40 CFR Part 63.120 of Subpart G, existing storage vessels are not required to comply with the provisions for gaskets, slotted membranes, and sleeve seals.
d.	63.655(i)	*Recordkeeping Requirements*: Keep the storage vessel records specified in 63.123 of Subpart G except as specified in 63.655(i)(i) through (iv).

e.	63.655(i)(1)(i)	Records related to gaskets, slotted membranes, and sleeve seals are not required for storage vessels within existing sources.
f.	63.655(i)(1)(iv)	If a storage vessel is determined to be Group 2 storage vessel, a record of any data, assumptions, and procedures used to make this determination shall be retained.

(4) [40 CFR 63, Subpart G] NESHAP FROM THE SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart G, including the following sections:

a.	63.120(a)	*Storage Vessel Provisions:* To demonstrate compliance with 63.119(b) or 63.119(d), comply with the requirements of 63.120(a)(1) through (a)(7). The permittee shall visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), according to the schedule specified in 63.120(a)(3).
b.	63.120(a)(2)(i)	For vessels equipped with a single-seal system, the owner or operator shall perform the inspections specified in 63.120(a)(2)(i) and (a)(2)(ii) of this section. (i) Visually inspect the internal floating roof and the seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill, or at least once every 12 months after the compliance date specified in 63.100 of subpart F of this part.
c.	63.120(a)(2)(ii)	Visually inspect the internal floating roof, the seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed, and at least once every 10 years after the compliance date specified in 63.100 of subpart F of this part.
d.	63.120(a)(4)	If during the inspections required by 63.120(a)(2)(i) or (a)(3)(ii) (for double-seal systems) of this section, the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage vessel, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 calendar days. If a failure that is detected during

		inspections required by 63.120(a)(2)(i) or (a)(3)(ii) 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
e.	63.120(a)(5)	Except as provided in 63.120(a)(6), for all the inspections required by 63.120(a)(2)(ii), (a)(3)(i), and (a)(3)(iii) of this section, the permittee shall notify the Administrator in writing at least 30 calendar days prior to the refilling of each storage vessel to afford the Administrator the opportunity to have an observer present.
f.	63.120(a)(6)	If the inspection required by 63.120(a)(2)(ii), (a)(3)(i), or (a)(3)(iii) is not planned and the permittee could not have known about the inspection 30 calendar days in advance of refilling the vessel, the permittee shall notify the Administrator at least 7 calendar days prior to the refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, the notification including the written documentation may be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to refilling.
g.	63.120(a)(7)	If during the inspections required by 63.120(a)(2)(ii), (a)(3)(i), or (a)(3)(iii), the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area, the permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with organic HAP.
h.	63.123(a)	*Recordkeeping*: Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 1 status and is in operation

i.	63.123(c)	Keep records of each inspection required by 40 CFR 63.120(a).
j.	63.123(g)	If an extension is requested for emptying a storage vessel per 40 CFR Part 63.120(a)(4), then keep in a readily accessible location, the documentation specified in 40 CFR Part 63.120(a)(4) as applicable.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

63.655 – Reporting Requirements		
a.	63.655(g)	The permittee shall submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the compliance exceptions specified in 63.655(g)(1), (g)(2) and (g)(4) occur. The first 6-month period shall begin on the date the Notification of Compliance Status report is required to be submitted. A Periodic Report is not required if none of the compliance exceptions identified in 63.120(g)(1), (g)(2) and (g)(4) occurred during the 6-month period unless emissions averaging is utilized. The permittee may submit reports required by other regulations in place of or as part of the Periodic Report required by this paragraph if the reports contain the information required by paragraphs (g)(1), (g)(2) and (g)(4).
b.	63.655(g)(1)	For storage vessels, Periodic Reports shall include the information specified for Periodic Reports in paragraph 63.655(g)(2) except that information related to gaskets, slotted membranes, and sleeve seals is not required for storage vessels that are part of an existing source
c.	63.655(g)(2) and (g)(2)(i)	The permittee shall submit the results of each inspection conducted in accordance with 63.120(a) of subpart G in which a failure is detected in the control equipment. (g)(2)(i) - For vessels for which annual inspections are required under 63.120(a)(2)(i) or (a)(3)(ii) of subpart G, the specifications and requirements listed in 63.655(g)(2)(i)(A) through (g)(2)(i)(C) of this section apply. (see below).

d.	63.655(g)(2)(i)(A)	A failure is defined as any time in which the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached from the internal floating roof; or there are holes, tears, or other openings in the seal or seal fabric; or there are visible gaps between the seal and the wall of the storage vessel.
e.	63.655(g)(2)(i)(B)	Except as provided in 63.655(g)(2)(i)(C), each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made or the date the storage vessel was emptied.
f.	63.655(g)(2)(i)(C)	If an extension is utilized in accordance with 63.120(a)(4) of subpart G of this part, the permittee shall, in the next Periodic Report, identify the vessel; include the documentation specified in 63.120(a)(4) of subpart G; and describe the date the storage vessel was emptied and the nature of and date the repair was made
g.	63.655(g)(2)(ii) and (g)(2)(ii)(A)	For vessels for which inspections are required under 63.120(a)(2)(ii), (i.e., internal inspections), the specifications and requirements listed in 63.655(g)(2)(ii)(A) and (g)(2)(ii)(B) of this section apply. (g)(2)(ii)(A) A failure is defined as any time in which the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal (if installed) has holes, tears, or other openings in the seal or the seal fabric.
h.	63.655(g)(2)(ii)(B)	For vessels for which inspections are required under 63.120(a)(2)(ii), each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made.
i.	63.655(h)(2) and (h)(2)(i)	Reports shall be submitted as specified in Subpart A of 40 CFR 63 and for storage vessels, notifications of inspections as specified in 63.655(h)(2)(i). (h)(2)(i) - In order to afford the Administrator the opportunity to have an observer present, the permittee shall notify the Administrator of the refilling of each Group 1 storage vessel that has been emptied and degassed:

j.	63.655(h)(2)(i)(A) and 63.120(a)(5)	Except as provided in 63.655(h)(2)(i)(B) and (C) of this section, the permittee shall notify the Administrator in writing at least 30 calendar days prior to filling or refilling of each storage vessel with organic HAP's to afford the Administrator the opportunity to inspect the storage vessel prior to refilling.
k.	63.655(h)(2)(i)(B) and 63.120(a)(6)	Except as provided in 63.655(h)(2)(i)(C), if the internal inspection required by 63.120(a)(2), 63.120(a)(3), or 63.120(b)(10) of subpart G of this part is not planned and the permittee could not have known about the inspection 30 calendar days in advance of refilling the vessel with organic HAP's, the permittee shall notify the Administrator at least 7 calendar days prior to refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. This notification, including the written documentation, may also be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to the refilling.
l.	63.655(h)(2)(i)(C) and 63.646(l)	The State or local permitting authority can waive the notification requirements of 63.655(h)(2)(i)(A) and/or 63.655(h)(2)(i)(B) for all or some storage vessels at petroleum refineries subject to this subpart. The State or local permitting authority may also grant permission to refill storage vessels sooner than 30 days after submitting the notification required by 63.655(h)(2)(i)(A), or sooner than 7 days after submitting the notification required by 63.655(h)(2)(i)(B) for all storage vessels, or for individual storage vessels on a case-by-case basis.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. None.

g) Miscellaneous Requirements

(1) None.

48. Emissions Unit Group -T5 IFR Grp1 spCC spK 21-09(L): T045,T046,

EU ID	Operations, Property and/or Equipment Description
T045	T045 is a 35,589.28 barrel storage tank identified as PR-500776. The tank has an internal floating roof a primary seal. It is currently operated as a Group 1 storage vessel under 40 CFR Part 63, Subpart CC.
T046	T046 is a 34,520.7 barrel storage tank identified as PR-500777. The tank has an internal floating roof a primary seal. It is currently operated as a Group 1 storage vessel under 40 CFR Part 63, Subpart CC.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-029 as issued on 1/16/1975)	No emission limitation was established in this PTI.
b.	OAC rule 3745-21-09(L)	See b)(2)a. and b)(2)b.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
d.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(2) and 63.641, this emissions unit is subject to Subpart CC as a Group 1 storage vessel; it is associated with petroleum refining process units	In accordance with 63.646(a) the permittee of a Group 1 storage vessel subject to 40 CFR Part 63, Subpart CC shall comply with the requirements of 63.119 through 63.121 of 40 CFR 63, Subpart G, except as provided in 63.646(b) through 63.646(l). See b)(2)c. and b)(2)i.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	located at a plant site and that is a major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a Group 1 storage vessel as defined in 63.641.]	
e.	40 CFR Part 60, Subpart K (40 CFR 60.110-113)	See b)(2)j.

(2) Additional Terms and Conditions

a. No fixed roof tank can store a petroleum liquid with a true vapor pressure greater than1.52 psi unless it is equipped with an internal floating roof.

b. Consistent with U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(L) by demonstrating compliance with the storage tank standards in 40 CFR Part 63, Subpart CC. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the requirements of OAC rule 3745-21-09(L) except for the requirements pertaining to all openings.

c. In accordance with 40 CFR 63.119(a)(1) of Subpart G, the permittee shall reduce the emissions of HAPs to the atmosphere by operating and maintaining an internal floating roof in compliance with the applicable requirements in 63.119(b).

d. [63.646(a)]
Each permittee of a Group 1 storage vessel subject to 40 CFR Part 63, Subpart CC, shall comply with the requirements of 40 CFR 63.119 through 63.121 (subpart G) except as provided in63.646(b) through (l) of Subpart CC.

e. [63.646(c)]
The following paragraphs do not apply to storage vessels at existing sources subject to this subpart: 40 CFR 63.119 (b)(5), (b)(6), (c)(2), and (d)(2).

f. [63.646(h)]
References in 40 CFR 63.119 through 63.121 to 63.122(g)(1), 63.151, and references to initial notification requirements do not apply.

g. [63.119(b)]
The permittee who elects to uses a fixed roof and an internal floating roof shall comply with the requirements specified in 63.119(b)(1) through (b)(4).

h. [63.120(a)]
To demonstrate compliance with 40 CFR 63.119(b) (storage vessel equipped with a fixed roof and internal floating roof), the permittee shall comply with the requirements of 63.120(a).

i. [63.646(g)]
Failure to perform inspections and monitoring required by 40 CFR Part 63.646, Subpart CC shall constitute a violation.

j. As specified under 40 CFR 63.640(n)(5), a Group 1 storage vessel that is also subject to the provisions of 40 CFR Part 60, Subpart K is required to only comply with the provisions of 40 CFR Part 63, Subpart CC.

c) Operational Restrictions

(1) The permittee shall install the following equipment and shall maintain tank vents, seals, and or covers as follows:

a. All openings, except stub drains, shall be equipped with a cover, seal or lid which is to be in a closed position at all times except when in actual use for tank gauging or sampling.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-21-09(L)(1)]

(2) 40 CFR 63, Subpart CC – NESHAP FROM PETROLEUM REFINERIES - STORAGE VESSEL PROVISIONS
The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart CC, including the following sections:

a.	63.646(f)(1)	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. This condition is less stringent than the requirement of OAC rule 3745-21-09(L)(1)(c).
b.	63.646(f)(2)	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.
C	63.646(f)(3)	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.

(3) [40 CFR 63, Subpart G] STORAGE VESSEL PROVISIONS [63.119(b)]
The permittee shall comply with the applicable restrictions required under 40 CFR Part 63, Subpart G, including the following sections:

a.	63.119(b)	For a fixed roof and an internal floating roof, comply with the requirements specified in 63.119(b)(1) and (b)(4), as provided in 63.646(c) of subpart CC. *Note*: The intent of 40 CFR Part 63.119(b)(1) and (b)(2) of Subpart G is to avoid having a vapor space between the floating roof and the stored liquid for extended periods. Storage vessels may be emptied for purposes such as routine storage vessel maintenance, inspections, petroleum liquid deliveries, or transfer operations. Storage vessels where liquid is left on walls, as bottom clingage, or in pools due to floor irregularity are considered completely empty.
b.	63.119(b)(1)	The internal floating roof shall be floating on the liquid surface at all times except during the periods listed in 63.119(b)(1)(i) through (iii).
c.	63.119(b)(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.
d.	63.119(b)(3)	Each internal floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device shall consist of one of the following devices: a liquid-mounted seal; a metallic shoe seal or two seals mounted one above the other. The lower seal may be vapor-mounted, but both must be continuous seals.
e.	63.119(b)(4)	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.

d) Monitoring and/or Recordkeeping Requirements

(1) Compliance with the tank repair requirements in 40 CFR Part 63, Subpart CC has been determined to be as stringent or more stringent as the tank repair requirements of OAC rule 3745-21-09(L).

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall maintain a record of any period of time in which all openings other than stub drains were not maintained as required in this permit and per the rules.

[Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-21-09(L)(1)(b) and (c)]

(3) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart CC, including the following sections:

a.	63.642(e)	Requirements for keeping all applicable reports and records required by this subpart for at least 5 years except as otherwise specified in this permit and be readily accessed within 24 hours.
b.	63.646(b), (b)(1) and (b)(2)	*Storage Vessel Provisions:* All terms not defined in 63.641 shall have the meaning given them in 40 CFR Part 63, Subparts A or G. The Group 1 storage vessel definition presented in 40 CFR Part 63.641 apply in lieu of the Group 1 storage vessel definitions presented in tables 5 and 6 of 40 CFR Part 63.119 of Subpart G. Use good engineering judgment or test results to determine the stored liquid weight percent total organic HAP. Method 18 of 40 CFR Part 60, Appendix A shall be used to determine the average weight percent of organic HAP in the liquid if the permittee and Administrator do not agree.
c.	63.646(e)	When complying with the inspection requirements of 40 CFR Part 63.120 of Subpart G, existing storage vessels are not required to comply with the provisions for gaskets, slotted membranes, and sleeve seals.
d.	63.655(i)	*Recordkeeping Requirements*: Keep the storage vessel records specified in 63.123 of Subpart G except as specified in 63.655(i)(i) through (iv).
e.	63.655(i)(1)(i)	Records related to gaskets, slotted membranes, and sleeve seals are not required for storage vessels within existing sources.
f.	63.655(i)(1)(iv)	If a storage vessel is determined to be Group 2 storage vessel, a record of any data, assumptions, and procedures used to make this determination shall be retained.

(4) [40 CFR 63, Subpart G] NESHAP FROM THE SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart G, including the following sections:

a.	63.120(a) and (a)(1)	*Storage Vessel Provisions:* To demonstrate compliance with 63.119(b) or 63.119(d), comply with the requirements of 63.120(a)(1) through (a)(7). (a)(1) The permittee shall visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), according to the schedule specified in 63.120(a)(2) and (a)(3).
b.	63.120(a)(2)(i)	For vessels equipped with a single-seal system, the owner or operator shall perform the inspections specified in 63.120(a)(2)(i) and (a)(2)(ii) of this section. (i) Visually inspect the internal floating roof and the seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill, or at least once every 12 months after the compliance date specified in 63.100 of subpart F of this part.
c.	63.120(a)(2)(ii)	Visually inspect the internal floating roof, the seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed, and at least once every 10 years after the compliance date specified in 63.100 of subpart F of this part.
d.	63.120(a)(4)	If during the inspections required by 63.120(a)(2)(i) or (a)(3)(ii) (for double-seal systems) of this section, the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage vessel, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 calendar days. If a failure that is detected during inspections required by 63.120(a)(2)(i) or (a)(3)(ii) 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
e.	63.120(a)(5)	Except as provided in 63.120(a)(6), for all the inspections required by 63.120(a)(2)(ii), (a)(3)(i), and (a)(3)(iii) of this section, the permittee shall notify the Administrator in

		writing at least 30 calendar days prior to the refilling of each storage vessel to afford the Administrator the opportunity to have an observer present.
f.	63.120(a)(6)	If the inspection required by 63.120(a)(2)(ii), (a)(3)(i), or (a)(3)(iii) is not planned and the permittee could not have known about the inspection 30 calendar days in advance of refilling the vessel, the permittee shall notify the Administrator at least 7 calendar days prior to the refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, the notification including the written documentation may be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to refilling.
g.	63.120(a)(7)	If during the inspections required by 63.120(a)(2)(ii), (a)(3)(i), or (a)(3)(iii), the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area, the permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with organic HAP.
h.	63.123(a)	*Recordkeeping*: Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 1 status and is in operation
i.	63.123(c)	Keep records of each inspection required by 40 CFR 63.120(a).
j.	63.123(g)	If an extension is requested for emptying a storage vessel per 40 CFR Part 63.120(a)(4), then keep in a readily accessible location, the documentation specified in 40 CFR Part 63.120(a)(4) as applicable.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

63.655 – Reporting Requirements		
a.	63.655(g)	The permittee shall submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the compliance exceptions specified in 63.655(g)(1), (g)(2) and (g)(4) occur. The first 6-month period shall begin on the date the Notification of Compliance Status report is required to be submitted. A Periodic Report is not required if none of the compliance exceptions identified in 63.120(g)(1), (g)(2) and (g)(4) occurred during the 6-month period unless emissions averaging is utilized. The permittee may submit reports required by other regulations in place of or as part of the Periodic Report required by this paragraph if the reports contain the information required by paragraphs (g)(1), (g)(2) and (g)(4).
b.	63.655(g)(1)	For storage vessels, Periodic Reports shall include the information specified for Periodic Reports in paragraph 63.655(g)(2) except that information related to gaskets, slotted membranes, and sleeve seals is not required for storage vessels that are part of an existing source
c.	63.655(g)(2) and (g)(2)(i)	The permittee shall submit the results of each inspection conducted in accordance with 63.120(a) of subpart G in which a failure is detected in the control equipment. (g)(2)(i) - For vessels for which annual inspections are required under 63.120(a)(2)(i) or (a)(3)(ii) of subpart G, the specifications and requirements listed in 63.655(g)(2)(i)(A) through (g)(2)(i)(C) of this section apply. (see below).
d.	63.655(g)(2)(i)(A)	A failure is defined as any time in which the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached from the internal floating roof; or there are holes, tears, or other openings in the seal or seal fabric; or there are visible gaps between the seal and the wall of the storage vessel.
e.	63.655(g)(2)(i)(B)	Except as provided in 63.655(g)(2)(i)(C), each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also

		describe the nature of and date the repair was made or the date the storage vessel was emptied.
f.	63.655(g)(2)(i)(C)	If an extension is utilized in accordance with 63.120(a)(4) of subpart G of this part, the permittee shall, in the next Periodic Report, identify the vessel; include the documentation specified in 63.120(a)(4) of subpart G; and describe the date the storage vessel was emptied and the nature of and date the repair was made
g.	63.655(g)(2)(ii) and (g)(2)(ii)(A)	For vessels for which inspections are required under 63.120(a)(2)(ii), (i.e., internal inspections), the specifications and requirements listed in 63.655(g)(2)(ii)(A) and (g)(2)(ii)(B) of this section apply. (g)(2)(ii)(A) A failure is defined as any time in which the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal (if installed) has holes, tears, or other openings in the seal or the seal fabric.
h.	63.655(g)(2)(ii)(B)	For vessels for which inspections are required under 63.120(a)(2)(ii), each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made.
i.	63.655(h)(2) and (h)(2)(i)	Reports shall be submitted as specified in Subpart A of 40 CFR 63 and for storage vessels, notifications of inspections as specified in 63.655(h)(2)(i). (h)(2)(i) - In order to afford the Administrator the opportunity to have an observer present, the permittee shall notify the Administrator of the refilling of each Group 1 storage vessel that has been emptied and degassed:
j.	63.655(h)(2)(i)(A) and 63.120(a)(5)	Except as provided in 63.655(h)(2)(i)(B) and (C) of this section, the permittee shall notify the Administrator in writing at least 30 calendar days prior to filling or refilling of each storage vessel with organic HAP's to afford the Administrator the opportunity to inspect the storage vessel prior to refilling.
k.	63.655(h)(2)(i)(B) and 63.120(a)(6)	Except as provided in 63.655(h)(2)(i)(C), if the internal inspection required by 63.120(a)(2), 63.120(a)(3), or 63.120(b)(10) of subpart G of this part is not planned and the permittee could not have known about the inspection 30 calendar days in advance of refilling the vessel with organic HAP's, the permittee shall notify the Administrator at least 7

		calendar days prior to refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. This notification, including the written documentation, may also be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to the refilling.
l.	63.655(h)(2)(i)(C) and 63.646(l)	The State or local permitting authority can waive the notification requirements of 63.655(h)(2)(i)(A) and/or 63.655(h)(2)(i)(B) for all or some storage vessels at petroleum refineries subject to this subpart. The State or local permitting authority may also grant permission to refill storage vessels sooner than 30 days after submitting the notification required by 63.655(h)(2)(i)(A), or sooner than 7 days after submitting the notification required by 63.655(h)(2)(i)(B) for all storage vessels, or for individual storage vessels on a case-by-case basis.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. None.

g) Miscellaneous Requirements

(1) None.

49. Emissions Unit Group -T6 EFR Grp1 spCC spKb 21-09(Z): T019,T084,T174,T187,T188,

EU ID	Operations, Property and/or Equipment Description
T019	T019 is a 78,976.93 barrel petroleum liquid storage tank identified as PR-500157. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T084	T084 is a 71,165.97 barrel petroleum liquid storage tank identified as PR-500134. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T174	T174 is a 80,000 barrel external floating roof storage vessel with dual seals. The tank is identified as tank number PR-500770 and is currently classified as a Group 1 storage vessel pursuant to 40 CFR 63.641.
T187	T187 is a 325,000-barrel external roof storage vessel with dual seals. The tank is identified as tank number PR-500818 and is currently classified as a Group 1 storage vessel pursuant to 40 CFR 63.641. All fugitive emissions from the North tank farm are included with this storage tank.
T188	T188 is a 325,000-barrel external roof storage vessel with dual seals. The tank is identified as tank number PR-500819 and is currently classified as a Group 1 storage vessel pursuant to 40 CFR 63.641.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) T019: (PTI 04-01492, issued on 11/1/2007 T174: (PTI 04-01024, issued on 6/26/1996) T187: (PTI 04-01329 as issued on	 14.29 tons per year (TPY) of volatile organic compounds (VOC); 19 TPY VOC;

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	5/13/2004) T188: (PTI 04-01329 as issued on 5/13/2004)	10.73 TPY of VOC; 10.73 TPY of VOC.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01 T084: (PTI P0106190, issued on 6/24/2010)	6.95 TPY of VOC See b)(2)a.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06 T084: (PTI P0106190, issued on 6/24/2010)	See b(2)b.
d.	OAC rule 3745-21-09(Z)	See b)(2)c. and b)(2)d.
e.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
f.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(2) and 63.641, this emissions unit is subject to Subpart CC as a Group 1 storage vessel; it is associated with petroleum refining process units located at a plant site and that is a major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a Group 1 storage vessel as defined in 63.641.]	In accordance with 63.640(n)(1), the permittee of an existing Group 1 storage vessel subject that is also subject to the provisions of 40 CFR Part 60, Subpart Kb, is required to comply only with the requirements of 40 CFR Subpart Kb, except as provided in 63.640(n)(8). See b)(2)e.
g.	40 CFR Part 60, Subpart Kb (40 CFR 60.110b – 117b) [In accordance with 40 CFR 60.110b, this emissions unit is a storage vessel with a design	In accordance with 60.112b(a), the permittee shall equip the storage vessel with an external floating roof meeting the specifications in 60.112b(a)(2). See c)(2).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	capacity greater than 151 m^3 with a maximum true vapor pressure greater than 3.5 kilopascals that was reconstructed or modified after July 23, 1984.]	

(2) Additional Terms and Conditions

a. For T084 only: The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then the emission limits/control measures in permit term b)(1)b. and f)(1)a. (6.95 TPY VOC limit) no longer applies to T084.

b)(1)b., f)(1)a. – only for T084

[OAC rule 3745-31-05(A)(3), as effective 11/30/2001]

b. For T084 only: This paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the uncontrolled potential to emit for VOC is less than 10 tons per year.

c. Per OAC 3745-21-09(Z)(3)(c), no tank can store a petroleum liquid with a maximum true vapor pressure greater than 1.5 pounds per square inch absolute unless it is equipped with an external floating roof.

d. The welded external floating roof storage tank equipped with a mechanical shoe primary seal and rim-mounted secondary seal shall meet the following requirements.

i. There shall be no visible holes, tears or other openings in the seal or seal fabric.

ii. For the primary seal, the total seal gap area shall not exceed 10.0 square inches per foot of tank diameter.

iii. For the secondary seal, the total seal gap area shall not exceed 1.0 square inch per foot of tank diameter.

The permittee may change the seal types during the term of this permit provided that a written notification and revised "emission activity category" form, including the results of the latest seal gap measurements, are submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the change occurs.

e. Failure to perform inspections and monitoring required by 40 CFR 63, subpart CC, shall constitute a violation of the applicable standard of 40 CFR 63, subpart CC.

f. The 40 CFR 61 Subpart FF drain at this tank is subject to 40 CFR 61.346 - Standards: Individual Drain Systems and uses a water seal to comply. These requirements are included under the emission unit specific requirements for P025.

c) Operational Restrictions

(1) The external floating roof tank shall be maintained using the following control measures:

a. Any opening in the external floating roof, except automatic bleeder vents, rim space vents, leg sleeves, stub drains, and slotted gauging/sampling wells shall be equipped with:

i. a cover, seal, or lid which remains in the closed position at all times without any visible gaps, except when the opening is in actual use; and

ii. a projection into the tank below the liquid surface.

b. Any automatic bleeder vent shall remain in the closed position, except when the external floating roof is floated off or landed on the roof leg supports.

c. Any rim vent shall be set to open at the manufacturer's recommended setting, except when the external floating roof is being floated off the roof leg supports.

d. Any emergency roof drain shall be equipped with a slotted membrane fabric cover or other device which covers at least 90 percent of the area of the opening.

e. Any stub drain shall be equipped with a projection into the tank below the liquid surface.

f. Any slotted gauging/sampling well shall be equipped with an object which floats on the liquid surface within the well and which covers at least 90 percent of the area of the well opening.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-21-09(Z)(1)(c)]

(2) [40 CFR 60, Subpart Kb] STANDARDS OF PERFORMANCE FOR VOLATILE ORGANIC LIQUID STORAGE VESSELS

The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 60, Subpart Kb, including the following sections:

a.	60.112b(a)(2)	An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof.
b.	60.112b(a)(2)(i)	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.
c.	60.112b(a)(2)(i)(A)	The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.
d.	60.112b(a)(2)(ii)	Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof 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.
e.	60.112b(a)(2)(iii)	The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

d) Monitoring and/or Recordkeeping Requirements

(1) The seals of the external floating roof tank shall be inspected as follows:

a. The seal and seal fabric shall be inspected annually for visible holes, tears, or other openings.

b. The secondary seal gap shall be measured annually, in accordance with the method specified in paragraph (I) of OAC rule 3745-21-10.

c. The primary seal gap shall be measured at least once every 5 years, in accordance with the method specified in paragraph (I) of OAC rule 3745-21-10.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-21-09(Z)(2)(a), (b) and (c)]

(2) The seal gaps shall be measured to determine the width and area of the gaps between the wall of the external floating roof tank and the seal around the circumference of the roof. The width of the seal gap shall be determined using probes of the appropriate width, to accurately measure the actual distance from the seal to the tank wall. The area of the seal gap shall be determined by multiplying the width of the seal gap by the circumferential length of the gap. The total seal gap area is the accumulated area of all gaps which are greater than 0.125 inch in width.
[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-21-09(Z)(2)(c)]

(3) The permittee shall maintain records of the following information for at least two years:

a. the dates and results of each seal and seal fabric inspection and each seal gap measurement; and

b. the annual throughput of each petroleum liquid stored in the tank.

A copy of these records shall be made available to the Director or an authorized representative of the Director upon written or verbal request and shall be maintained for 5 years pursuant to OAC 3745-77-07(A)(3)(b).

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-21-09(Z)(2)(d) and (e)]

(4) The permittee shall maintain records of the following information for at least five years:

a. the types of petroleum liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

A copy of these records shall be made available to the Director or an authorized representative of the Director upon written or verbal request.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-21-09(Z)(4)]

(5) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart CC, including the following sections:

a.	63.640(n)(8)(i)	Storage vessels that are to comply with 60.112b(a)(2) of subpart Kb are exempt from the secondary seal requirements of 60.112b(a)(2)(i)(B) during the gap measurements for the primary seal required by 60.113b(b) of subpart Kb.
b.	63.640(n)(8)(ii)	If the permittee determines that it is unsafe to perform the seal gap measurements required in 40 CFR 60.113b(b) of subpart Kb, the permittee shall comply with the requirements in either 63.120(b)(7)(i) or 63.120(b)(7)(ii) of subpart G.
c.	63.640(n)(8)(iii) & (iv)	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 permittee may utilize up to two extensions of up to 30 additional calendar days each. The permittee is not required to provide a request for the extension to the Administrator but shall report it in the next periodic report according to 63.640(n)(8)(iv).
d.	63.640(n)(8)(v)	The inspection reports required by 60.115b(a)(3), (a)(4), and (b)(4) of subpart Kb may be submitted as part of the periodic reports required by 40 CFR 63 Subpart CC, rather than within the 30-day period specified in 60.115b(a)(3), (a)(4), and (b)(4) of subpart Kb.
e.	63.640(n)(8)(vi)	The reports of rim seal inspections specified in 60.115b(b)(2) are not required if none of the measured gaps or calculated gap areas exceed the limitations specified in 60.113b(b)(4). Documentation of the inspections shall be recorded as specified in 60.115b(b)(3).
f.	63.642(e)	Requirements for keeping all applicable reports and records required by this subpart for at least 5 years except as otherwise specified in this permit and be readily accessed within 24 hours.

(6) [40 CFR 60, Subpart Kb] STANDARDS OF PERFORMANCE FOR VOLATILE ORGANIC LIQUID STORAGE VESSELS

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 60, Subpart Kb, including the following sections:

60.113b Testing and Procedures		
a.	60.113b(b)(1)(i)	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: (i) 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.
b.	60.113b(b)(1)(ii)	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: (ii) 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.
c.	60.113b(b)(1)(iii)	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: (iii) 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 paragraphs (b)(1)(i) and (b)(1)(ii) of this section.
d.	60.113b(b)(2)(i)	Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.
e.	60.113b(b)(2)(ii)	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.
f.	60.113b(b)(2)(iii)	The total surface area of each gap described in 60.113b(b)(2)(ii) 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.
g.	60.113b(b)(3)	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 60.113b(b)(4).
h.	60.113b(b)(4)	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.
i.	60.113b(b)(5)	Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.
j.	60.113b(b)(6)	Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.
60.115b - Recordkeeping Requirements		
k.	60.115b(b)(3)	Keep a record of each gap measurement performed as required by 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain: (i) The date of measurement. (ii) The raw data obtained in the measurement. (iii) The calculations described in 60.113b(b)(2) and (b)(3).
60.116b Monitoring Requirements		
l.	60.116b(a)	The permittee shall keep copies of all reports and records required by 40 CFR 63.115b, except for the record required by 63.115b(c)(1), for at least 2 years. NOTE: this condition is less stringent than OAC 3745-77-07(A)(3)(b), which requires all records required by the Title V to be maintained for 5 years.
m.	60.116b(b)	Keep readily accessible records of the dimension of each storage vessel and an analysis showing the capacity of the storage vessel.

n.	60.116b(c)	Except as provided in 60.116b(f), the permittee shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of the VOL during the respective storage period.
o.	60.116b(e)	How to determine the maximum true vapor pressure using available data on the storage temperature.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

a.	63.640(n)(8)(v)	Permittees of storage vessels complying with subpart Kb of part 60 may submit the inspection reports required by 60.115b(a)(3), (a)(4), and (b)(4) of subpart Kb as part of the periodic reports required by 40 CFR 63 Subpart CC, rather than within the 30-day period specified in 60.115b(a)(3), (a)(4), and (b)(4) of subpart Kb.

(2) [40 CFR 60, Subpart Kb] STANDARDS OF PERFORMANCE FOR VOLATILE ORGANIC LIQUID STORAGE VESSELS
The permittee shall comply with the applicable reporting requirements required in 40 CFR 60, Subpart Kb, including the following sections:

60.115b Reporting Requirements		
a.	60.115b(b)(2)	Within 60 days of performing the seal gap measurements required by 60.113b(b)(1), furnish the Administrator with a report that contains: (i) The date of measurement. (ii) The raw data obtained in the measurement. (iii) The calculations described in §60.113b (b)(2) and (b)(3).
b.	60.115b(b)(4)(iii)	After each seal gap measurement that detects gaps exceeding the limitations specified by 60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in 60.115b(b)(2) of this section and the date the vessel was emptied or the repairs made

		and date of repair. Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

T019: VOC emissions shall not exceed 14.29 tons per year

T084: VOC emissions shall not exceed 6.95 tons per year

T174: VOC emissions shall not exceed 19 tons per year.

T187: VOC emissions shall not exceed 10.73 tons per year.

T188: VOC emissions shall not exceed 10.73 tons per year.

Applicable Compliance Method:

Compliance shall be determined by estimating emissions using the most recent version of EPA's Tanks computer software or the most recent emission factors contained in AP-42 Chapter 7, using the actual annual throughput and annual average vapor pressure.

g) Miscellaneous Requirements

(1) None.

50. Emissions Unit Group -T7 EFR Grp1 spCC 21-09(Z): T016,T017,T018,T020,T021,T024,T025,T026,T027,T028,T029,T030,T031,T032,T033,T034,T035,T036, T037,T038,T039,T040,T041,T044,T059,T060,T085,T090,T091,T096,T097,

EU ID	Operations, Property and/or Equipment Description
T016	79,703.69 barrel petroleum liquid storage tank identified as PR-500154. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T017	T017 is a 79,723.69 barrel petroleum liquid storage tank identified as PR-500155. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T018	T018 is a 78,665.02 barrel petroleum liquid storage tank identified as PR-500156. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T020	T020 is a 146,230 barrel petroleum liquid storage tank identified as PR-500647. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T021	T021 is a 146,268.8 barrel petroleum liquid storage tank identified as PR-500646. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T024	T024 is a 147,655.7 barrel petroleum liquid storage tank identified as PR-500812. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T025	T025 is a 148,123.6 barrel petroleum liquid storage tank identified as PR-500811. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC. All fugitive emissions from the East tank farm are included with this storage tank.
T026	T026 is a 65,437.34 barrel petroleum liquid storage tank identified as PR-500076. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T027	T027 is a 42,134.48 barrel petroleum liquid storage tank identified as PR-500186. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T028	T028 is a 41,937.25 barrel petroleum liquid storage tank identified as PR-500189. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper

EU ID	Operations, Property and/or Equipment Description
	secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T029	T029 is a 95,276.64 barrel petroleum liquid storage tank identified as PR-500099. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T030	T030 is a 147,336.3 barrel petroleum liquid storage tank identified as PR-500813. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T031	T031 is a 147,742.3 barrel petroleum liquid storage tank identified as PR-500814. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T032	T032 is a 148,267.3 barrel petroleum liquid storage tank identified as PR-500815. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T033	T033 is a 148,313 barrel petroleum liquid storage tank identified as PR-500816. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T034	T034 is a 148,297.5 barrel petroleum liquid storage tank identified as PR-500817. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T035	T035 is a 42,211.44 barrel petroleum liquid storage tank identified as PR-500143. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T036	T036 is a 42,211.35 barrel petroleum liquid storage tank identified as PR-500123. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T037	T037 is a 41,782.97 barrel petroleum liquid storage tank identified as PR-500122. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T038	T038 is a 41,770.82 barrel petroleum liquid storage tank identified as PR-500120. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC. All fugitive emissions from the West tank farm are included with this

EU ID	Operations, Property and/or Equipment Description
	storage tank.
T039	T039 is a 41,965.73 barrel petroleum liquid storage tank identified as PR-500121. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T040	T040 is a 44,404.5 barrel petroleum liquid storage tank identified as PR-500131. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T041	T041 is a 42,614.05 barrel petroleum liquid storage tank identified as PR-500130. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T044	T044 is a 131,660 barrel petroleum liquid storage tank identified as PR-500158. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T059	T059 is a 41,665.08 barrel petroleum liquid storage tank identified as PR-500064. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T060	T060 is a 42,212.73 barrel petroleum liquid storage tank identified as PR-500065. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T085	T085 is a 78,834.6 barrel petroleum liquid storage tank identified as PR-500135. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T090	T090 is a 41,586.15 barrel petroleum liquid storage tank identified as PR-500187. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T091	T091 is a 42,065.3 barrel petroleum liquid storage tank identified as PR-500188. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T096	T096 is a 19,276.11 barrel petroleum liquid storage tank identified as PR-500269. It has an external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.
T097	T097 is a 19,563.97 barrel petroleum liquid storage tank identified as PR-500270. It has an

EU ID	Operations, Property and/or Equipment Description
	external floating roof with a mechanical shoe primary seal and a rim mounted flexible wiper secondary seal. It is currently classified as a Group 1 storage vessel pursuant to 40 CFR Part 63, Subpart CC.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-21-09(Z)	See b)(2)a. and b)(2)b.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
c.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(2) and 63.641, this emissions unit is subject to Subpart CC as a Group 1 storage vessel; it is associated with petroleum refining process units located at a plant site and that is a major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a Group 1 storage vessel as defined in 63.641.]	In accordance with 63.646(a) the permittee of a Group 1 storage vessel subject to 40 CFR Part 63, Subpart CC shall comply with the requirements of 63.119 through 63.121 of 40 CFR 63, Subpart G, except as provided in 63.646(b) through 63.646(l). See b)(2)c. through b)(2)e.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	40 CFR Part 61, Subpart FF	For T016, T017, T018, T035, T040, T041, T044, T085: See b)(2)f.

(2) Additional Terms and Conditions

a. Per OAC 3745-21-09(Z)(3)(c), no tank can store a petroleum liquid with a maximum true vapor pressure greater than 1.5 pounds per square inch absolute unless it is equipped with an external floating roof.

b. The welded external floating roof storage tank equipped with a mechanical shoe primary seal and rim-mounted secondary seal shall meet the following requirements.

i. There shall be no visible holes, tears or other openings in the seal or seal fabric.

ii. For the primary seal, the total seal gap area shall not exceed 10.0 square inches per foot of tank diameter.

iii. For the secondary seal, the total seal gap area shall not exceed 1.0 square inch per foot of tank diameter.

The permittee may change the seal types during the term of this permit provided that a written notification and revised “emission activity category” form, including the results of the latest seal gap measurements, are submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the change occurs.

c. In accordance with 63.119(a)(1), the permittee shall reduce the emissions of HAPs to the atmosphere by operating and maintaining an external floating roof in compliance with the applicable requirements in 63.119(c).

d. MACT status (Group 1 or Group 2) is determined by the type of material being stored in the tank as defined by 40 CFR 63.641. If an existing tank changes from a Group 1 to Group 2 storage vessel where the material stored is less than 1.51 psia (maximum true vapor pressure) or 4% by weight of HAPS, then the tank is only subject to the recordkeeping requirements of 40 CFR 63.123(a) of Subpart G and 63.655(i)(1)(iv) of Subpart CC and is not required to comply with any other provisions in 40 CFR 63.119 through 63.123 of Subpart G.

e. [63.646(g)]
Failure to perform inspections and monitoring required by 40 CFR Part 63.646, Subpart CC shall constitute a violation of the applicable standard of this Subpart.

f. These tanks have drains that are subject to the requirements of 40 CFR 61, Supbart FF 61.346 – Standards: Individual Drain Systems and uses a water seal to comply. These requirements are included under the emission unit specific requirements of P025.

c) Operational Restrictions

(1) The external floating roof tank shall be maintained using the following control measures:

a. Any opening in the external floating roof, except automatic bleeder vents, rim space vents, leg sleeves, stub drains, and slotted gauging/sampling wells shall be equipped with:

i. a cover, seal, or lid which remains in the closed position at all times without any visible gaps, except when the opening is in actual use; and

ii. a projection into the tank below the liquid surface.

b. Any automatic bleeder vent shall remain in the closed position, except when the external floating roof is floated off or landed on the roof leg supports.

c. Any rim vent shall be set to open at the manufacturer's recommended setting, except when the external floating roof is being floated off the roof leg supports.

d. Any emergency roof drain shall be equipped with a slotted membrane fabric cover or other device which covers at least 90 percent of the area of the opening.

e. Any stub drain shall be equipped with a projection into the tank below the liquid surface.

f. Any slotted gauging/sampling well shall be equipped with an object which floats on the liquid surface within the well and which covers at least 90 percent of the area of the well opening.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-21-09(Z)(1)(c)]

(2) [40 CFR 63, Subpart CC] – NESHAP FROM PETROLEUM REFINERIES - STORAGE VESSEL PROVISIONS
The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart CC, including the following sections:

a.	63.646(f)(1)	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.
b.	63.646(f)(2)	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.

c.	63.646(f)(3)	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.

(3) [40 CFR 63, Subpart G] STORAGE VESSEL PROVISIONS

The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart G, including the following sections:

63.119 Storage Vessel Provisions – Reference Control Technology		
a.	63.119(c)	The permittee who uses an external floating roof shall comply with the requirements specified in 63.119(c)(1), (c)(3) and (c)(4) as provided in 63.646(c) of Subpart CC.
b.	63.119(c)(1)	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, the upper seal (secondary seal) is above the lower seal (primary seal). The primary seal shall be either a metallic shoe seal or a liquid-mounted seal. Both seals shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion. See 63.119(c)(1)(i) through (c)(1)(iii) for exceptions.
c.	63.119(c)(3)	The external 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.
d.	63.119(c)(4)	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
63.120 Storage Vessels, Procedures to Determine Compliance		
e.	63.120(b)(5)	PRIMARY SEAL – additional requirements: Where a metallic shoe seal is in use, one end of the metallic shoe shall extend into the stored liquid and the other end shall extend a minimum vertical distance of 61 centimeters (24 inches) above the stored liquid surface.There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope

f.	63.120(b)(6)	SECONDARY SEAL – additional requirements: 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 except as provided in 40 CFR Part 63.160(b)(4). There shall be no holes, tears, or other openings in the seal or seal fabric.

d) Monitoring and/or Recordkeeping Requirements

(1) The seals of the external floating roof tank shall be inspected as follows:

a. The seal and seal fabric shall be inspected annually for visible holes, tears, or other openings.

b. The secondary seal gap shall be measured annually, in accordance with the method specified in paragraph (I) of OAC rule 3745-21-10.

c. The primary seal gap shall be measured at least once every 5 years, in accordance with the method specified in paragraph (I) of OAC rule 3745-21-10.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-09(Z)(2)(a), (b), and (c)]

(2) The seal gaps shall be measured to determine the width and area of the gaps between the wall of the external floating roof tank and the seal around the circumference of the roof. The width of the seal gap shall be determined using probes of the appropriate width, to accurately measure the actual distance from the seal to the tank wall. The area of the seal gap shall be determined by multiplying the width of the seal gap by the circumferential length of the gap. The total seal gap area is the accumulated area of all gaps which are greater than 0.125 inch in width.

[OAC rule 3745-21-10(I)] [OAC rule 3745-21-09(Z)(2)(c)]

(3) The permittee shall maintain records of the following information:

a. the dates and results of each seal and seal fabric inspection and each seal gap measurement; and

b. the annual throughput of each petroleum liquid stored in the tank.

A copy of these records shall be made available to the Director or an authorized representative of the Director upon written or verbal request.

[Authority for term OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-09(Z)(2)(d) and (e)]

(4) The permittee shall maintain records of the following information for at least five years:

a. the types of petroleum liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

A copy of these records shall be made available to the Director or an authorized representative of the Director upon written or verbal request.

[Authority for term: OAC rule 37-77-07(C)(1) and OAC rule 3745-21-09(Z)(4)]

(5) Compliance with the tank repair requirements in 40 CFR Part 63, Subpart CC has been determined to be as stringent or more stringent as the tank repair requirements of OAC rule 3745-21-09(Z).

[Authority for term: OAC rule 3745-77-07(C)(1)]

(6) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart CC, including the following sections:

a.	63.642(e)	Keep copies of all applicable reports and records required by 40 CFR 63, subpart CC for at least 5 years except as otherwise specified in this permit. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.
63.646 – Storage Vessel Provisions		
b.	63.646(b), (b)(1) and (b)(2)	*Storage Vessel Provisions:* All terms not defined in 63.641 shall have the meaning given them in 40 CFR Part 63, Subparts A or G. The Group 1 storage vessel definition presented in 40 CFR Part 63.641 applies in lieu of the Group 1 storage vessel definitions presented in tables 5 and 6 of 40 CFR Part 63.119 of Subpart G.
c.	63.646(b)(1)	Use good engineering judgment or test results to determine the stored liquid weight percent total organic HAP
d.	63.646(b)(2)	Method 18 of 40 CFR Part 60, Appendix A shall be used to determine the average weight percent of organic HAP in the liquid if the permittee and Administrator do not agree on whether the annual average weight percent organic HAP's in the stored liquid is above or below 4 percent.

e.	63.646(e)	When complying with the inspection requirements of 40 CFR Part 63.120 of Subpart G, storage vessels at existing sources subject to 40 CFR Part 63, Subpart CC, are not required to comply with the provisions for gaskets, slotted membranes, and sleeve seals.
63.655(i) references 63.123 of 40 CFR 63, Subpart G – Storage Vessel Recordkeeping		
f.	63.655(i)	*Recordkeeping Requirements*: Keep the storage vessel records specified in 63.123 of Subpart G except as specified in 63.655(i)(i) through (iv).
g.	63.655(i)(1)(i)	Records related to gaskets, slotted membranes, and sleeve seals are not required for storage vessels within existing sources.
h.	63.655(i)(1)(iv)	If a storage vessel is determined to be Group 2 storage vessel, a record of any data, assumptions, and procedures used to make this determination shall be retained.

(7) [40 CFR 63, Subpart G] NESHAP FROM THE SYNTHETIC ORGANIC CHEMICL MANUFACTURING INDUSTRY FOR PROCESS VENTS, STORAGE VESSELS, TRANSFER OPERATIONS, AND WASTEWATER

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart G, including the following sections:

63.120-Storage Vessel Inspections:		
a.	63.120(b)(1)(i)	Except as provided in 40 CFR Part 63.120(b)(7), determine the gap areas and maximum gap widths between the primary seal and the wall of the storage vessel, and the secondary seal and the wall of the storage vessel according to the frequency specified in the following paragraphs: For an external floating roof vessel equipped with a primary and secondary seals, measurements of gaps between the vessel wall and the primary seal shall be performed during the hydrostatic testing of the vessel at least once every 5 years;

b.	63.120(b)(1)(iii)	Measurements of gaps between the vessel wall and the secondary seal shall be performed at least once per year; and
c.	63.120(b)(1)(iv)	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 vessels specified in table 5 or table 6 of 40 CFR 63 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.
d.	63.120(b)(2)(i)	Determine the gap widths and gap areas in the primary and secondary seals (seal gaps) individually by the procedures described below. Seal gaps, if any, shall be measured at one or more floating roof levels when the roof is not resting on the roof leg supports.
e.	63.120(b)(2)(ii)	Seal gaps, if any, shall be measured around the entire circumference of the vessel in each place where an 0.32 centimeter (1/8 inch) diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the storage vessel. The circumferential distance of each such location shall also be measured.
f.	63.120(b)(2)(iii)	The total surface area of each gap described63.120(b)(2)(ii) shall be determined by using probes of various widths to measure accurately the actual distance from the vessel wall to the seal and multiplying each such width by its respective circumferential distance
g.	63.120(b)(3)	Add the gap surface are of each gap location for the primary seal and divide the sum by the nominal diameter of the vessel. The accumulated area of gaps between the vessel wall and the primary seal shall not exceed 212 square centimeters per meter (10 square inches per foot) of vessel diameter and the width of any portion of any gap shall not exceed 3.81

		centimeters (1.5 inches). The accumulated area of gaps between the vessel wall and the secondary seal shall not exceed 21.2 square centimeters per meter (1 square inch per foot) of vessel diameter and the width of any portion of any gap shall not exceed 1.27 centimeters (0.5 inch). These seal gap requirements may be exceeded during the measurement of primary seal gaps as required by 40 CFR Part 63.120(b)(1).
h.	63.120(b)(4)	Add the gap surface area of each gap location for the secondary seal and divide the sum by the nominal diameter of the vessel. The accumulated area of gaps between the vessel wall and the secondary seal shall not exceed 21.2 square centimeters per meter (3.29 square inches) of vessel diameter and the width of any portion of any gap shall not exceed 1.27 centimeters (0.5 inches). These seal gap requirements may be exceeded during the measurement of primary seal gaps as required by 40 CFR 63.120(b)(1)(i) and (b)(1)(ii).
i.	63.120(b)(5)	The primary seal shall meet the additional requirements specified: (i) Where a metallic shoe seal is in use, one end of the metallic shoe shall extend into the stored liquid and the other end shall extend a minimum vertical distance of 61 centimeters (24 inches) above the stored liquid surface. (ii) There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.
j.	63.120(b)(6)	The secondary seal shall meet the additional requirements specified: (i) 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 except as provided in 63.120(b)(4). (ii) There shall be no holes, tears, or other openings in the seal or seal fabric.
k.	63.120(b)(7)	If the permittee determines that it is unsafe to perform the seal gap measurements required in 63.120(b)(1) and (b)(2) or to inspect the vessel to determine compliance with 63.120(b)(5) and (b)(6) because the floating roof appears to be structurally unsound and poses an imminent or

		potential danger to inspecting personnel, the permittee shall comply with the requirements in either 63.120(b)(7)(i) or (b)(7)(ii).
l.	63.120(b)(8)	Repair failures identified no later than 45 calendar days after identification, or empty and remove the storage vessel from service no later than 45 calendar days after identification of conditions that do not meet requirements listed in 40 CFR Part 63.120(b)(3), (b)(4), (b)(5) and (b)(6). If a failure is detected that cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, two extensions of up to 30 calendar days may be utilized. 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.
m.	63.120(b)(10)	Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed and required repairs if the roof has defects or the seals have holes, tears or other openings in the seal or seal fabric.
63.123 – Recordkeeping Requirements		
n.	63.123(a)	Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep records as long as the storage vessel retains Group 1 status and is in operation.
o.	63.123(d) for EFR Tanks	Keep records describing the results of each seal gap measurement made in accordance with 40 CFR Part 63.120(b). Include the date of the measurement, the raw data obtained in the measurement, and the calculations described in 40 CFR Part 63.120(b)(3) and (b)(4).

p.	63.123(g)	Requirements for permittees who elect to utilize an extension in emptying a storage vessel in accordance with 40 CFR 63.120 (b)(7)(ii) or (b)(8). Keep the documentation readily accessible.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

63.655 - Reporting Requirements		
a.	63.655(g)	Submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the compliance exceptions specified in 63.655(g)(1) through (6) or (g)(9) occur. The first 6-month period shall begin on the date the Notification of Compliance Status report is required to be submitted
b.	63.655(g)(3)	*Periodic Reporting of results of seal gap measurements for EFR tanks:* - submit documentation of the results of each seal gap measurement in accordance with 40 CFR 63.120(b) in which the seal and seal gap requirements of 63.120(b)(3), (b)(4), (b)(5), or (b)(6) are not met. Include documentation in 63.655(g)(3)(i)(A) through (g)(3)(i)(D) - documentation of an extension, if utilized, required in periodic report per 63.655(g)(3)(ii). - submit documentation of any failures that are identified during visual inspections required by 40 CFR Part 40 CFR 63.120(b)(10). The documentation shall meet the specifications and requirements stated in 63.655(g)(3)(iii).
c.	63.655(h)(2)(i)	*Storage Vessel Provisions – Notification Requirements:* In order to have an observer present, notify Toledo Environmental Services in writing, 30 days in advance: - of the refilling of each Group 1 storage vessel that has been emptied and degassed except as stated in 63.655(h)(2)(i)(A) through (C). - for EFR tanks, of any seal gap measurements. The state can waive this notification requirement.

d.	63.655(h)(2)(ii)	Notify the Administrator of any seal gap measurements. The notification shall be made in writing at least 30 calendar days in advance of any gap measurements required by 40 CFR 63.120 (b)(1) or (b)(2) of subpart G. The State or local permitting authority can waive this notification requirement for all or some storage vessels subject to the rule or can allow less than 30 calendar days' notice.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. None.

g) Miscellaneous Requirements

(1) None.

51. Emissions Unit Group -T8 EFR Grp1 spCC spFF sp Kb: T166,T167,

EU ID	Operations, Property and/or Equipment Description
T166	T166 is a 16,883.35 barrel external floating roof storage vessel with dual seals. The tank is identified as tank number PR-500014 and is currently classified as a Group 1 wastewater storage vessel pursuant to 40 CFR 63.641.
T167	T167 is a 16,866.73 barrel external floating roof storage vessel with dual seals. The tank is identified as tank number PR-500015 and is currently classified as a Group 1 wastewater storage vessel pursuant to 40 CFR 63.641.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-1267, issued 10/16/2001, corrected copy 10/23/2001)	T166: 3.9 TPY of volatile organic compounds (VOC); and T167: 3.9 TPY VOC
b.	OAC rule 3745-21-09(Z)	See b)(2)a.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
d.	40 CFR Part 63, Subpart CC (40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(3) and 63.641, this emissions unit is subject to Subpart CC as part of a petroleum refining process unit located at a	In accordance with 63.647(a) and 63.655(a), the permittee of a Group 1 wastewater storage tank storing Group 1 wastewater streams shall comply with the requirements of 61.340 through 61.357 of 40 CFR 61, Subpart FF. See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	plant site that is a major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a tank storing Group 1 wastewater streams.]	
e.	40 CFR Part 61, Subpart FF (40 CFR 61.340-358) [In accordance with 40 CFR 61.340(a) and (b), this emissions unit is subject to Subpart FF as a storage vessel holding BWON regulated material at a petroleum refinery.]	In accordance with 40 CFR 61.351(a), as an alternative to the standards for tanks specified in 61.343, the permittee elects to comply with subpart FF by having a fixed roof and external floating roof meeting the requirements of 40 CFR 60.112b(a)(2) of 40 CFR 60, Subpart Kb. See b)(2)c.
f.	40 CFR Part 60, Subpart Kb (40 CFR 60.110b – 117b) [In accordance with 40 CFR 60.110b, this emissions unit is a storage vessel with a design capacity greater than 151 m^3 with a maximum true vapor pressure greater than 3.5 kilopascals that was reconstructed or modified after July 23, 1984.]	In accordance with 60.112b(a), the permittee shall equip the storage vessel with an external floating roof meeting the specifications in 60.112b(a)(2). See c)(2).
g.	40 CFR Part 60, Subpart QQQ	For T166 and T167: See b)(2)d.

(2) Additional Terms and Conditions

a. Consistent with U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(Z) by demonstrating compliance with the storage tank standards in 40 CFR Part 63, Subpart CC. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the requirements of OAC rule 3745-21-09(Z), except for the record keeping requirement of OAC 3745-21-09(Z)(2)(d)(ii).

b. In accordance with 63.641, the definition for storage vessels exempts wastewater storage tanks from the storage vessel provisions of 40 CFR 63.646, Subpart CC.

c. If the permittee elects to comply with the alternative standards for tanks in 40 CFR 61.351, then the permittee is exempt from the provisions of 61.343 of this subpart.

d. The 40 CFR 60 Subpart QQQ drain at this tank is subject to 40 CFR Part 60.692-2 Standards: Individual Drain Systems and uses secondary containment dike drain valves that are maintained closed to comply. These requirements are included under the emission unit specific requirements of P025.

c) Operational Restrictions

(1) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS

The permittee shall comply with the applicable restrictions required under 40 CFR 61, Subpart FF that defers to 40 CFR Part 60, Subpart Kb, including the following sections:

a.	40 CFR 61.351(a) of Subpart FF	As an alternative to the standards for tanks specified in 61.343 of this subpart, the permittee may elect to comply with the fixed roof and external floating roof meeting the requirements in 40 CFR 60.112b(a)(2) of 40 CFR 60, subpart Kb.

(2) [40 CFR 60, Subpart Kb] STANDARDS OF PERFORMANCE FOR VOLATILE ORGANIC LIQUID STORAGE VESSELS

The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 60, Subpart Kb, including the following sections:

a.	60.112b(a)(2)	An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof.
b.	60.112b(a)(2)(i)	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. The seal shall meet the requirements of 40 CFR 60.112b(a)(2)(i)(A) and (B).
c.	60.112b(a)(2)(ii)	Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents

		are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof 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.
d.	60.112b(a)(2)(iii)	The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information:

a. the annual throughput of each petroleum liquid stored in the tank.

A copy of these records shall be made available to the Director or an authorized representative of the Director upon written or verbal request.

[Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-21-09(Z)(1)(d) and (e)]

(2) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 61, subpart FF, including the following sections:

a.	40 CFR 61.356(a)	The permittee shall comply with the recordkeeping requirements of this section. Each record shall be maintained in a readily accessible location at the facility site.
b.	61.356(k)	The permittee who elects the alternative to the standards for tanks specified in 61.351 of Subpart FF shall comply with the recordkeeping requirements in 40 CFR 60.115b of 40 CFR 60, Subpart Kb.

(3) [40 CFR 60, Subpart Kb] STANDARDS OF PERFORMANCE FOR VOLATILE ORGANIC LIQUID STORAGE VESSELS

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 60, Subpart Kb, including the following sections:

60.113b - Inspections		
a.	60.113b(b)(1)(i)	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: Hydrostatic testing: within 60 days of initial fill with volatile organic liquid (VOL) and every 5 years after.
b.	60.113b(b)(1)(ii)	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; and
c.	60.113b(b)(1)(iii)	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 paragraphs (b)(1)(i) and (b)(1)(ii) of this section.
d.	60.113b(b)(2)(i)	Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.
e.	60.113b(b)(2)(ii)	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 the seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.
f.	60.113b(b)(2)(iii)	The total surface area of each gap described in 60.113b(b)(2)(ii) 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.
g.	60.113b(b)(3)	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 60.113b(b)(4).
h.	60.113b(b)(4)	Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in 60.113b(b)(4)(i) and (ii) of this section. If a failure is detected during inspection in

		60.113b(b)(1) that cannot be repaired in 45 days and if the vessel cannot be emptied within 45 days, up to 2 extensions of up to 30 additional days can be requested.
i.	60.113b(b)(6)	Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.
60.115b Recordkeeping Requirements		
j.	60.115b	The permittee shall keep copies of all reports and records required by 40 CFR 63.115b, except for the record required by 63.115b(c)(1), for at least 2 years. NOTE: this condition is less stringent than OAC 3745-77-07(A)(3)(b), which requires all records required by the Title V to be maintained for 5 years.
k.	60.115b(b)(3)	Keep a record of each gap measurement performed in 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain: i. The date of measurement; ii. The raw data obtained in the measurement; iii. The calculations described in 60.113b(b)(2) and (b)(3)
60.116b Monitoring Requirements		
l.	60.116b(a)	Keep copies of all records required by 40 CFR 60.116b except the records required by paragraph 60.116b(b) shall be kept for the life of the source.
m.	60.116b(b)	Keep readily accessible records of the dimension of each storage vessel and an analysis showing the capacity of the storage vessel.
n.	60.116b(c)	Except as provided in 60.116b(f), the permittee shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of the VOL during the respective storage period.
o.	60.116b(e)	How to determine the maximum true vapor pressure using available data on the storage temperature.
p.	60.116b(f)	Requirements for a vessel storing a waste mixture of indeterminate or variable composition.

e) Reporting Requirements

(1) [40 CFR 61, Subpart FF] – NATIONAL EMISSION STANDARDS FOR BENZENE WASTE OPERATIONS

The permittee shall submit the following reports and such other notifications and reports to the appropriate Ohio EPA District office or local air agency as are required pursuant to 40 CFR 61, Subpart FF, including the following sections:

a.	40 CFR 61.357(f)	The permittee who elects the alternative to the standards for tanks specified in 61.351 of Subpart FF shall comply with the reporting requirements in 40 CFR 60.115b of 40 CFR 60, Subpart Kb.

(2) [40 CFR 60, Subpart Kb] STANDARDS OF PERFORMANCE FOR VOLATILE ORGANIC LIQUID STORAGE VESSELS

The permittee shall comply with the applicable reporting requirements required in 40 CFR 60, Subpart Kb, including the following sections:

60.115b Reporting Requirements		
a.	60.113b(b)(5)	Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.
b.	60.113b(b)(6)(ii)	For all inspections required, notify the Administrator in writing at least 30 days prior to filling or re-filling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to re-filling. If the inspection required is not planned and the permittee could not have known about the inspection 30 days in advance of refilling the tank, the permittee shall notify the Administrator 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. Alternately, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.
c.	60.115b(b)(2)	Within 60 days of performing the seal gap measurements required by 60.113b(b)(1), furnish the Administrator with a report that contains: (i) The date of measurement.

		(ii) The raw data obtained in the measurement. (iii) The calculations described in §60.113b (b)(2) and (b)(3).
d.	60.115b(b)(4)	After each seal gap measurement that detects gaps exceeding the limitations specified by 60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in 60.115b(b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

T166: VOC emissions shall not exceed 3.9 tons per year

T167: VOC emissions shall not exceed 3.9 tons per year.

Applicable Compliance Method:

Compliance shall be determined by estimating emissions using the most recent version of EPA's Tanks computer software or the most recent emission factors contained in AP-42 Chapter 7, using the actual annual throughput and annual average vapor pressure.

g) Miscellaneous Requirements

(1) None.

52. Emissions Unit Group -T9 FR Grp2 spCC spKb 21-09(L): T136,T137,T138,

EU ID	Operations, Property and/or Equipment Description
T136	T136 is a 23,809.5 barrel fixed roof storage vessel identified as tank number PR-500686. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T137	T137 is a 23,809.5 barrel fixed roof storage vessel identified as tank number PR-500688. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.
T138	T138 is a 60,000 gallon fixed roof storage vessel identified as tank number PR-500687. It is classified as a Group 2 storage vessel pursuant to 40 CFR 63.641.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (*For T136*: PTI 04-0379 issued 3/11/1987) (*For T137*: PTI 04-0379 issued 3/11/1987) (*For T138*: PTI 04-0379 issued 3/11/1987)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(L).
b.	OAC rule 3745-21-09(L)	See b)(2)a.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 of 40 CFR Part 63, Subpart CC "General Provisions Applicability to Subpart CC" provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to this emissions unit.
d.	40 CFR Part 63, Subpart CC	40 CFR 63, Subpart CC, establishes no emission limitation or control measures

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(40 CFR 63.640-656) [In accordance with 40 CFR 63.640(a), 63.640(c)(2) and 63.641, this emissions unit is subject to Subpart CC as a Group 2 storage vessel; it is associated with petroleum refining process units located at a plant site and that is a major source as defined in section 112(a) of the Clean Air Act; and meets the definition of a Group 2 storage vessel as defined in 63.641.]	for Group 2 storage vessels. See b)(2)c. and e)(2) – 63.640(m)
e.	40 CFR Part 60, Subpart Kb (40 CFR 60.110b-117b) [In accordance with 40 CFR 60.116b(d), this emissions unit is a fixed roof storage vessel which contains a petroleum liquid having a true vapor pressure equal to or greater than 3.5 kPa (0.5 psia) but not greater than 5.2 kPa (0.75 psia) subject to the emissions limitations/control measures specified in this section]	See b)(2)b.

(2) Additional Terms and Conditions

a. Consistent with U.S. EPA streamlining , the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(L) by demonstrating compliance with the storage tank standards in 40 CFR Part 63, Subpart CC. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the requirements of OAC rule 3745-21-09(L).

b. The permittee is exempt from the control requirements of 40 CFR Part 60, subpart Kb, but shall keep the records required in 40 CFR 60.116b(a)-(d).

c. As specified under 40 CFR 63.640(n)(1), a Group 2 storage vessel that is part of an existing source and is also subject to the provisions of 40 CFR Part 60, subpart Kb, is required to comply only with the requirements of 40 CFR Part 60, subpart Kb.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, subpart CC, including the following sections:

a.	63.655(i)(1)(iv)]	Maintain a record of any data, assumptions, and procedures used to make the determination that this storage vessel is Group 2, e.g., that the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent.
b.	63.642(e)	The permittee shall keep copies of all applicable reports and records required by this permit for at least 5 years except as otherwise specified in this permit. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

(2) [40 CFR 60, Subpart Kb] STANDARDS OF PERFORMANCE FOR VOLATILE ORGANIC LIQUID STORAGE VESSELS

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 60, Subpart Kb, including the following sections:

60.116b Monitoring of operations		
a.	60.116b(a)	Keep copies of all records required by 40 CFR Part 60, Subpart Kb for at least 5 years, except for the record required by 40 CFR Part 60.116b(b) which will be kept for the life of the source.
b.	60.116b(b)	Keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

c.	60.116b(c)	Maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure (to determine the maximum true vapor pressure, see 40 CFR Part 60.116b(e)) of that VOL during the respective storage period.

e) Reporting Requirements

(1) [40 CFR 63, Subpart CC] NESHAP FROM PETROLEUM REFINERIES
The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 63, Subpart CC, including the following sections:

a.	63.640(m)	The permittee shall submit a compliance schedule in a periodic report describing any operational process change to this emission unit that causes it to change from a group 2 to a group 1 emission unit. (m)(1) The permittee shall submit to the Director and Administrator for approval a compliance schedule, along with a justification for the schedule. (m)(2) The compliance schedule shall be submitted within 180 days after the change is made, unless the compliance schedule has been previously submitted to the permitting authority. If it is not possible to determine until after the change is implemented whether the emission point has become Group 1, the compliance schedule shall be submitted within 180 days of the date when the affect of the change is known to the source. The compliance schedule may be submitted in the next Periodic Report if the change is made after the date the Notification of Compliance Status report is due. (m)(3) The Administrator shall approve or deny the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification. Approval is automatic if not received from the Administrator within 120 calendar days of receipt.
b.	63.655(f)(6)	Notification of Compliance Status reports required by 63.640(l)(3) and for storage vessels subject to the compliance dates specified in 63.640(h)(4) shall be submitted no later than 60 days after the end of the 6-month period during which the change or addition was made that resulted in the Group 1 emission point or the existing Group 1 storage vessel was brought into compliance, and may be combined with the periodic report.

		Six-month periods shall be the same 6-month periods specified in paragraph (g) of this section. The Notification of Compliance Status report shall include the information specified in paragraphs (f)(1) through (f)(5) of this section. This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, as part of the periodic report, or in any combination of these four. If the required information has been submitted before the date 60 days after the end of the 6-month period in which the addition of the Group 1 emission point took place, a separate Notification of Compliance Status report is not required within 60 days after the end of the 6-month period. If an owner or operator submits the information specified in paragraphs (f)(1) through (f)(5) of this section at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information.

(2) [40 CFR 60, Subpart Kb] STANDARDS OF PERFORMANCE FOR VOLATILE ORGANIC LIQUID STORAGE VESSELS

The permittee shall comply with the applicable reporting requirements required in 40 CFR 60, Subpart Kb, including the following sections:

a.	60.116(d)	Notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds or equals the respective maximum true vapor pressure of 5.2 kPa.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. None.

g) Miscellaneous Requirements

(1) None.