



Mike DeWine, Governor
Jon Husted, Lt. Governor
Anne M. Vogel, Director

01/24/2024

Certified Mail

Jim Fain
Lima Refining Company
1150 South Metcalf Street
Lima, OH 45804

Facility ID: 0302020012
Permit Number: P0133998
County: Allen

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, The Lima News. A copy of the public notice, the Statement of Basis, and the draft permit are enclosed. This permit can be accessed electronically on the Ohio EPA document search website here: <https://epa.ohio.gov/help-center/edocument-search/edocument-search>. 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 Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Rd.
Bowling Green, OH 43402

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 Ohio EPA DAPC, Northwest District Office at (419)352-8461.

Sincerely,

A handwritten signature in black ink that reads "Robert Hodanbosi".

Robert Hodanbosi
Chief, Division of Air Pollution Control

cc: U.S. EPA Region 5 - *Via E-Mail Notification*
Ohio EPA-NWDO; 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: <https://epa.ohio.gov/actions> 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
Lima Refining Company
1150 South Metcalf Street

Lima, OH 45804

ID#: P0133998
Date of Action: 01/24/2024
Permit Desc: Title V renewal for a petroleum refining and storage facility.

The permit and complete instructions for requesting information or submitting comments may be obtained at: <https://epa.ohio.gov/help-center/edocument-search/edocument-search> by entering the permit # or by contacting: Alyse Wineland, Ohio EPA DAPC, Northwest District Office, 347 North Dunbridge Rd., Bowling Green, OH 43402. Ph: (419)352-8461



Statement of Basis
 Lima Refining Company
 Permit Number: P0133998
 Facility ID: 0302020012

Statement of Basis* For Air Pollution Title V Permit

* As defined in OAC rule 3745-77-01(MM): "Statement of basis" or "SOB" means a statement that sets forth the legal and factual basis for the draft [Title V] permit conditions (including references to the applicable statutory or regulatory provisions)."
 Completing this form is intended to satisfy those requirements.

Facility ID:	0302020012
Facility Name:	Lima Refining Company
Facility Description:	Petroleum Refinery and Storage
Facility Address:	1150 South Metcalf Street, Lima, OH 45804
Permit #:	P0133998, Title V Permit - Renewal
This facility is subject to Title V because it is major for: <input type="checkbox"/> Lead <input checked="" type="checkbox"/> Sulfur Dioxide <input checked="" type="checkbox"/> Carbon Monoxide <input checked="" type="checkbox"/> Volatile Organic Compounds <input checked="" type="checkbox"/> Nitrogen Oxides <input checked="" type="checkbox"/> Particulate Matter ≤ 10 microns <input checked="" type="checkbox"/> Single Hazardous Air Pollutant <input type="checkbox"/> Combined Hazardous Air Pollutants <input checked="" type="checkbox"/> GHG And/or subject to: <input checked="" type="checkbox"/> Maximum Available Control Technology Standard(s) <input type="checkbox"/> GACT standard(s) that requires a Title V permit <input type="checkbox"/> Title IV <input type="checkbox"/> Opt-In source	

A. Permit Background

1. Has each insignificant emissions unit been reviewed to confirm it meets the definition in OAC rule 3745-77-01(V)?		
Yes <input checked="" type="checkbox"/>	No	Comments:
2. Discuss any common control determinations (this includes revisions to previous determinations), include justification, factors, and facts which led to the final decision. Discussion: N/A		
3. 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). This includes identifying conditions from previous permits that are not included in the new permit.		
PTI No.:	Affected EUs:	



Discussion of changes from the previous Title V:N/A	
4. 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 minor modification per OAC rules 3745-77-08(C)(1) or (2)	
PTI No.: P0133093	Affected EUs: T064
Minor Modification Description: Admin mod for IFR to incorporate CC and remove NSPS Kb	
PTI No.: P0132200	Affected EUs: T073
Minor Modification Description: Admin mod for IFR to reflect organics stored	
PTI No.: P0129038	Affected EUs: P010
Minor Modification Description: Admin mod to update compliance and testing requirement for the SO ₂ /1000lb fresh feed limit	
PTI No.: P0129551	Affected EUs: T064
Minor Modification Description: Admin mod to allow for installation of an internal floating roof	
PTI No.: P0133425	Affected EUs: P023
Minor Modification Description: Admin mod to remove "truck loading" reference	
PTI No.: P0134346	Affected EUs: T020, T071, T239
Minor Modification Description: Admin mid to update rule applicability to explain overlap between NSPS and MACT requirements	
PTI No.: P0134347	Affected EUs: T072, T075, T121, T196, T231, T237, T238
Minor Modification Description: Admin mid to update rule applicability to explain overlap between NSPS and MACT	
PTI No.: P0134272	Affected EUs: P063
Minor Modification Description: Diesel engine pump installed in 2020 (> 12 mos. at current location)	
5. 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)	
PTI No.:	Affected EUs:
Significant Modification Description:	
6. 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)	
PTI No.:	Affected EUs:
Reopening for Cause for Description:	
7. Please identify the affected emissions 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.	
Affected EUs:	
8. Please identify any federal Consent Decree (CD) that resulted in the addition of Title V T&Cs – include the CD Number, the CD Public Notice date (if known) and Ohio EPA Permit Number (if applicable, along with final permit issuance date) that incorporates the CD requirements.	



Statement of Basis
 Lima Refining Company
 Permit Number: P0133998
 Facility ID: 0302020012

CD No.	Public Notice Date:	PTI No.	PTI Issuance Date:
9. Please identify any complex or unusual rule applicability determination that is not readily apparent in the permit T&Cs and warrants additional explanation in the Statement of Basis. If the discussion is included in a PTI Permit Strategy Write Up cite the Permit Number and copy/paste or summarize the determination here.			
PTI No.	Discussion:		
10. Please identify any streamlining determinations within the permit. Include an identification of the subsumed limit(s) and explanation of how the resulting limit is equivalent to or more stringent than those subsumed. If the discussion exists in a PTI Permit Strategy Write Up, cite the Permit Number and summarize the determination here. This would also be noted for specific emissions units identified in C.			
PTI No.	Discussion: N/A		
11. Please identify any current enforcement actions to address violations at the facility resulting in a compliance plan and schedule.			
Director's Final Findings and Orders; AGO Consent Decree; or U.S. EPA Consent Decree Date:	List the Order/Injunctive Relief number from the associated enforcement document and provide a description:		

B. Facility-Wide Terms and Conditions

A. Permit Background

1. Has each insignificant emissions unit been reviewed to confirm it meets the definition in OAC rule 3745-77-01(V)?		
Yes <input checked="" type="checkbox"/>	No	Comments:
2. Discuss any common control determinations (this includes revisions to previous determinations), include justification, factors, and facts which led to the final decision.		
Discussion: N/A		
3. 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). This includes identifying conditions from previous permits that are not included in the new permit.		
PTI No.:	Affected EUs:	
Discussion of changes from the previous Title V:		
4. 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 minor modification per OAC rules 3745-77-08(C)(1) or (2)		
PTI No.: PTI P0133093	Affected EUs: T064	



Minor Modification Description: Admin mod for IFR to incorporate CC and remove NSPS Kb			
PTI No.: PTI P0132200		Affected EUs: T073	
Minor Modification Description: Admin mod for IFR to reflect organics stored			
PTI No.: PTI P0129038		Affected EUs: P010	
Minor Modification Description: Admin mod to update compliance and testing requirement for the SO2 /1000lb fresh feed limit			
PTI No.: PTI P0129551		Affected EUs: T064	
Minor Modification Description: Admin mod for IFR to reflect organics stored			
PTI No.: PTI P0133425		Affected EUs: P023	
Minor Modification Description: Admin mod to remove "truck loading" reference			
PTI No.: PTI P0134346		Affected EUs: T020, T071, T239	
Minor Modification Description: Admin mid to update rule applicability to explain overlap between NSPS and MACT requirements			
PTI No.: PTI P0134347		Affected EUs: T072, T075, T121, T196, T231, T237, T238	
Minor Modification Description: Admin mid to update rule applicability to explain overlap between NSPS and MACT requirements			
5. 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)			
PTI No.:		Affected EUs:	
Significant Modification Description:			
6. 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)			
PTI No.:		Affected EUs:	
Reopening for Cause for Description:			
7. Please identify the affected emissions 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.			
Affected EUs:			
8. Please identify any federal Consent Decree (CD) that resulted in the addition of Title V T&Cs – include the CD Number, the CD Public Notice date (if known) and Ohio EPA Permit Number (if applicable, along with final permit issuance date) that incorporates the CD requirements.			
CD No.	Public Notice Date:	PTI No.	PTI Issuance Date:



9. Please identify any complex or unusual rule applicability determination that is not readily apparent in the permit T&Cs and warrants additional explanation in the Statement of Basis. If the discussion is included in a PTI Permit Strategy Write Up cite the Permit Number and copy/paste or summarize the determination here.	
PTI No.	Discussion:
10. Please identify any streamlining determinations within the permit. Include an identification of the subsumed limit(s) and explanation of how the resulting limit is equivalent to or more stringent than those subsumed. If the discussion exists in a PTI Permit Strategy Write Up, cite the Permit Number and summarize the determination here. This would also be noted for specific emissions units identified in C.	
PTI No.	Discussion:
11. Please identify any current enforcement actions to address violations at the facility resulting in a compliance plan and schedule.	
Director's Final Findings and Orders; AGO Consent Decree; or U.S. EPA Consent Decree Date:	List the Order/Injunctive Relief number from the associated enforcement document and provide a description:

B. Facility-Wide Terms and Conditions

Term and Condition (paragraph)	Basis		Comments
	SIP (3745-)	Other	
B.1	N	Y	Lists Facility wide terms and conditions that are enforceable under state law only.
B.2	OAC rule 3745-21-09 (T)(4)(a)	40 CFR, Part 60, Subpart VV	Alternative Leak Detection and Repair (LDAR) Monitoring Plan, including incorporation by reference for 40 CFR, Part 60, Subpart VV; 40 CFR, Part 60, Subpart VVa; 40 CFR, Part 60, Subpart GGG; 40 CFR, Part 60; Subpart GGGa; and 40 CFR, Part 60, Subpart QQQ
B.3	N	40 CFR, Part 60, Subpart Kb	Lists applicability of 40 CFR, Part 60, Subpart Kb
B.4	N	40 CFR, Part 60, Subpart QQQ	Lists applicability of 40 CFR, Part 60, Subpart QQQ
B.5	N	40 CFR, Part 63,	Lists applicability of 40 CFR, Part 63, Subpart CC



		Subpart CC	
B.6	N	40 CFR, Part 63, Subpart CC	Lists facility-wide requirements of 40 CFR, Part 63, Subpart CC
B.7	N	40 CFR, Part 63, Subpart ZZZZ	Lists applicability of 40 CFR, Part 63, Subpart ZZZZ
B.8	N	40 CFR, Part 63, Subpart GGGGG	Lists exemption criteria for 40 CFR, Part 63, Subpart GGGGG
B.9	OAC rule 3745-77-07(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, 3745-18 and 3745-21 and/or 40 CFR Part 60 or 63
B.10	OAC rule 3745-21-09(M)(3)	N	Lists process unit turnaround requirements
B.11	N	Y	Record keeping requirements for PM/PM10/PM2.5 and VOC, in tons per year, for several emissions units to ensure that emissions from the crude oil flexibility project does not trigger a major modification for these pollutants.
B.12	N	Y	Reporting requirements for PM/PM10/PM2.55 and VOC, in tons per year, for several emissions units
B.13	N	Y	Lists specific natural gas piping components subject to the LDAR Monitoring Plan.
B.14	N	Y	Lists de minimis applicability for a new molten sulfur tank associated with the crude oil flexibility project
B.15	N	40 CFR Part, 97, Subparts AAAAA and BBBB 40 CFR Part 75	Lists applicability and requirements of 40 CFR Part, 97, Subparts AAAAA and BBBB; and 40 CFR Part 75



C. Emissions Unit Terms and Conditions

<p>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?</p>	<p>R = record keeping requirements Rp = reporting requirements ET = emission testing requirements (not including compliance method terms) Misc = miscellaneous requirements</p>
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C. Emissions Unit Terms and Conditions

<p>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?</p>	<p>R = record keeping requirements Rp = reporting requirements ET = emission testing requirements (not including compliance method terms) Misc = miscellaneous requirements</p>
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Emissions Unit Table

EU(s)	Limitation	Basis	ND	OR	M	R	Rp	ET	ENF	Misc	Comments
Section C.1: B001, Vacuum Unit II - Process Heater (PR175151)											
	0.020 lb PE/mmBtu	OAC rule 3745-17-10(B)(1)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel are sufficient to demonstrate compliance without requiring formal testing
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel are sufficient to demonstrate compliance without requiring formal testing
	None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)



	<p>0.040 lb NOx/mmBtu HHV on a 30-day rolling average basis 162 ppmv H2S hourly on a 3-hour rolling average basis, 60 ppmv daily on a 365-day rolling average basis</p>	<p>40 CFR, Part 60, Subparts J and Ja OAC rule 3745-31-10 through 20 PTI P0123731</p>	Y	N	N	N	N	N	Y	N	<p>ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires NSPS Subpart J to be listed as an applicable rule</p>
	<p>0.0075 lb PE/PM10/PM2.5/mmBtu 4.07 tons PE/PM10/PM2.5 per rolling, 12-month period 0.0054 lb VOC/mmBtu, 2.95 tons VOC per rolling, 12-month period</p>	<p>OAC rule 3745-31-05(D) PTI P0123731</p>	N	Y	Y	Y	Y	N	N	N	<p>ET- M/R/Rp for inherently clean fuel are sufficient to demonstrate compliance without requiring formal testing</p>
	<p>0.03 lb NOx/mmBtu, based upon a 365-day rolling average, 0.040 lb NOx/mmBtu based upon a 30-day rolling average, 16.40 tons NOx per rolling, 12-month period</p>	<p>ORC 3704.03(T) OAC rule 3745-31-10 through 20 PTI P0123731</p>	N	Y	Y	Y	Y	Y	N	N	



0.04 lb CO/mmBtu, based upon a 365-day rolling average, 21.87 tons CO per rolling, 12-month period	ORC 3704.03(T) OAC rule 3745-31-10 through 20 PTI P0123731	N	Y	Y	Y	Y	Y	Y	N	N	
12.35 tons SO2 per rolling, 12-month period	ORC 3704.03(T) OAC rule 3745-31-10 through 20 PTI P0123731	N	Y	Y	Y	Y	N	N	N		ET- M/R/Rp for inherently clean fuel and CEMs requirements are sufficient to demonstrate compliance without requiring formal testing
66,042 tons CO2e per rolling, 12-month period	OAC rule 3745-31-10 through 20 PTI P0123731	N	Y	Y	Y	Y	N	N	N		ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
Section C.2: B002, ISO Stabilizer (PR170003)/Splitter Process Heater(PR175155)											
0.020 lb PE/mmBtu	OAC rule 3745-17-10(B)(1)	N	Y	Y	Y	Y	N	N	N		ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N		ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N		ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
0.040 lb NOx/mmBtu HHV on a 30-day rolling average	40 CFR, Part 60, Subpart J and Ja	Y	N	N	N	N	N	Y	N		ND- Emissions unit is subject to both NSPS Subparts J and Ja. Subpart Ja requirements are listed since they are more stringent than Subpart J.



	basis, 0.009 lb NOx/mmBtu based on a 365-day rolling block average, 162 ppmv H2S hourly on a 3-hour rolling average basis, 60 ppmv H2S daily on a 365-day rolling average basis	OAC rule 3745-31-05(D) PTI P0123731									ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires NSPS Subpart J to be listed as an applicable rule and requires the NOx 365-day emission limitation to be established
Section C.3: B003, ISO I & II Process Heaters (PR 175152/PR 175153)											
	0.020 lb PE/mmBtu	OAC rule 3745-17-10(B)(1)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	230 mg H2S /dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H2S), as a 3-hour rolling average	40 CFR, Part 60, Subpart J	N	N	Y	Y	Y	N	Y	N	ET- M/R/Rp for inherently clean fuel and CEMs requirements are sufficient to demonstrate compliance without requiring formal testing
	0.009 lb NOx/mmBtu based on a 365-	OAC rule 3745-31-05(D)	N	Y	Y	Y	Y	N	N		ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing



	day rolling block average	PTI P0123731									ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires the NOx 365-day emission limitation to be established
Section C.4: B004, Crude II Process Heater (PR 175150)											
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	0.040 lb NOx/mmbtu HHV on a 30-day rolling average basis, 162 ppmv H2S hourly on a 3-hour rolling average basis, 60 ppmv daily on a 365-day rolling average basis	40 CFR, Part 60, Subpart J and Ja OAC rule 3745-31-10 through 20 PTI P0123731	Y	N	N	N	N	N	Y	N	ND- Emissions unit is subject to both NSPS Subparts J and Ja. Subpart Ja requirements are listed since they are more stringent than Subpart J. ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires NSPS Subpart J to be listed as an applicable rule
	0.0075 lb PE/PM10/PM2.5/MMBtu and 21.09 tons of PE/PM10/PM2.5 per rolling, 12-month period, 0.0054 VOC/MMBtu and 15.26 tons of VOC per rolling, 12-month period,	OAC rule 3745-31-05(D) PTI P0123731	Y	Y	Y	Y	Y	Y	Y	N	ND- NOx emission limitation is less stringent than OAC rule 3745-31-10 through 20 ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires the NOx 365-day emission limitation to be established



	0.035 NOx/MMBtu, based on a 365-day rolling average											
	0.03 lb of NOx/MMBtu based upon a 365-day rolling average, and 84.92 tons NOx per rolling, 12-month period 0.04 lb of CO/MMBtu based upon a 365-day rolling and 113.23 tons CO per rolling, 12-month period 64.26 tons SO2 per rolling, 12-month period CO2e emissions shall not exceed 342,041 tons per rolling, 12-month period See b)(2)k.	ORC 3704.03(T) OAC rule 3745-31-10 through 20 PTI P0123731	N	Y	Y	Y	Y	Y	N	N	ET- Required for NOx and CO. For SO2 and CO2e: M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing	
Section C.5: B006, UltraFormer Process Preheater, Reheater 1, Reheater 2, Reheater 3 (PR 175156-175159)												
	0.020 lb PE/mmBtu	OAC rule 3745-17-10(B)(1)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing	



	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	0.040 lb NOx/mmBtu HHV on a 30-day rolling average basis, 162 ppmv H2S hourly on a 3-hour rolling average basis, 60 ppmv daily on a 365-day rolling average basis	40 CFR, Part 60, Subpart J and Ja	Y	N	N	N	N	N	Y	N	ND- Emissions unit is subject to both NSPS Subparts J and Ja. Subpart Ja requirements are listed since they are more stringent than Subpart J. ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires NSPS Subpart J to be listed as an applicable rule
	0.008 lb NOx/mmBtu based on a 365-day rolling block average	OAC rule 3745-31-05(D) PTI P0122660	N	Y	Y	Y	Y	N	N		ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires the NOx 365-day emission limitation to be established
Section C.6: B007, Reformer Regenerator Process Heater (PR 175162)											
	0.020 lb PE/mmBtu	OAC rule 3745-17-10(B)(1)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	None	40 CFR, Part 63,	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)



		Subpart DDDDD									
230 mg H2S /dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H2S), as a 3-hour rolling average	40 CFR, Part 60, Subpart J	N	N	Y	Y	Y	Y	N	Y	N	ET- M/R/Rp for inherently clean fuel and CEMS requirements are sufficient to demonstrate compliance without requiring formal testing ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires NSPS Subpart J to be listed as an applicable rule
0.116 lb NOx/mmBtu based on a 3-hr block average	OAC rule 3745-31-05(D) PTI P0116161	N	Y	Y	Y	Y	Y	N	N		ET- Testing not required, M/R/Rp for inherently clean fuel are sufficient to demonstrate compliance ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires the NOx 365-day emission limitation to be established
Section C.7: B008, HDS Process Heater (PR 175169)											
0.020 lb PE/mmBtu	OAC rule 3745-17-10(B)(1)	N	Y	Y	Y	Y	Y	N	N	N	ET-Testing not required, M/R/Rp for inherently clean fuel are sufficient to demonstrate compliance
Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
230 mg H2S /dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H2S), as a 3-	40 CFR, Part 60, Subpart J	N	N	Y	Y	Y	Y	N	Y	N	ET- M/R/Rp for inherently clean fuel and CEMS requirements are sufficient to demonstrate compliance without requiring formal testing ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires NSPS Subpart J to be listed as an applicable rule



	hour rolling average										
	0.050 lb NOx/mmBtu based on a 365-day rolling block average	OAC rule 3745-31-05(D) PTI P0122660	N	Y	Y	Y	Y	N	N		ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires the NOx 365-day emission limitation to be established
Section C.8: B022, B024: Process Heaters (PR 175102 and PR 175110)											
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	230 mg H2S /dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H2S), as a 3-hour rolling average	40 CFR, Part 60, Subpart J	N	N	Y	Y	Y	N	Y	N	ET- M/R/Rp for inherently clean fuel and CEMS requirements are sufficient to demonstrate compliance without requiring formal testing ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires NSPS Subpart J to be listed as an applicable rule
	0.014 lb of PE/MMBtu 0.024 lb of SO2/MMBtu, as a monthly average 0.082 lb of CO/MMBtu	OAC rule 3745-31-05(A)(3) PTI P0116161	N	Y	Y	Y	Y	N	N	N	ET- Testing not required, M/R/Rp for inherently clean fuel are sufficient to demonstrate compliance



B022	0.084 lb of NOx/MMBtu based upon a 3-hour block average	OAC rule 3745-31-05(D) PTI P0116161	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
B024	0.109 lb of NOx/MMBtu based upon a 3-hour block average	OAC rule 3745-31-05(D) PTI P0116161	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
Section C.9: B026, CE Boiler, Steam Generating Unit (PR 175007)											
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	230 mg H2S /dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H2S), as a 3-hour rolling average	40 CFR, Part 60, Subpart J	N	N	Y	Y	Y	N	Y	N	ET- M/R/Rp for inherently clean fuel and CEMS requirements are sufficient to demonstrate compliance without requiring formal testing ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires NSPS Subpart J to be listed as an applicable rule
	2.86 lbs of PE/hr, 31.65 CO/hr, 2.07 lbs of VOC/hr, 10.12 lbs of sulfur dioxide (SO2)/hr, 0.13 lb NOx/MMBtu, based upon a	OAC rule 3745-31-05(A)(3) OAC rule 3745-31-05(D) PTI P0122660	N	N	Y	Y	Y	N	Y	N	ET- M/R/Rp for inherently clean fuel and NOx CEMS requirements are sufficient to demonstrate compliance without requiring formal testing ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires the NOx 365-day emission limitation to be established



	30-day rolling average, 0.100 lb NOx/mmBtu based upon a 365-day rolling block average										
Section C.10: B027, Coker Furnace – Process Heater (PR 170002)											
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	230 mg H2S /dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H2S), as a 3-hour rolling average	40 CFR, Part 60, Subpart J	N	N	Y	Y	Y	N	Y	N	ET- M/R/Rp for inherently clean fuel and CEMS requirements are sufficient to demonstrate compliance without requiring formal testing ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires NSPS Subpart J to be listed as an applicable rule
	1.84 lbs PE/hr 20.29 lbs CO/hr 1.33 lbs VOC/hr 2.56 lbs SO2/hr	OAC rule 3745-31-05(A)(3) PTI P0116161	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	0.060 lb NOx/mmBtu based upon a 3-hr block average	OAC rule 3745-31-05(D) PTI P0116161	N	N	Y	Y	Y	N	Y	N	ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires the 3-hr block average emission limitation to be established
Section C.11: B028, Catalytic Gasoline Hydrotreater Process Heater (PR 170007)											



	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	230 mg H2S /dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H2S), as a 3-hour rolling average	40 CFR, Part 60, Subpart J	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel and CEMS requirements are sufficient to demonstrate compliance without requiring formal testing
	3.31 tons SO2/yr, 0.043 lb of nitrogen oxides (NOx)/MMBtu, 4.63 tons NOx/yr, 2.36 lbs CO/hr, 10.34 tons CO/yr, 0.155 lb VOC/hr, 0.68 ton VOC/yr, 0.214 PE/hr, 0.94 ton PE/yr	OAC rule 3745-31-05(A)(3) PTI P0107904	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel and CEMS requirements are sufficient to demonstrate compliance without requiring formal testing
Section C.12: B029, Diesel Hydrotreater Process Heater											
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing



	None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	230 mg H2S /dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H2S), as a 3-hour rolling average	40 CFR, Part 60, Subpart J	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel and CEMS requirements are sufficient to demonstrate compliance without requiring formal testing
	BWON Control Requirements	40 CFR, Part 61, Subpart FF	N	N	N	N	N	N	N	N	M/R/Rp/ET- The requirements are listed under emissions unit P025
	Control Requirements	40 CFR, Part 63, Subpart CC	N	Y	Y	Y	Y	N	N	N	M/R/Rp/ET- The requirements are listed under emissions unit P007
	Alternative LDAR Plan	OAC rule 3745-21-09(T) OAC rule 3745-21-09(DD) 40 CFR, Part 60, Subpart VV 40 CFR, Part 60, Subpart GGG 40 CFR, Part 61, Subpart V 40 CFR, Part 63, Subpart CC	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2



7.77 tons SO ₂ /yr 0.06 lb NO _x /MMBtu 7.81 tons NO _x /yr 5.54 lbs CO/hr, 24.28 tons CO/yr 0.36 lb VOC/hr, 1.59 tons VOC/yr 0.502 lb (PE)/hr, 2.2 tons PE/yr	OAC rule 3745-31- 05(A)(3) PTI P0107905										ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
Section C.13: B032, Nebraska Boiler											
0.020 lb PE/mmBtu	OAC rule 3745-17- 10(B)(1)	N	Y	Y	Y	Y	N	N	N		ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
Visible PE shall not exceed 20% opacity as a 6- minute average	OAC rule 3745-17- 07(A)	N	Y	Y	Y	Y	N	N	N		ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N		ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
0.035 lb NO _x /mmBtu, based upon a 365-day rolling block average 0.075 lb CO/mmBtu	ORC 3704.03(T) OAC rule 3745-31- 05(D) PTI P0122660	N	Y	Y	Y	Y	N	Y	N		ET- M/R/Rp for inherently clean fuel are sufficient to demonstrate compliance without requiring formal testing and emission limits represent PTE ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires the NO _x 365-day emission limitation to be established
Section C.14: B033, KHT Process Feed Heater											
0.020 lb PE/mmBtu	OAC rule 3745-17- 10(B)(1)	N	Y	Y	Y	Y	N	N	N		ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing



Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
162 ppmv H2S hourly on a 3-hour rolling average basis, 60 ppmv daily on a 365-day rolling average basis	40 CFR, Part 60, Subpart Ja	N	N	Y	Y	Y	Y	N	N	
Alternative LDAR Plan	21-09(T) 40 CFR, Part 60, Subpart VVa 40 CFR, Part 60, Subpart GGGa 40 CFR, Part 61, Subpart V, 40 CFR, Part 63, Subpart CC	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2
0.168 lb CO/mmBtu	ORC 3704.03(T) PTI P0107028	N	Y	Y	Y	Y	N	Y	N	ET- M/R/Rp for inherently clean fuel are sufficient to demonstrate compliance without requiring formal testing and emission limit represents PTE



	BWON Control Requirements	40 CFR, Part 61, Subpart FF	N	N	N	N	N	N	N	N	M/R/Rp/ET- The requirements are listed under emissions unit P025
	Control Requirements	40 CFR, Part 63, Subpart CC	N	N	N	N	N	N	N	N	M/R/Rp/ET- The requirements are listed under emissions unit P007
Section C.15: B034, KHT Reboiler Process Heater											
	0.020 lb PE/mmBtu	OAC rule 3745-17-10(B)(1)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	162 ppmv H2S hourly on a 3-hour rolling average basis, 60 ppmv daily on a 365-day rolling average basis	40 CFR, Part 60, Subpart Ja	N	N	Y	Y	Y	Y	N	N	
	Alternative LDAR Plan	40 CFR, Part 60, Subpart VVa 40 CFR, Part 60, Subpart GGGa	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2
	0.060 lb NOx/mmBtu	ORC 3704.03(T)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel are sufficient to demonstrate compliance without requiring formal testing and emission limit represents PTE



	0.168 lb CO/mmBtu	PTI P0107028									
Section C.16: B035, B&W Boiler											
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	162 ppmv H2S hourly on a 3-hour rolling average basis, 60 ppmv daily on a 365-day rolling average basis	40 CFR, Part 60, Subpart Ja	N	N	Y	Y	Y	Y	N	N	
	0.038 lb of NOx/MMBtu of actual heat input and 41.59 tons NOx/yr 0.0375 lb of CO/MMBtu of actual heat input and 41.05 tons CO/yr 0.00745 lb of PM10/MMBtu of actual heat input and 8.16 tons PM10/yr 0.0054 lb of VOC/MMBtu of actual heat	OAC rule 3745-31-05(D) ORC 3704.03(T) PTI P0116164	N	Y	Y	Y	Y	Y	N	N	ET- NOx testing only. For CO, VOC,SO2, CO2e: M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing



	input and 5.91 tons VOC/yr 7.70 lbs of SO2 per hour and 12.46 tons SO2/yr 142,972 tons of CO2e/yr										
Section C.17: B036, FCC Furnace – Process Heater											
	0.020 lb PE/mmBtu	OAC rule 3745-17-10(B)(1)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	None	40 CFR, Part 63, Subpart DDDDD	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	162 ppmv H2S hourly on a 3-hour rolling average basis, 60 ppmv daily on a 365-day rolling average basis	40 CFR, Part 60, Subpart Ja	N	N	Y	Y	Y	Y	N	N	
	0.0075 lb of PE/PM10 /PM2.5)/MMBtu of actual heat input and 2.51 tons of PE/PM10/PM2.5 /rolling, 12-month period	3745-31-05(D) ORC 3704.03(T) PTI P0124219									ET- CO and NOx testing only. For VOC, SO2, CO2e: M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing



	<p>0.0054 lb of VOC/MMBtu of actual heat input and 1.81 tons of VOC/rolling, 12-month period 0.150 lb NOx/MMBtu of actual heat input based upon a 3-hour block rolling average 0.03 lb of NOx/mmBtu of actual heat input based upon a 365-day rolling average; 0.040 lb of NOx/MMBtu of actual heat input based upon a 30-day rolling average and 10.09 tons NOx/rolling, 12-month period 0.04 lb of CO/MMBtu of actual heat input based upon a 365-day rolling average and 13.46 tons CO/rolling, 12-month period</p>										
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Section C.18: F001, Paved and Unpaved Roadways



Section C.19: F005, Coke Handling											
	Visible fugitive PE shall not exceed 20 percent opacity, as a 3-minute average	OAC rule 3745-31-05(D) PTI P0127258	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp are sufficient to demonstrate compliance without requiring formal testing (best available control measures including inherent moisture content, dust suppression as necessary and visible emission checks)
	Emissions from coke product transfer points and front-end loader traffic at the coke pile, combined: 7.34 tons fugitive PE per rolling, 12-month period 1.30 tons fugitive PM10 per rolling, 12-month period 0.39 ton PM2.5 per rolling, 12-month period	OAC rule 3745-31-05(D) PTI P0127258	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp are sufficient to demonstrate compliance without requiring formal testing (best available control measures including inherent moisture content, dust suppression as necessary and visible emission checks)
Section C.20: J001, Propane and Propylene Truck Loading/Unloading Rack											
Section C.21: J002, J004: Railcar Loading/Unloading Facilities Controlled by Flare Gas Recovery System											
	Alternative LDAR Plan	21-09(T) 40 CFR, Part 60, Subparts VV and VVa 40 CFR, Part 60, Subparts GGG and GGGa	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2



		40 CFR, Part 61, Subpart V, 40 CFR, Part 63, Subpart CC										
	Control Requirements	40 CFR, Part 63, Subpart CC	N	N	N	N	Y	N	N	N	M/R/ET- The requirements are listed under emissions units P006 and P007	
Section C.22: J007, Decanted Oil Loading Rack												
	Alternative LDAR Plan	21-09(T) 40 CFR, Part 60, Subpart VV 40 CFR, Part 60, Subparts GGG 40 CFR, Part 61, Subpart V, 40 CFR, Part 63, Subpart CC ORC 3704.03(T) PTI P0127043	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2	
Section C.23: J010, Distillate Loading Rack												
	Alternative LDAR Plan	OAC rule 3745-21-09(T) 40 CFR, Part 60, Subpart GGGa	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2	



		40 CFR, Part 63, Subpart CC									
	24.10 tons VOC per rolling, 12-month period 7.0 tons fugitive VOC per rolling, 12-month period	ORC 3704.03(T) PTI P0106825	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp are sufficient to demonstrate compliance without requiring formal testing (LDAR requirements)
	BWON Control Requirements	40 CFR, Part 61, Subpart FF	N	Y	Y	Y	Y	N	N	N	ET- No emission limitation was established
Section C.24: J011, Decanted Oil/Sulfur/Caustic Rail Rack											
	Alternative LDAR Plan	OAC rule 3745-21-09(T) 40 CFR, Part 60, Subpart VV 40 CFR, Part 60, Subpart GGG 40 CFR, Part 63, Subpart CC	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2
	1.74 tons VOC per rolling, 12-month period from DO Rail Loading Only	OAC rule 3745-31-05(D) PTI P0123731	N	Y	Y	Y	Y	N	N	N	ET-Testing not required, M/R/Rp are sufficient to demonstrate compliance without requiring formal testing (Quarterly reporting of throughput exceedances)
Section C.25: P005, Delayed Coking Process											
	Depressurize each coke drum to 2 psig or less	OAC rule 3745-31-05(D) and	N	N	Y	Y	Y	N	N	N	M/R/Rp requirements are sufficient to demonstrate compliance to demonstrate compliance without requiring formal testing (pressure recorded prior to discharge)



	<p>prior to venting the coke drum steam exhaust to the atmosphere. When the pressure exceeds 2 psig, vent gases must be routed to the refinery fuel gas system, the FCC/coker flare (emissions unit P006), or other control device prior to opening the vent to the atmosphere. 18.20 tons VOC from fugitive equipment leaks subject to LDAR</p>	<p>40 CFR, Part 60, Subpart Ja PTI P0123731</p>									
	<p>1143 lbs SO₂/hr</p>	<p>OAC rule 3745-18-06(E)</p>	<p>N</p>	<p>N</p>	<p>N</p>	<p>N</p>	<p>N</p>	<p>N</p>	<p>N</p>	<p>N</p>	<p>M/R/Rp – Emission limit was established based on maximum process weight rate using equation in 18-06(E)(2). Since the limit is based on potential to emit, no M/R/Rp is required. ET – per Engineering Guide #16, most recent stack test was sufficient to demonstrate compliance, and no further testing required at this time</p>
	<p>Alternative LDAR Plan</p>	<p>OAC rule 3745-21-09(T) 40 CFR, 40 CFR, Part 60, Subparts GGG and GGGa</p>	<p>Y</p>	<p>N</p>	<p>N</p>	<p>N</p>	<p>N</p>	<p>N</p>	<p>N</p>	<p>N</p>	<p>ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2</p>



		40 CFR, Part 63, Subpart CC									
	Depressuring Requirements	40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	20.81 tons combined VOC emissions from coke drum venting, coke cutting and coke drum draining per rolling, 12-month period 18.20 tons VOC per rolling, 12-month period from fugitive LDAR equipment	OAC rule 3745-31-05(D) ORC 3704.03(T) PTI P0123731	N	N	Y	Y	Y	N	N	N	M/R/Rp are sufficient to demonstrate compliance to demonstrate compliance without requiring formal testing (pressure recorded prior to discharge)
	CO2e emissions shall not exceed 1,533 tons per rolling, 12-month period	OAC rule 3745-31-10 through 20 PTI P0123731	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance to demonstrate compliance without requiring formal testing (pressure recorded prior to discharge)

Section C.26: P006, Refinery FCC/Coker Flare (PR 196128), treated as control equipment

	No visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, when regulated	40 CFR, Part 63, Subpart CC	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (continuous visual monitoring)
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	material is routed to the flare and the flare vent gas flow rate is less than the smokeless design capacity of the flare.											
	162 ppmv of H2S, as a 3-hour rolling average	40 CFR, Part 60, Subpart J and Ja	N	N	Y	Y	Y	N	Y	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (CEMS) ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires NSPS Subpart J to be listed as an applicable rule	
	10.00 tons NOx/calendar-yr during periods of process unit start and shutdown 90.00 tons SO2/calendar-yr during periods of process unit start-up and shutdown	OAC rule 3745-31-05(F) PTI P0121859	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp are sufficient to demonstrate compliance to demonstrate compliance (emissions calculations) without requiring formal testing	
Section C.27: P007, Refinery LIU Flare treated as control equipment												
	No visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, when regulated material is routed to the	40 CFR, Part 63, Subpart CC	N	Y	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (continuous visual monitoring)	



	flare and the flare vent gas flow rate is less than the smokeless design capacity of the flare.											
	230 mg H2S /dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H2S), as a 3-hour rolling average Less than or equal to 500 lbs SO2 per day under normal operating conditions	40 CFR, Part 60, Subpart J and Ja OAC rule 3745-31-05(D) PTI P0121859	N	N	Y	Y	Y	N	Y	N	ET- M/R/Rp for inherently clean fuel and CEMS requirements are sufficient to demonstrate compliance without requiring formal testing ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires NSPS Subpart J to be listed as an applicable rule	
	10.00 tons NOx/calendar-yr during periods of process unit start and shutdown 100.00 tons SO2/calendar-yr during periods of process unit start-up and shutdown	OAC rule 3745-31-05(F) PTI P0121859	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp are sufficient to demonstrate compliance to demonstrate compliance (emissions calculations) without requiring formal testing	
Section C.28: P010, FCC Process												
	Visible PE shall not exceed 20%	OAC rule 3745-17-07(A)	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp (parametric monitoring) are sufficient to demonstrate compliance to demonstrate compliance without requiring formal testing	



	opacity as a 6-minute average										
	1.0 g/kg (1 lb PM/1,000 lb) coke burn-off 80 ppmvd, corrected to 0 percent excess air, on a 7-day rolling average of NOx 25 ppmvd, corrected to 0 percent excess air, on a 365-day rolling average of SO2 50 ppmvd, corrected to 0 percent excess air, on a 7-day rolling average of SO2 500 ppmvd CO, corrected to 0 percent excess air, on an hourly average basis	40 CFR, Part 60, Subparts J and Ja 40 CFR, Part 63, Subpart UUU OAC rule 3745-31-05(D) PTI P0129038	Y	N	N	N	N	Y	Y	N	ND- Emissions unit is subject to both NSPS Subparts J and Ja. Subpart Ja requirements are listed since they are more stringent than Subpart J. ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires NSPS Subpart J to be listed as an applicable rule
	70 ppmvd of NOx (dry basis) at 0 percent (%) excess air as a 365 day rolling block average 140 ppmvd of NOx at 0% excess air as a 7 day rolling block average	OAC rule 3745-31-05(D) P0127755	N	Y	Y	Y	Y	Y	Y	N	ENF- Federal Consent Decree 3:17-cv-1320 required NOx 365-day and 7-day rolling block average emission limitations to be established



Section C.29: P014, Vacuum II Distillation Tower Process											
	1620 lbs SO2/hr	OAC rule 3745-18-06(E)(2)	N	N	N	N	N	N	N	N	M/R/Rp- Since vapors from this source are compressed in the NESHAPS gas compressor, (emissions unit P025) and routed to the refinery fuel gas system for amine treatment, no further monitoring requirements are necessary. Also, P007 (LIU flare) is the secondary control device, so monitoring requirements for P007 are also applicable ET- Per Engineering Guide #16, most recent stack test was sufficient to demonstrate compliance, and no further testing required at this time
	VOC Control Requirements	OAC rule 3745-21-07(M)	N	N	N	N	N	N	N	N	Limitation: Control the emissions of VOC from any vacuum producing system by compressing the vapors and adding them to the refinery fuel gas system M/R/Rp- Since vapors from this source are compressed in the NESHAPS gas compressor, (emissions unit P025) and routed to the refinery fuel gas system for amine treatment, no further monitoring requirements are necessary. Also, P007 (LIU flare) is the secondary control device, so monitoring requirements for P007 are also applicable ET- No emission limitation was established
	Control Requirements	40 CFR, Part 63, Subpart CC	N	N	N	N	Y	N	N	N	M/R- Since vapors from this source are compressed in the NESHAPS gas compressor, (emissions unit P025) and routed to the refinery fuel gas system for amine treatment, no further monitoring requirements are necessary. Also, P007 (LIU flare) is the secondary control device, so monitoring requirements for P007 are also applicable ET- No emission limitation was established
Section C.30: P017 , Aromatics Process											
	Alternative LDAR Plan	OAC rule 3745-21-09(T) 40 CFR, Part 61, Subparts J and V	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2
	Scrubber Control Requirements	40 CFR, Part 61, Subpart BB 40 CFR, Part 63, Subpart EEEE	N	Y	Y	Y	Y	Y	N	N	Emissions unit must comply with U.S. EPA Approved Alternative Monitoring Plan when using the scrubber as control for emissions unit P023



	Control Requirements	40 CFR, Part 63, Subpart CC	N	N	N	N	N	N	N	N	M/R/Rp/ET- Emissions unit is controlled the LIU flare (emissions unit P007). All operational restrictions, monitoring, recordkeeping, reporting, and testing requirements for the flare are established in the terms and conditions for emissions unit P007 and are also applicable to emissions unit P017
Section C.31: P018, Isomerization Process											
	Alternative LDAR Plan	OAC rule 3745-21-09(T) 40 CFR, Part 60, Subpart VV 40 CFR, Part 60, Subpart GGG 40 CFR, Part 61, Subpart V 40 CFR, Part 63, Subpart CC	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2
	Control Requirements	40 CFR, Part 63, Subpart CC	N	N	N	N	N	N	N	N	M/R/Rp/ET- Emissions unit is controlled the LIU flare (emissions unit P007). All operational restrictions, monitoring, recordkeeping, reporting, and testing requirements for the flare are established in the terms and conditions for emissions unit P007 and are also applicable to emissions unit P018
Section C.32: P023, Benzene Loading rack											
	Alternative LDAR Plan	40 CFR, Part 61, Subparts J and V	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2
	Control and Monitoring Requirements	40 CFR, Part 61, Subpart BB 40 CFR, Part 63, Subpart EEEE	N	Y	Y	Y	Y	Y	N	N	Emissions unit must comply with U.S. EPA Approved Alternative Monitoring Plan when using the scrubber as control for emissions unit P023



	Control Requirements	40 CFR, Part 63, Subpart CC	N	N	N	N	N	N	N	N	M/R/Rp/ET- Emissions unit is controlled the LIU flare (emissions unit P007). All operational restrictions, monitoring, recordkeeping, reporting, and testing requirements for the flare are established in the terms and conditions for emissions unit P007 and are also applicable to emissions unit P023
	Control Device Requirements	40 CFR, Part 63, Subpart SS	N	N	Y	Y	Y	Y	N	N	
	5.16 lbs benzene/hr	OAC rule 3745-31-05(A)(3) PTI P0133425	Y	Y	Y	Y	Y	N	N	N	ET- M/R/Rp are sufficient to demonstrate compliance without requiring formal testing (MACT and NESHAP M/R/Rp)
Section C.33: P025, NESHAPs Oil/Water Separator System											
	Alternative LDAR Plan	40 CFR, Part 60, Subpart VV 40 CFR, Part 60, Subpart QQQ 40 CFR, Part 61, Subpart FF 40 CFR, Part 63, Subpart DD	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2
	Total Annual Benzene Quantity Requirements	40 CFR, Part 61, Subpart FF	Y*	N	Y	Y	Y	Y	N	N	*ND- Emissions unit exempt from this rule during all times when the vent from this emissions unit is routed to the Compressor System
	Drain System and Oil-Water Separator Work Practice Standards	40 CFR, Part 60, Subpart QQQ	N	N	Y	Y	Y	Y	N	N	



	Off-Site Waste and Recovery Operations Work Practice Standards	40 CFR, Part 63, Subpart DD	N	N	N	N	N	N	N	N	M/R/Rp Only the general standards portion of this rule is applicable, and these are shown as additional terms and conditions; the general standards are incorporated by reference ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	VOC Control Requirements	OAC rule 3745-21-09(M)(2)	N	N	N	N	N	N	N	N	M/R/Rp/ET- standard work practices established by this rule
	Compressor Maintenance Requirements	OAC rule 3745-15-06(A)(3)	N	N	N	N	N	N	N	N	M/R/Rp- During compressor maintenance M/R/Rp must follow this rule ET- No emission limitation was established
	Vapor Control Requirements	OAC rule 3745-31-05(A)(3) PTI P0107935	N	N	Y	Y	Y	N	N	N	M/R/Rp- Work practice requirements established ET- No emission limitation was established
Section C.34: P027, Decanted Oil Filter Process											
	0.1 lb VOC/hr	OAC rule 3745-31-05(A)(3) PTI 03-6995	N	N	N	N	N	N	N	N	M/R/Rp/ET- Emissions unit is controlled by FCC/coker flare (P006), compliance may be demonstrated with the VOC limit by multiplying emission factor Of 10.8 lbs VOC/day, dividing by 24 hr/day and applying an control efficiency for the flare of 95%. Calculations shown and flare M/R/Rp are sufficient to demonstrate compliance without requiring formal testing
		40 CFR, Part 63, Subpart CC	N	N	N	N	N	N	N	N	M/R/Rp/ET- Emissions unit is controlled by FCC/coker flare (P006) with backup to the LIU flare (emissions unit P007). All operational restrictions, monitoring, recordkeeping, reporting, and testing requirements for the flare are established in the terms and conditions for emissions unit P006 and P007 and are also applicable to emissions unit P027. Therefore, no additional monitoring, record keeping, reporting, and testing requirements are necessary for the flare in this emissions unit.
Section C.35: P028, Oily Sludge Centrifuge Process											
	Alternative LDAR Plan	OAC rule 3745-21-09(T) 40 CFR, Part 60, Subpart VV	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2



		40 CFR, Part 60, Subpart GGG										
Section C.36: P030, Reformer Process												
	HCl Concentration Requirements	40 CFR, Part 63, Subpart UUU	N	N	Y	Y	Y	Y	N	N		
	Control Requirements	40 CFR, Part 63, Subpart CC	N	N	N	N	N	N	N	N	M/R/Rp/ET- Emissions unit is controlled by the LIU flare (emissions unit P007) with backup to FCC/coker flare (P006). All operational restrictions, monitoring, recordkeeping, reporting, and testing requirements for the flare are established in the terms and conditions for emissions unit P006 and P007 and are also applicable to emissions unit P030. Therefore, no additional monitoring, record keeping, reporting, and testing requirements are necessary for the flare in this emissions unit.	
Section C.37: P033, SRU Cooling Tower												
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monitoring of total dissolved solids in cooling water and PE calculations)	
	5.24 lbs PE/hr	OAC rule 3745-17-11(B)	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monitoring of total dissolved solids in cooling water and PE calculations)	
	22.95 tons PE/yr	OAC rule 3745-31-05(A)(3) PTI P0107936	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monitoring of total dissolved solids in cooling water and PE calculations)	
Section C.38: P034, BH Cooling Tower												
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monitoring of total dissolved solids in cooling water and PE calculations)	



	5.49 lbs PE/hr	OAC rule 3745-17-11(B)	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monitoring of total dissolved solids in cooling water and PE calculations)
	24.05 tons PE/yr	OAC rule 3745-31-05(A)(3) PTI P0123731	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monitoring of total dissolved solids in cooling water and PE calculations)
	Heat Exchanger Requirements	40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (total strippable VOC leak testing)
Section C.39: P037, LIU Cooling Tower											
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monitoring of total dissolved solids in cooling water and PE calculations)
	43.95 lbs PE/hr	OAC rule 3745-17-11(B)	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monitoring of total dissolved solids in cooling water and PE calculations)
	13.63 lbs PE/hr and 59.68 tons PE per rolling, 12-month period 9.54 lbs PM10/hr and 41.78 tons PM10 per rolling, 12-month period 5.72 lbs PM2.5/hr and 25.07 tons PM2.5 per rolling, 12-month period	OAC rule 3745-31-05(D) ORC 3704.03(T) PTI P0123731	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monitoring of total dissolved solids in cooling water and PE, PM10, PM2.5 calculations)



	3.40 lbs VOC/hr and 14.90 tons VOC per rolling, 12-month period	OAC rule 3745-31-05(D) ORC 3704.03(T) PTI P0123731	N	N	N	N	N	N	N	N	M/R/Rp/ET-Emission limit represents PTE and compliance may be demonstrated using AP-42 emission factors and the maximum water flow rate
	Heat Exchanger Requirements	40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (total strippable VOC leak testing)
Section C.40: P040, SRU Claus 1,2 and TGTU Section C.41: P041, Butane-Butylene Treater											
P040 P041	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-31-05(D) OAC rule (A)(3)(a) PTI P0123731 PTI P0107904	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel and CEMS requirements re sufficient to demonstrate compliance without requiring formal testing
P040	230 mg H2S /dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H2S), as a 3-hour rolling average; 250 parts ppmvd (dry basis) of SO2 at 0% excess air 250 ppmv SO2 @ 0%, as a 12-hr rolling average	40 CFR, Part 60, Subparts J and Ja 40 CFR, Part 63, Subpart UUU OAC rule 3745-31-10 through 20 OAC rule PTI P0123731	N	N	Y	Y	Y	Y	Y	N	ENF- Federal Consent Decree Case No. 5:07-cv-683-WRF requires NSPS Subpart J to be listed as an applicable rule



P040 P041	Alternative LDAR Plan	OAC rule 3745-21-09(T) 40 CFR, Part 60, Subpart VV 40 CFR, Part 60, Subpart GGG 40 CFR, Part 61, Subpart V 40 CFR, Part 63, Subparts CC and UUU	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2
P040 P041	CO Waste Stream Requirements	OAC rule 3745-21-08(E)	N	N	Y	Y	Y	N	N	N	ET- No emission limitation was established
P040 P041	Control Requirements	40 CFR, Part 63, Subpart CC	N	Y	Y	Y	Y	Y	N	N	M/R/Rp/ET- The requirements are listed under emissions unit P050 and P006
P040 P041	BWON Control Requirements	40 CFR, Part 61, Subpart FF	N	N	N	N	N	N	N	N	M/R/Rp/ET- The requirements of this rule are listed under emissions unit P025
P041	Combustion emissions from the tail gas incinerator shall not exceed the following: 0.14 lb of PE/hr, 0.61 ton of PE/yr 1.84 lbs of NOx/hr, 8.06 tons of NOx/yr;	OAC rule 3745-31-05(A)(3) PTI P0123731 PTI P0107904	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing



	1.88 lbs of CO/hr, 8.23 tons of CO/yr; and 0.10 lb of VOC/hr, 0.44 ton of VOC/yr										
P040 P041	Process emissions from the tail gas incinerator shall not exceed the following: 19.18 lbs of SO ₂ /hr, as a 12-hr average, and 84.02 tons of SO ₂ /yr; and 250 ppmvd of SO ₂ at 0% excess air.	OAC rule 3745-31-10 through 20 OAC rule 3745-31-05(A)(3) ORC 3704.03(T) PTI P0123731 P0107904	N	N	Y	Y	Y	Y	N	N	
P040	Combustion emissions from the tail gas incinerator shall not exceed the following: 0.11 lb PE/PM ₁₀ /PM _{2.5} /hr and 0.47 ton of PE/PM ₁₀ /PM _{2.5} per rolling, 12-month period 0.08 lb VOC/hr and 0.34 ton of VOC per rolling, 12-month period	OAC rule 3745-31-05(D) PTI P0123731	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
P040	Combustion emissions from the tail gas	OAC rule 3745-31-10 through 20	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing



	incinerator shall not exceed the following: 1.41 lbs NOx/hr and 6.16 tons of NOx per rolling, 12-month period 1.18 lbs of CO/hr and 5.17 tons of CO per rolling, 12-month period CO2e emissions shall not exceed 28,047 tons per rolling, 12-month period	PTI P0123731									
Section C.42: P047, Backup AWWT Pump											
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	NOx emissions shall not exceed 6.3 g/kW-hr VOC emissions shall not exceed 6.3 g/kW-hr	ORC 3704.03(T) PTI P0108339	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel (distillate fuel supplier certification) are sufficient to demonstrate compliance without requiring formal testing
	0.310 lb PE/mmBtu of actual heat input	OAC rule 3745-17-11(B)(5)(a)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel (distillate fuel supplier certification) are sufficient to demonstrate compliance without requiring formal testing
	RICE Requirements	40 CFR, Part 63, Subpart ZZZZ	N	N	N	N	N	N	N	N	M/R/Rp/ET- Compliance with this rule is demonstrated through compliance with 40 CFR, Part 60, Subpart IIII



	CO shall not exceed 11.4 g/kW-hr PM shall not exceed 0.54 g/kW-hr	40 CFR, Part 60, Subpart IIII	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel (distillate fuel supplier certification) are sufficient to demonstrate compliance without requiring formal testing
Section C.43: P048, Wastewater Treatment Plant (PRs 190786, 190790, 190794, 190798, 190801)											
	Alternative LDAR Plan	40 CFR, Part 60, Subpart GGGa 40 CFR, Part 63, Subpart CC	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2
	Benzene Containing Waste Streams Annual Benzene Quantity 6 megagrams or Less	40 CFR, Part 61, Subpart FF 40 CFR, Part 63, Subpart CC	Y	N	N	N	N	N	N	N	ND- Emissions unit exempt from this rule during all times when the gaseous waste stream from this emissions unit is routed to the fuel gas system. All equipment downstream of inlet lift station controlled by a nitrogen blanket is exempt from this rule.
	Individual Drains and Oil-Water Separator Requirements	40 CFR, Part 60, Subpart QQQ	N	N	Y	Y	N	N	N	N	Rp/ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	9.79 tons VOC/yr from inlet lift station 6.98 tons VOC/yr from fugitive emissions associated with LDAR from wastewater operations	OAC rule 3745-31-05(D) ORC 3704.03(T) PTI P0109018	N	N	N	N	N	N	N	N	M/R/Rp/ET-Emission limits represent PTE and compliance may be demonstrated using the WQater9® program and U.S. EPA Protocol Document for Equipment Leaks



	None	OAC rule 3745-21-09(M)(2)	N	N	N	N	N	N	N	N	M/R/Rp/ET – Work practice standards established by this rule
Section C.44: P049, SRU 3											
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-31-05(D) PTI P0123731	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	250 ppmvd of SO2 at 0% excess air as a 12-hour average	40 CFR, Part 60, Subpart Ja 40 CFR, Part 63, Subpart UUU OAC rule 3745-31-10 through 20 PTI P0123731	N	N	Y	Y	Y	Y	N	N	
	Alternative LDAR Plan 1.92 tons VOC per rolling, 12-month period from fugitive equipment leaks subject to LDAR requirements	OAC rule 3745-21-09(T) OAC rule 3745-21-09(DD) 40 CFR, Part 60, Subpart VVa 40 CFR, Part 60, Subpart GGGa 40 CFR, Part 61, subpart V	Y	N	N	N	N	N	N	N	ND- Approved alternative LDAR plan described in Facility-Wide Term and Condition B.2



		OAC rule 3745-31- 05(D) PTI P0123731										
	BWON Control Requirements	40 CFR, Part 61, Subpart FF	N	N	N	N	N	N	N	N	N	M/R/Rp/ET- The requirements are listed under emissions unit P025
	Control Requirements	40 CFR, Part 63, Subpart CC	N	Y	Y	Y	Y	Y	N	N	N	M/R/Rp/ET- The requirements are listed under emissions unit P050 and P006
	CO Waste Stream Requirements	OAC rule 3745-21- 08(E)	N	N	Y	Y	Y	N	N	N	N	ET- No emission limitation was established
	Combustion emissions from the tail gas incinerator shall not exceed the following: 0.16 lb PE/PM10 /PM2.5/hr and 0.72 ton of PE/PM10/PM2.5 per rolling, 12-month period 0.12 lb VOC/hr and 0.52 ton of VOC per rolling, 12-month period	OAC rule 3745-31- 05(D) PTI P0123731	N	Y	Y	Y	Y	N	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	Combustion emissions from the tail gas incinerator shall not exceed the following:	OAC rule 3745-31-10 through 20 PTI P0123731	N	Y	Y	Y	Y	N	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing



	2.17 lbs NOx/hr and 9.52 tons of NOx per rolling, 12-month period 1.83 lbs CO/hr and 8.00 tons of CO per rolling, 12-month period CO2e emissions shall not exceed 40,512 tons per rolling, 12-month period										
	Process emissions from the tail gas incinerator shall not exceed the following: 22.67 SO2/hr, as a 12-hour rolling average; 99.30 tons of SO2 per rolling, 12-month period; and 250 parts per million by volume (dry basis) (ppmvd) of SO2 at 0% excess air as a 12-hour rolling average	OAC rule 3745-31-10 through 20 ORC 3704.03(T) PTI P0123731	N	N	Y	Y	Y	Y	N	N	ET- M/R/Rp and CEMS requirements are sufficient to demonstrate compliance without requiring formal testing
Section C.45: P050, Acid Gas Flare											
	No visible emissions except for	40 CFR, Part 60, Subpart CC	N	Y	Y	Y	Y	Y	N	N	



	periods not to exceed a total of 5 minutes during any 2 consecutive hours, when regulated material is routed to the flare and the flare vent gas flow rate is less than the smokeless design capacity of the flare.										
	230 mg H2S /dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H2S), as a 3-hour rolling average; 250 parts ppmvd (dry basis) of SO2 at 0% excess air 250 ppmv SO2 @ 0%, as a 12-hr rolling average	40 CFR, Part 60, Subpart Ja OAC rule 3745-31-10 through 20 PTI P0123731	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel and CEMS requirements are sufficient to demonstrate compliance without requiring formal testing
	Flare Requirements	40 CFR, Part 63, Subpart UUU	N	Y	Y	Y	Y	Y	N	N	
	0.25 ton PE/PM10/PM2.5 per rolling, 12-	OAC rule 3745-31-05(D)	N	Y	Y	Y	Y	N	Y	N	ET- M/R/Rp requirements (good combustion practices) are sufficient to demonstrate compliance without requiring formal testing and emission limits represent PTE



	month period from pilot and sweep gas firing only 18.80 tons VOC per rolling, 12-month period from pilot and sweep gas firing only	ORC 3704.03(T) PTI P0123731									
	1.00 ton of NOx/calendar-yr during periods of process unit start-up and shutdown 100.00 tons of SO ₂ /calendar-yr during periods of process unit start-up and shutdown	OAC rule 3745-31-05(D) PTI P0123731	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp are sufficient to demonstrate (emissions calculations) without requiring formal testing
	Emissions from pilot and sweep gas firing shall not exceed the following: 2.24 tons NOx per rolling, 12-month period 0.02 ton SO ₂ per rolling, 12-month period 10.22 tons CO per rolling, 12-month period 3,860.5 tons CO ₂ e per	OAC rule 3745-31-10 through 20 ORC 3704.03(T) PTI P0123731	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp requirements (good combustion practices) are sufficient to demonstrate compliance without requiring formal testing



	rolling, 12-month period											
Section C.46: P055, FCC Cooling Tower												
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monitoring of total dissolved solids in cooling water and PE calculations)	
	Heat Exchanger Requirements	40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (total strippable VOC leak testing)	
	2.52 lbs PE/hr; 11.04 tons PE per rolling, 12-month period 1.77 lbs PM10/hr; 7.73 tons PM10 per rolling, 12-month period 1.06 lbs PM2.5/hr; 4.64 tons PM2.5 per rolling, 12-month period	OAC rule 3745-31-05(D) PTI P0126470	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monitoring of total dissolved solids in cooling water and PE calculations)	
	1.47 lbs VOC/hr; 6.44 tons VOC/yr	OAC rule 3745-31-05(F) PTI P0126470	N	N	N	N	N	N	N	N	M/R/Rp/ET-Emission limit represents PTE and compliance may be demonstrated using AP-42 emission factors and the maximum water flow rate	
Section C.47: P057 and P058, 325 HP Diesel Engine Driven Pumps												
	0.310 lb PE/mmBtu of actual heat input	OAC rule 3745-17-11(B)(5)(a)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel (distillate fuel supplier certification) are sufficient to demonstrate compliance without requiring formal testing	



	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	RICE Requirements	40 CFR, Part 63, Subpart ZZZZ	N	N	N	N	N	N	N	N	M/R/Rp/ET- Compliance with this rule is demonstrated through compliance with 40 CFR, Part 60, Subpart IIII
	NOx shall not exceed 0.4 g/kW-hr CO shall not exceed 3.5 g/kW-hr PM shall not exceed 0.02 g/kW-hr NHHC shall not exceed 0.19 g/kW-hr	40 CFR, Part 60, Subpart IIII	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel (distillate fuel supplier certification) are sufficient to demonstrate compliance without requiring formal testing
Section C.48: P059, West Zeolite Charge Pump											
	0.310 lb PE/mmBtu of actual heat input	OAC rule 3745-17-11(B)(5)(a)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel (distillate fuel supplier certification) are sufficient to demonstrate compliance without requiring formal testing
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	RICE Requirements	40 CFR, Part 63, Subpart ZZZZ	N	N	N	N	N	N	N	N	M/R/Rp/ET- Compliance with this rule is demonstrated through compliance with 40 CFR, Part 60, Subpart IIII
	NOx shall not exceed 0.4 g/kW-hr	40 CFR, Part 60, Subpart IIII	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel (distillate fuel supplier certification) are sufficient to demonstrate compliance without requiring formal testing



	CO shall not exceed 3.5 g/kW-hr PM shall not exceed 0.2 g/kW-hr NHHC shall not exceed 0.19 g/kW-hr										
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Section C.49: P063, West Zeolite Charge Pump

	0.310 lb PE/mmBtu of actual heat input	OAC rule 3745-17-11(B)(5)(a)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel (distillate fuel supplier certification) are sufficient to demonstrate compliance without requiring formal testing
	Visible PE shall not exceed 20% opacity as a 6-minute average	OAC rule 3745-17-07(A)	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel requirements are sufficient to demonstrate compliance without requiring formal testing
	RICE Requirements	40 CFR, Part 63, Subpart ZZZZ	N	N	N	N	N	N	N	N	M/R/Rp/ET- Compliance with this rule is demonstrated through compliance with 40 CFR, Part 60, Subpart IIII

	NOx shall not exceed 0.4 g/kW-hr CO shall not exceed 5.0 g/kW-hr PM shall not exceed 0.2 g/kW-hr NHHC shall not exceed 0.19 g/kW-hr	40 CFR, Part 60, Subpart IIII	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp for inherently clean fuel (distillate fuel supplier certification) are sufficient to demonstrate compliance without requiring formal testing
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Section C.50: P803, Piping Components



	None	ORC 3704.03(T) PTI P0124354	N	N	N	N	N	N	N	N	M/R/Rp/ET- BAT is equivalent to compliance with 40 CFR, Part 63, Subpart CC. Facility must comply with M/R/Rp/ET requirements specified by this rule.
Section C.51: T009, Tank 216											
	Internal Floating Roof Requirements	OAC rule 3745-21-09(L)	Y	N	Y	N	N	N	N	N	ND/R/Rp/ET- The requirements of 40 CFR, Part 63, Subpart CC overlap with this rule
	Internal Floating Roof Requirements	40 CFR, Part 60, Subpart Kb 40 CFR, Part 61, Subpart FF 40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
Section C.52: T011, Tank 84											
	Internal Floating Roof Requirements	40 CFR, Part 61, Subpart FF 40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
Section C.53: T220, Tank 77											
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	N	N	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 11.1 psia ET- M/R/Rp are sufficient to demonstrate compliance
	Internal Floating Roof Requirements	40 CFR, Part 60, Subpart Kb 40 CFR, Part 61, Subpart FF	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)



		40 CFR, Part 63, Subpart CC										
Section C.54: T017, T021, T025, T028, T029, T034, T037, T039, T042, T043, T044, T049, T205, T206, T207, T208, External Floating Roof Group 1 Vessels subject to 40 CFR, Part 63, Subpart CC												
	External Floating Roof Requirements	OAC rule 3745-21-09(Z)	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)	
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)	
Section C.55: T020, Tank 201												
	Storage Vessel Provisions	OAC rule 3745-21-09(Z) 40 CFR, Part 63, Subpart CC 40 CFR, Part 60, Subpart Kb	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)	
Section C.56: T023, Tank 204												
	External Floating Roof Requirements	OAC rule 3745-21-09(Z)	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)	
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)	
Section C.57: T027, Tank 208												
	Storage Vessel Provisions	40 CFR, Part 60, Subpart Kb 40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)	



	9.72 tons VOC/yr	OAC rule 3745-31-05(F) PTI P0108089	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and quarterly deviation reporting)
Section C.58: T026, T030, T036, T038, T040, External Floating Roof Group 1 Vessels subject to 40 CFR, Part 63, Subpart CC; and Storage Tank Emission Reduction Partnership Program 65 Federal Register 19891 (April 13, 2000)											
	External Floating Roof Requirements	OAC rule 3745-21-09(Z)	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
Section C.59: T031, T032, T041, Internal Floating Roof Group 1 Vessels subject to 40 CFR, Part 63, Subpart CC											
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	N	N	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 11.1 psia ET- M/R/Rp are sufficient to demonstrate compliance
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
Section C.60: T033, Tank 215											
	Storage Vessel Provisions	40 CFR, Part 60, Subpart Kb	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	Material Throughput Restriction	OAC rule 3745-31-05(F) PTI P0108126	N	Y	Y	Y	Y	N	N	N	The maximum annual throughput shall not exceed 1,106,826,000 gallons ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and quarterly deviation reporting)



	11.54 tons VOC per rolling, 12-month period	ORC 3704.03(T) PTI P0108126	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and quarterly deviation reporting)
Section C.61: T045, Tank 248											
	Storage Vessel Provisions Maximum True Vapor Pressure Requirements	40 CFR, Part 63, Subpart CC 40 CFR, Part 60, Subpart Kb ORC 3704.03(T) PTI P0115043	N	N	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 0.754 psia ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and deviation report if necessary)
	36.1 tons VOC per rolling, 12-month period	OAC rule 3745-31-05(D) PTI P0115043	N	Y	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and quarterly deviation reporting)
Section C.62: T053, T054, T057, T058, T059, T060, T061, T065, T066, T067, T068, T123, T164, T177, T178, T195, Fixed Roof Group 2 Vessels subject to 40 CFR, Part 63, Subpart CC											
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	Y	Y	N	N	Y	N	N	N	ND/R/Rp/ET- The requirements of this rule are less stringent than the requirements of 40 CFR, Part 63, Subpart CC
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
Section C.63: T055, Tank 232											
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	N	Y	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 1.5 psia ET- M/R/Rp are sufficient to demonstrate compliance
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)



		40 CFR, Part 60, Subpart Ka									
	5.59 tons VOC/yr	OAC rule 3745-31-05(A)(3)(a) PTI P0104760	N	Y	Y	Y	Y	N	N	N	The maximum annual throughput shall not exceed 735,840,000 gallons ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and annual throughput reporting)
Section C.64: T064, Tank 263											
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L) 40 CFR, Part 60, Subpart Kb	Y	N	N	N	Y	N	N	N	The maximum true VP shall not exceed 1.52 psia ND/M/R/Rp/ET- The emissions unit is exempt from these rules based on the design capacity and maximum true VP requirement
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC ORC 3704.03(T) PTI P0129551	N	N	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 0.51 psia ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
Section C.65: T071, Internal Floating Roof Group 1 Vessel subject to 40 CFR, Part 60, Subpart Ka; 40 CFR, Part 63, Subpart CC											
Section C.66: T072, Internal Floating Roof Group 1 Vessel subject to 40 CFR, Part 60, Subpart Ka; 40 CFR, Part 63, Subpart CC											
	Wastewater Provisions Storage Vessel Provisions	40 CFR, Part 61, Subpart FF 40 CFR, Part 63, Subpart CC 40 CFR, Part 63, Subpart Kb	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	Y	N	N	N	Y	N	N	N	The maximum true VP shall not exceed 1.0 psia ND/M/R/ET- The requirements of this rule are less stringent than the requirements of 40 CFR, Part 63, Subpart CC



T071	5.25 tons VOC/yr	OAC rule 3745-31-05(A)(3)(a) PTI P0134347	N	Y	Y	Y	Y	N	N	N	The maximum annual throughput shall not exceed 64,675,810 gallons ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and annual throughput reporting)
T072	6.14 tons VOC/yr	OAC rule 3745-31-05(A)(3)(a) PTI P0134347	N	Y	Y	Y	Y	N	N	N	The maximum annual throughput shall not exceed 64,675,810 gallons ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and annual throughput reporting)
Section C.67: T073, 60, Subpart Ka; 40 CFR, Part 63, Subpart CC											
	Wastewater Provisions Storage Vessel Provisions	40 CFR, Part 61, Subpart FF 40 CFR, Part 63, Subpart CC 40 CFR, Part 63, Subpart Ka	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	Y	N	N	N	Y	N	N	N	The maximum true VP shall not exceed 1.0 psia ND/M/R/ET- The requirements of this rule are less stringent than the requirements of 40 CFR, Part 63, Subpart CC
	7.51 tons VOC/yr	OAC rule 3745-31-05(A)(3)(a) PTI P0132200	N	Y	Y	Y	Y	N	N	N	The maximum annual throughput shall not exceed 153,300,000 gallons ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and annual throughput reporting)
Section C.68: T074, Tank 253											
	Wastewater Provisions Storage Vessel Provisions	40 CFR, Part 61, Subpart FF 40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)



		40 CFR, Part 60, Subpart Kb									
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	Y	N	N	N	Y	N	N	N	The maximum true VP shall not exceed 1.0 psia ND/M/R/Rp/ET- The requirements of this rule are less stringent than the requirements of 40 CFR, Part 63, Subpart CC
	12.04 tons VOC/yr	OAC rule 3745-31-05(A)(3)(a) PTI P0104760	N	Y	Y	Y	Y	N	N	N	The maximum annual throughput shall not exceed 316,766,671 gallons ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and annual throughput reporting)
Section C.69: T075, Internal Floating Roof Group 1 Vessel subject to 40 CFR, Part 60, Subpart Ka; 40 CFR, Part 63, Subpart CC											
	Wastewater Provisions Storage Vessel Provisions	40 CFR, Part 61, Subpart FF 40 CFR, Part 63, Subpart CC 40 CFR, Part 63, Subpart Kb	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	Y	N	N	N	Y	N	N	N	The maximum true VP shall not exceed 1.0 psia ND/M/R/ET- The requirements of this rule are less stringent than the requirements of 40 CFR, Part 63, Subpart CC
	12.04 tons VOC/yr	OAC rule 3745-31-05(A)(3)(a) PTI P0104760	N	Y	Y	Y	Y	N	N	N	The maximum annual throughput shall not exceed 316,766,671 gallons ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and annual throughput reporting)
Section C.70: T076, Tank 219											
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	Y	N	N	N	Y	N	N	N	The maximum true VP shall not exceed 1.5 psia ND/M/R/ET- The requirements of this rule are less stringent than the requirements of 40 CFR, Part 63, Subpart CC



	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	None	OAC rule 3745-31-05(A)(3) PTI 03-1102	N		N	N	N	N	N	N	M/R/Rp/ET- No emission limitations or operational restrictions were established by this rule
Section C.71: T083, Tank 164559											
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	Y	Y	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 1.52 psia ND/ET- The requirements of this rule are less stringent than the requirements of 40 CFR, Part 63, Subpart CC
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC 40 CFR, Part 60, Subpart Ka	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
Section C.72: T084, T085, T087, Internal Floating Roof Group 1 Vessels subject to 40 CFR, Part 60, Subpart Ka; 40 CFR, Part 61, Subpart Y; and 40 CFR, Part 63, Subpart CC and											
	Internal Floating Roof Requirements	OAC rule 3745-21-09(L)	Y	N	N	N	N	N	N	N	ND - The requirements of 40 CFR, Part 63, Subpart CC overlap with this rule. The requirements of 40 CFR, Part 61, Subpart Y are more stringent than 40 CFR, Part 63, Subpart CC. Therefore, compliance must be shown with 40 CFR, Part 61, Subpart Y.
	Benzene Storage Vessel Provisions	40 CFR, Part 61, Subpart Y	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
Section C.73: T088, Tank 169											
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC 40 CFR, Part 60, Subpart Ka	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	External Floating Roof Requirements	OAC rule 3745-21-09(Z)	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)



Section C.74: T090, T091, Internal Floating Roof Group 1 Vessels subject to 40 CFR, Part 60, Subpart Kb; 40 CFR, Part 61, Subpart FF; 40 CFR, Part 63, Subpart CC; and Storage Tank Emission Reduction Partnership Program, 65 Federal Register 19891 (April 13, 2000)

	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	N	N	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 11.1 psia ET- M/R/Rp are sufficient to demonstrate compliance
	Wastewater Provisions Storage Vessel Provisions	40 CFR, Part 61, Subpart FF 40 CFR, Part 63, Subpart CC 40 CFR, Part 63, Subpart Kb	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)

Section C.75: T121, Tank 391

	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	N	N	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 11.1 psia ET- M/R/Rp are sufficient to demonstrate compliance
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC 40 CFR, Part 60, Subpart Kb	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	11.02 tons VOC/yr	OAC rule 3745-31-05(A)(3) PTI P0134347	N	N	N	N	N	N	N	N	M/R/Rp/ET-Emission limit represents PTE and compliance may be demonstrated using AP-42 calculation methods

Section C.76: T161, Tank 57

	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	N	N	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 1.52 psia ET- M/R/Rp are sufficient to demonstrate compliance
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		40 CFR, Part 60, Subpart Kb 40 CFR, Part 63, Subpart CC	Y	N	Y	Y	N	N	N	N	ND/R/ET- The emissions unit is exempt from these rules based on the design capacity and maximum true VP requirement
	39.81 tons VOC per rolling, 12-month period	ORC 3704.03(T) PTI P0106608	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and calculations and annual throughput reporting)
Section C.77: T190, Tank 44											
	Maximum True Vapor Pressure Requirements	2 OAC rule 3745-1-09(L)	N	N	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 11.1 psia ET- M/R/Rp are sufficient to demonstrate compliance
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC 40 CFR, Part 60, Subpart Kb	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	0.67 lbs VOC/hr; 2.93 tons VOC/yr	OAC rule 3745-31-05 PTI 03-5614	N	N	N	N	N	N	N	N	M/R/Rp/ET-Emission limits represent PTE and compliance may be demonstrated using AP-42 calculation methods
	0.04 lb benzene/hr; 0.18 ton benzene/yr	OAC rule 3745-31-05 PTI 03-5614	N	N	N	N	N	N	N	N	M/R/Rp/ET-Emission limits represent PTE and compliance may be demonstrated using AP-42 calculation methods
Section C.78: T191, T192, Internal Floating Roof Group 1 vessels subject to 40 CFR, Part 60, Subpart Kb; 40 CFR, Part 61, Subpart FF; and 40 CFR, Part 63, Subpart CC (PTI No. 03-13794),											
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	N	N	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 11.1 psia ET- M/R/Rp are sufficient to demonstrate compliance
	Storage Vessel Provisions	40 CFR, Part 60, Subpart Kb	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)



		40 CFR, Part 61, Subpart FF 40 CFR, Part 63, Subpart CC										
	5.19 tons VOC/yr	OAC rule 3745-31-05(A)(3) PTI 03-13794	N	N	N	N	N	N	N	N		M/R/Rp/ET-Emission limit represents PTE and compliance may be demonstrated using AP-42 calculation methods
Section C.79: T196, Tank 6												
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	N	N	Y	Y	Y	N	N	N		The maximum true VP shall not exceed 11.1 psia ET- M/R/Rp are sufficient to demonstrate compliance
	Storage Vessel Provisions	40 CFR, Part 60, Subpart Kb 40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N		ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	3.44 tons OC/yr	OAC rule 3745-31-05(A)(3) PTI P0134347	N	Y	Y	Y	Y	N	N	N		ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and annual deviation reporting, if required)
Section C.80: T197, Tank 5												
	Maximum True Vapor Pressure Requirements Storage Vessel Provisions	21-09(L) 40 CFR, Part 60, Subpart Kb 40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N		The maximum true VP shall not exceed 0.75 psia ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and deviation report if necessary)



	25.2 tons VOC/yr	OAC rule 3745-31-05(A)(3) PTI 03-6335	N	N	N	N	N	N	N	N	M/R/Rp/ET-Emission limit represents PTE and compliance may be demonstrated using AP-42 calculation methods
Section C.81: T200, Tank 164788											
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC	N	N	Y	Y	N	N	N	N	Rp/ET- None required by rule, M/R requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
Section C.82: T201, Tank 38 ("G-Tank")											
	External Floating Roof Requirements	OAC rule 3745-21-09(Z)	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	Maximum True Vapor Pressure Requirements Storage Vessel Provisions	40 CFR, Part 60, Subpart Kb 40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 11.1 psia ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	54.8 tons VOC/yr	OAC rule 3745-31-05(A)(3) PTI 03-13794	N	N	N	N	N	N	N	N	M/R/Rp/ET-Emission limit represents PTE and compliance may be demonstrated using AP-42 calculation methods
Section C.83: T202, T203, T204, Fixed Roof Group 1 Vessels subject to 40 CFR, Part 60, Subpart Kb; 40 CFR, Part 61, Subpart FF; and 40 CFR, Part 63, Subpart CC											
	Wastewater Provisions Storage Vessel Provisions	40 CFR, Part 61, Subpart FF 40 CFR, Part 63, Subpart CC 40 CFR, Part 61, Subpart FF	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)



	Control Requirements	OAC rule 3745-31-05(A)(3) PTI 03-7545	N	N	N	N	N	N	N	N	The vent from this emissions unit must be routed to the compressor system (emissions unit P025) M/R/Rp/ET- The requirements are listed under emissions unit P025
Section C.84: T212, Tank 72											
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	N	Y	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 1.52 psia ET- M/R/Rp are sufficient to demonstrate compliance
	Wastewater Provisions Storage Vessel Provisions	40 CFR, Part 61, Subpart FF 40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	Wastewater Provisions	40 CFR, Part 63, Subpart Kb	N	N	Y	Y	N	N	N	N	The vent from this emissions unit must be routed to the compressor system (emissions unit P025) which complies with 40 CFR, Part 61, Subpart FF Rp/ET- The requirements are listed under emissions unit P025
	7.35 tons VOC/yr	OAC rule 3745-31-05(A)(3) PTI P0114999	N	N	N	N	N	N	N	N	Emissions must be routed to emissions unit P025 M/R/Rp/ET-Emission limit represents PTE and compliance may be demonstrated using AP-42 calculation methods
Section C.85: T214, Tank 482											
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	N	Y	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 1.52 psia ET- M/R/Rp are sufficient to demonstrate compliance
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC 40 CFR, Part 60, Subpart Ka	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	6.43 tons VOC/yr	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	M/R/Rp/ET-Emission limit represents PTE and compliance may be demonstrated using AP-42 calculation methods



		PTI 03-13434									
Section C.86: T217, Tank 164468 ("E-Tank")											
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	N	Y	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 1.52 psia ET- M/R/Rp are sufficient to demonstrate compliance
	BWON Control Requirements Storage Vessel Provisions	40 CFR, Part 63, Subpart CC 40 CFR, Part 60, Subpart Ka	N	N	Y	Y	Y	N	N	N	Emissions are routed to emissions unit P025 ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	BWON Control Requirements	40 CFR, Part 61, Subpart FF	N	N	Y	Y	Y	Y	N	N	
	Control Requirements	OAC rule 3745-31-05(A)(3) PTI 03-13434	N	N	N	N	N	N	N	N	The vent from this emissions unit must be routed to the compressor system (emissions unit P025) M/R/Rp/ET- The requirements are listed under emissions unit P025
Section C.87: T222, Tank 56											
Section C.88: T223, Tank 71											
T222 T223	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	Y	Y	Y	Y	Y	N	N	N	ND/ET- The emissions unit is exempt from this rule based on compliance with 40 CFR, Part 60, Subpart Kb
T222 T223	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC 40 CFR, Part 60, Subpart Kb	N	N	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 0.75 psia ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
T222	36.45 tons OC/yr	OAC rule 3745-31-05(A)(3)	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and calculations and annual throughput reporting)



		PTI 03-13669									
T223	21.06 tons OC/yr	OAC rule 3745-31-05 PTI 03-16166	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and calculations and annual throughput reporting)
Section C.89: T231, Tank 327											
	Storage Vessel Provisions	OAC rule 3745-21-09(Z) 40 CFR, Part 63, Subpart CC 40 CFR, Part 60, Subpart Kb	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	13.89 tons OC/yr	OAC rule 3745-31-05 PTI P0134347	N	N	Y	Y	Y	N	N	N	The maximum annual throughput shall not exceed 1,779,947,985 gallons ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and annual throughput reporting)
Section C.88: T236, Tank 108											
	Maximum True Vapor Pressure Requirements Storage Vessel Provisions	OAC rule 3745-21-09(L) 40 CFR, Part 60, Subpart Kb 40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 0.75 psia ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards, monthly throughput monitoring and deviation report if necessary)
	20.0 tons OC/yr	OAC rule 3745-31-05 PTI P0104006	N	N	Y	Y	Y	N	N	N	The maximum annual throughput shall not exceed 1,779,947,985 gallons ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and annual throughput reporting)
Section C.91: T237, Tank 106											
Section C.92: T238, Tank 107											



T237	External Floating Roof Requirements	OAC rule 3745-21-09(Z)	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
T237 T238	Maximum True Vapor Pressure Requirements Storage Vessel Provisions	40 CFR, Part 63, Subpart CC	N	Y	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 11.1 psia ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
T237	11.37 tons VOC/yr	OAC rule 3745-31-05(A)(3) PTI P0134347	N	Y	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 11.1 psia ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (annual throughput records), emission limit represents PTE and compliance may be demonstrated using AP-42 calculation methods
T238	13.69 tons VOC/yr	OAC rule 3745-31-05(A)(3) PTI P0134347	N	Y	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 11.1 psia ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (annual throughput records), emission limit represents PTE and compliance may be demonstrated using AP-42 calculation methods
Section C.93: T239, Tank 110											
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(Z)	Y	N	N	N	Y	N	N	N	The maximum true VP shall not exceed 11.1 psia ND/M/R/ET- The requirements of this rule are less stringent than the requirements of 40 CFR, Part 63, Subpart CC
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC	N	Y	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 11.1 psia ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
	8.49 tons VOC/yr	OAC rule 3745-31-05(F) PTI P0134346	N	Y	Y	Y	Y	N	N	N	The maximum annual throughput shall not exceed 975,384,510 gallons ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and quarterly deviation reporting)
Section C.94: T268, T269, T270, Decanted Oil Group 2 Vessels											
	5.28 tons VOC/yr	OAC rule 3745-31-05(A)(3)	N	Y	Y	Y	Y	N	N	N	ET- M/R Rp are sufficient to demonstrate compliance without requiring formal testing



		PTI P0105198									
	Maximum True Vapor Pressure Requirements	40 CFR, Part 60, Subpart Kb	N	Y	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 0.51 psia ET- M/R/Rp are sufficient to demonstrate compliance without requiring formal testing
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC	N	N	Y	Y	N	N	N	N	Rp/ET- Facility's approved alternative LDAR plan include all requirements from this rule
Section C.95: T271, Tank 128											
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	Y	Y	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 1.52 psia ND/ET- The requirements of this rule are less stringent than the requirements of 40 CFR, Part 63, Subpart CC
	Storage Vessel Provisions	40 CFR, Part 63, Subpart CC	N	N	Y	Y	Y	N	N	N	ET- None required by rule, M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (work practice standards)
Section C.96: T273, Tank 120											
Section C.97: T280, VAC Bottoms Tank											
	Storage Vessel Provisions Maximum True Vapor Pressure Requirements	40 CFR, Part 63, Subpart CC 40 CFR, Part 60, Subpart Kb	N	N	Y	Y	N	N	N	N	The maximum true VP shall not exceed 0.754 psia ND/Rp/ET- The emissions unit is exempt from these rules based on the maximum true VP requirement
	Maximum True Vapor Pressure Requirements	OAC rule 3745-21-09(L)	N	Y	Y	Y	Y	N	N	N	The maximum true VP shall not exceed 1.5 psia ND/ET- The requirements of this rule are less stringent than the requirements of 40 CFR, Part 60, Subpart Kb
	39.1 tons VOC per rolling, 12-month period	ORC 3704.03(T) PTI P0109927	N	N	Y	Y	Y	N	N	N	ET- M/R/Rp requirements are sufficient to demonstrate compliance without requiring formal testing (monthly throughput monitoring and annual deviation reporting, if required)



DRAFT

**Division of Air Pollution Control
Title V Permit
for
Lima Refining Company**

Facility ID:	0302020012
Permit Number:	P0133998
Permit Type:	Renewal
Issued:	01/24/2024
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance



Division of Air Pollution Control
Title V Permit
for
Lima Refining Company

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Draft Title V Permit
Lima Refining Company
Permit Number: P0133998
Facility ID: 0302020012

Effective Date: To be entered upon final issuance

Authorization

Facility ID: 0302020012
Facility Description: Petroleum Refinery and Storage
Application Number(s): A0074436, A0071001, A0071612, A0075421, A0072976, A0069534, A0072291, A0074764, A0072719, A0073013
Permit Number: P0133998
Permit Description: Title V renewal for a petroleum refining and storage facility.
Permit Type: Renewal
Issue Date: 01/24/2024
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Superseded Permit Number: P0127259

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

Lima Refining Company
1150 South Metcalf Street
Lima, OH 45804

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

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Rd.
Bowling Green, OH 43402
(419)352-8461

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 Ohio EPA DAPC, Northwest District Office. 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

Anne M. Vogel
Director

List of Commonly Used Abbreviations

AP-42 = U.S. EPA's Compilation of Air Pollution Emissions Factors	IBR = Incorporation by Reference	PER = Permit Evaluation Report
ASTM = American Society for Testing and Materials	ID = Identification Number (typically referring to a facility ten-digit ID number)	PM = particulate matter
BACT = Best Available Control Technology	LAER = Lowest Achievable Emission Rate	PM ₁₀ = particulate matter with an aerodynamic diameter less than or equal to 10 microns
BAT = Best Available Technology	lb(s)/hr = pound(s) per hour	PM _{2.5} = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
CAA = Clean Air Act (1955, 70, 77, 80)	LDAR = Leak Detection and Repair	ppb = parts per billion
CAAA = Clean Air Act Amendments (1990)	LPG = liquefied petroleum gas/propane	ppm = parts per million
CAM = Compliance Assurance Monitoring	MACT = Maximum Achievable Control Technology	PSD = Prevention of Significant Deterioration
CEM = Continuous Emissions Monitor	MAGLC = Maximum Acceptable Ground Level Concentration	psi = pounds per square inch
CEMS = Continuous Emissions Monitoring System	mg/m ³ = milligrams per cubic meter	psia = pounds per square inch absolute
CFC = chlorofluorocarbon	MM = million	PTE = Potential-to-Emit
CFR = Code of Federal Regulations	MMBtu = million British Thermal Units	PTI = Permit-to-Install
CH ₄ = methane	MON = Miscellaneous Organic Chemical Manufacturing NESHAP	PTIO = Permit-to-Install and Operate
CI = compression ignition	MSDS = Material Safety Data Sheet	PTO = Permit-to-Operate
CO = carbon monoxide	MSW = Municipal Solid Waste	PWR = process weight rate
CO ₂ = carbon dioxide	NAAQS = National Ambient Air Quality Standard	RACM = Reasonably Available Control Measures
COM = Continuous Opacity Monitor	NESHAP = National Emission Standard for Hazardous Air Pollutants	RACT = Reasonably Available Control Technology
DAPC = Division of Air Pollution Control	NG = natural gas	RATA = Relative Accuracy Test Audit
DO/LAA = District Office/Local Air Agency	ng/m ³ = nanograms per cubic meter	RTO = regenerative thermal oxidizer
dscf = dry standard cubic foot	NH ₃ = ammonia	SB265 = Senate Bill 265
EAC = Emissions Activity Category	NMHC = non-methane hydrocarbons	scfm = standard cubic feet per minute
eDocs = Electronic Documents Database	NMOC = non-methane organic compound	SI = spark ignition
ERAC = Environmental Review Appeals Commission	NNSR = Nonattainment New Source Review	SIP = State Implementation Plan
ESP = electrostatic precipitator	NO = nitrogen oxide	SM = Synthetic Minor
EU = Emissions Unit	NO ₂ = nitrogen dioxide	SO ₂ = sulfur dioxide
FEPTIO = Federally Enforceable Permit-to-Install and Operate	NO _x = nitrogen oxides	SOB = Statement of Basis
FER = Fee Emissions Report	NSPS = New Source Performance Standard	SSMP = Startup, Shutdown and Malfunction Plan
FR = Federal Register	NSR = New Source Review	T & C = Term and Condition
GACT = Generally Achievable Control Technology	NTV = Non-Title V	TDS = total dissolved solids
GHG = greenhouse gases	O&M = Operation and Maintenance	TLV = Threshold Limit Value
gr = grains	O ₃ = ozone	TO = thermal oxidizer
gr/dscf = grains per dry standard cubic foot	OAC = Ohio Administrative Code	TPH = ton(s) per hour
H ₂ S = hydrogen sulfide	OC = organic compound	TPY = ton(s) per year
H ₂ SO ₄ = sulfuric acid	OEPA = Ohio Environmental Protection Agency	TSP = total suspended particulates
HAP = hazardous air pollutant	ORC = Ohio Revised Code	VE = visible emissions
HCl = hydrochloride	Pb = lead	VMT = vehicle miles traveled
HF = hydrogen fluoride	PBR = Permit-By-Rule	VOC = volatile organic compound
Hg = mercury	PCB = polychlorinated biphenyl	WPP = Work Practice Plan
HON = Synthetic Organic Chemical Manufacturing NESHAP	PE = particulate emissions	µg/m ³ = micrograms per cubic meter
hp = horsepower	PEMS = Predictive Emissions Monitoring System	
HVLP = high volume, low pressure		



Draft Title V Permit
Lima Refining Company
Permit Number: P0133998
Facility ID: 0302020012

Effective Date: To be entered upon final issuance

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. 21., Air Pollution Nuisance
 - (2) Standard Term and Condition A. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions
 - (3) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions
 - (4) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting for State-Only Requirements
 - (5) 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
 - (6) Standard Term and Condition A. 30., Submitting Documents Required by this Permit
- (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 recordings for 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 submitted scheduled maintenance requests, 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 Ohio EPA DAPC, Northwest District Office. 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.20, 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 Ohio EPA DAPC, Northwest District Office 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)(v))

- (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 Ohio EPA DAPC, Northwest District Office unless otherwise specified.

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

3. Reporting of Any Exceedance 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 permit except 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 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 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, OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77-07(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 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 Ohio EPA DAPC, Northwest District Office 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 Ohio EPA DAPC, Northwest District Office) 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 intermittent consistent 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 [defined as "Title I modification" in OAC rule 3745-77-01], 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 Ohio EPA DAPC, Northwest District Office 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 Ohio EPA DAPC, Northwest District Office 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 activities and emissions levels” as defined in OAC rule 3745-77-01. 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), 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, no emissions unit identified in this permit that has been certified 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 the Ohio EPA DAPC, Northwest District Office.
- 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 Ohio EPA DAPC, Northwest District Office. 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 Ohio EPA DAPC, Northwest District Office 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 Ohio EPA DAPC, Northwest District Office 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 of an 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 Ohio EPA DAPC, Northwest District Office, 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.



Draft Title V Permit
Lima Refining Company
Permit Number: P0133998
Facility ID: 0302020012

Effective Date: To be entered upon final issuance

B. Facility-Wide Terms and Conditions



Effective Date: To be entered upon final issuance

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. Alternative Leak Detection and Repair (LDAR) Monitoring Plan

The facility must maintain an up-to-date LDAR Monitoring Plan on-site. The LDAR Monitoring Plan must address all currently applicable federal and state rules for fugitive equipment leaks. The LDAR Monitoring Plan must also be updated to address the requirements of new rules as those new rules become applicable to the refinery and refinery processes. The current version of the LDAR Monitoring Plan must be readily available for review upon inspection and provided to the Ohio EPA upon request.

The director may accept an alternative monitoring, recordkeeping and reporting program for that required by paragraph (T)(1) of OAC rule 3745-21-09 if the permittee of a petroleum refinery can demonstrate to the satisfaction of the director that the alternative program is at least as effective in identifying, documenting and reporting leaks from petroleum refinery equipment as the program outlined in paragraph (T)(1) of OAC rule 3745-21-09. For purposes of this paragraph, any proposed alternative monitoring, recordkeeping and reporting program that the director finds comparable to the requirements of paragraph (DD)(12) or (DD)(13) of OAC rule 3745-21-09 or for any individual equipment component, finds equivalent to the federal requirements specified in 40 CFR, Part 60, Subparts VV, VVa, GGG, GGGa and QQQ or 40 CFR, Part 63, Subparts H and CC shall be acceptable to the director.

Pursuant to paragraph (a) of OAC rule 3745-21-09(T)(4), the alternative monitoring, recordkeeping and reporting program entitled "Premcor Lima Refinery, LDAR Plan" and dated November 19, 2002 is approved by the director as an acceptable alternative program for the "Lima Refining Company."

The permittee shall comply with the standards, monitoring and recordkeeping requirements, reporting requirements, and test methods under 40 CFR, Part 60, Subpart VV, including the following sections:

60.480(a)(1)	Applicability
60.480(a)(2)	Affected Facility
60.480(b)	Affected Facility
60.480(d)(1)	Exemptions – Maintain Records, Note: this is equivalent to item 60.480(b)(1) in the alternative LDAR monitoring plan
60.480(d)(2)	Exemptions – Affected Facility with No Equipment in VOC Service, Note: this is equivalent to item 60.480(b)(2) in the alternative LDAR monitoring plan
60.481	Definitions
60.482-1(a)	Compliance Date
60.482-1(b)	Compliance Determination
60.482-1(c)(1)	Equivalence of Means of Emission Limitation – Request

60.482-1(c)(2)	Equivalence of Means of Emission Limitation – Compliance
60.482-1(d)	Vacuum Service Exclusion
60.482-1(e)(1), 60.482-1(e)(2), 60.482-1(e)(3)(i) and 60.482-1(e)(3)(ii)	Compressors in Hydrogen Service Exclusion – Demonstration, Demonstration by Engineering Judgment, and Demonstration Revision
60.482-1(f)	Light Liquid Service: Additional Provision
60.482-2(a)(1), 60.482-2(a)(2), 60.482-2(b)(1), 60.482-2(b)(2), 60.482-2(c)(1), 60.482-2(c)(2), 60.482-2(d), 60.482-2(d)(1) through 60.482-2(d)(4), 60.482-2(d)(5)(i), 60.482-2(d)(5)(ii), and 60.482-2(d)(6)(i) through 60.482-2(d)(6)(iii)	Light Liquid Pumps: Monthly Monitoring; Weekly Visual Inspection; Leak Detection - 2,000 ppm*; Leak Detection – Drips; Repair Requirements; Dual Mechanical Seal Exemption – Barrier Fluid Options, Barrier Fluid Heavy Liquid or Not VOC, Barrier Fluid Sensor, Weekly Visual Inspection, Daily Sensor Check or Alarm, Failure Criteria, Leak Detection, Repair Requirements *the leak detection for pumps is 2,000 ppm in lieu of 10,000 ppm
60.482-2(e)(1) through 60.482-2(e)(3)	No Detectable Emissions Pump Exemption – No Shaft, Demonstration, and Annual Testing
60.428-2(f)	Pumps with Closed Vent System Exemption
60.482-2(g), and 60.482-2(g)(1) through 60.482-2(g)(2)	Unsafe-to-Monitor Pump Exemption: Immediate Danger and Written Monitoring Plan
60.482-3(a) through 60.482-3(d), 60.482-3(e)(1), 60.482-3(e)(2), 60.482-3(f), 60.482-3(g)(1) and 60.482-3(g)(2)	Compressor Seal System: Design and Operation, Heavy Liquid Service or Non-VOC Barrier Fluid, Sensor, Daily Sensor Check or Audible Alarm, Failure Criteria, Leak Detection, Repair Requirements
60.482-3(h)	Compressor with Closed Vent System Exemption
60.482-3(i), 60.482-3(i)(1) and 60.482-3(i)(2)	No Detectable Emissions Compressor Exemption: Demonstration and Annual Testing
60.482-3(j)	Reciprocating Compressor Exemption
60.482-4(a), 60.482-4(b)(1), 60.482-4(b)(2), 60.482-4(c), 60.482-4(d)(1) and 60.482-4(d)(2)	Gas/Vapor Pressure Relief Device No Detectable Emissions (NDE); Gas/Vapor Pressure Release Return to NDE; Gas/Vapor Pressure Release Monitor Within 5 Days; Gas/Vapor Pressure Relief Device Routed to Process, Fuel Gas, or Closed Vent/Control Device Exemption; Gas/Vapor Pressure Relief Device Rupture Disk Exemption; and Gas/Vapor Pressure Relief Device Rupture Disk Replacement

60.482-5(a) through 60.482-5(c)	Sampling Connection System Design and Operation, In Situ Sampling Systems and Sampling Systems Without Purges Exemption
60.482-6(a)(1), 60.482-6(a)(2), and 60.482-6(b) through 60.482-6(e)	Open Ended Valves or Lines: Equipment, Cap Operation, Valve Operation, Double Block and Bleed Operation, Emergency Shutdown Exemption, and Polymerization and Safety Hazard Exemption
60.482-7(a) through 60.482-7(c), 60.482-7(d)(1), 60.482-7(d)(2), 60.482-7(e), 60.482-7(f)(1) through 60.482-7(f)(3), 60.482-7(g)(1), 60.482-7(g)(2), and 60.482-7(h)(1) through 60.482-7(h)(3)	Gas/Vapor and Light Liquid Valves: Monthly Monitoring; Leak Definition – 500 ppm*; Quarterly Monitoring Option; Repair Within 15 Days; First Attempt at Repair Including Best Practices; No Detectable Emissions (NDE) Exemption/No External Actuation; NDE Definition; Annual Testing; Unsafe to Monitor Exemption – Immediate Danger and Written Monitoring Plan; Difficult to Monitor Exemption – Demonstration, Process Unit Conditions and Written Plan *the leak definition for valves is 500 ppm in lieu of 10,000 ppm
60.482-8(a), 60.482-8(b), 60.482-8(c)(1), 60.482-8(c)(2) and 60.482-8(d)	Heavy Liquid Pumps and Valves, Liquid Pressure Relief Devices and Connectors: Potential Leak, Leak Definition, Repair Within 15 Days, First Attempt at Repair Including Best Practices
60.482-9(a), 60.482-9(b), 60.482-9(c)(1), 60.482-9(c)(2), 60.482-9(d)(1), 60.482-9(d)(2) and 60.482-9(e)	Delay of Repair: Technical Infeasibility, Valves not in VOC Service, Valves Emissions Demonstration, Valves Collect Purged Material, Pumps Dual Mechanical Seal Required, Pumps Repair Within 6 Months
60.482-10(a) through 60.482-10(e), 60.482-10(f)(1)(i), 60.482-10(f)(1)(ii), 60.482-10(f)(2), 60.482-10(g), 60.482-10(g)(1), 60.482-10(g)(2), 60.482-10(h), 60.482-10(i), 60.482-10(j)(1), 60.482-10(j)(2), 60.482-10(k)(1) through 60.482-10(k)(3), 60.482-10(l) through 60.482-10(n)	Closed Vent and Control Device Systems: Vapor Recovery; Enclosed Combustion Devices; Flares; Monitoring; Hard Piping Initial Monitoring; Hard Piping Annual Inspection; Ductwork Annual Monitoring; Repair Leaks as soon as Practical; First Attempt at Repair Within 5 Days; Repair Completion Within 15 Days; Delay of Repair; Vacuum Exemption, Unsafe to Inspect Exemption - Imminent or Potential Danger and Written Inspection Plan; Difficult to Inspect Exemption - Determination, Process Unit Criteria and Written Inspection Plan; Recordkeeping; Operation Requirement; Surge Control Vessels and Bottoms Receivers in Benzene Service
60.483-1(a), 60.483-1(b)(1) through 60.483-1(b)(3), 60.483-1(c)(1) through 60.483-1(c)(3) and 60.483-1(d)	Allowable Percentage of Valves Leaking: Notification, Performance Test Procedures, Repair, Performance Test Leak Definition, Performance Test Leak Percentage, 2% Leak Percentage Limit for Affected Facility



60.483-2(a)(1), 60.483-2(a)(2), 60.483-2(b)(1) through 60.483-2(b)(6)	Skip Period Valves: Notification, Initial Compliance, Semiannual Monitoring, Annual Monitoring, Procedure for Greater Than 2% Leak Rate, Percent Leaking Calculation, Recordkeeping
60.484(a) through 60.484(f)	Equivalence of Means of Emission Limitation: Determination – Equipment, Design and Operation; Work Practices; Unique Demonstration Approach; Notice in Federal Register by Administrator; Procedure for VOC Equipment Leak Control Manufacturers
60.485(a) through 60.485(g)	Performance Tests Required by 40 CFR 60.8, Compliance Determination with 60.482 through 60.484, Compliance Determination with No Detectable Emission Standards, Test Each Piece of Equipment Unless Process Unit is not in VOC Service, Demonstration of Light Liquid Service, Representative Samples, Flare Compliance Determination
60.486(a), 60.486(b)(1) through 60.486(b)(3), 60.486(c) through 60.486(k)	Recordkeeping; Leak Detected – Tag and Tag Removal; Leak Detected – Log; Closed Vent/Control Device Design Records; Equipment Identification Records; Difficult and Unsafe to Monitor Records; Skip Period Records; Leak Sensor Criteria Records; Exemption Records; Equipment Not in VOC Service Records; 40 CFR, Part 60, Subpart A Provisions
60.487(a) through 60.487(f)	Semi-annual Reporting: Initial and Subsequent Content Requirements; Notification – Alternative Valve Standard; Performance Test Reporting; Requirements of 60.487(a) through 60.487(c) Remain in Force

[OAC rule 3745-21-09(T)(4)(a) and 40 CFR, Part 60, Subpart VV and PTI P0123731]

3. The following insignificant emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984: T275, T276, T277, T278 and T279. 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 Ohio EPA, Northwest District Office.

The permittee shall comply with all applicable requirements of 40 CFR, Part 60, Subpart Kb. The permittee shall also comply with all applicable requirements of 40 CFR, Part 60, Subpart A (General Provisions). Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR, Part 60, Subpart Kb, and Subpart A.

[40 CFR, Part 60, Subpart Kb]

4. The following insignificant 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: T275, T276, T277, T278 and T279. The complete NSPS requirements, including the NSPS General



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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 Ohio EPA, Northwest District Office.

The permittee shall comply with all applicable requirements of 40 CFR, Part 60, Subpart QQQ. The permittee shall also comply with all applicable requirements of 40 CFR, Part 60, Subpart A (General Provisions). Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR, Part 60, Subpart QQQ, and Subpart A.

[40 CFR, Part 60, Subpart QQQ]

5. The following insignificant emissions units contained in this permit are subject to 40 CFR, Part 63, Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries: T275, T276, T277, T278 and T279. The complete NESHAPS requirements, including the NESHAPS 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 Ohio EPA, Northwest District Office.

The permittee shall comply with all applicable requirements of 40 CFR, Part 63, Subpart CC. The permittee shall also comply with all applicable requirements of 40 CFR, Part 63, Subpart A (General Provisions). Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR, Part 63, Subpart CC, and Subpart A.

[40 CFR, Part 63, Subpart CC]

6. The facility is subject 40 CFR, Part 63, Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries. The permittee shall comply with the applicable control requirements, operating limits and emission limits under 40 CFR, Part 63, Subpart CC, including the following sections:

63.658(a) through 63.658(k)	Benzene Fenceline Monitoring Provisions
63.655(i)(8)	Ongoing recordkeeping requirements
63.655(e) and 63.655(h)(8)	Reporting requirements

[40 CFR, Part 63, Subpart CC]

7. The following insignificant emissions unit contained in this permit is subject to 40 CFR, Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines: P035. The complete NESHAPS requirements, including the NESHAPS 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 Ohio EPA, Northwest District Office.

The permittee shall comply with all applicable requirements of 40 CFR, Part 63, Subpart ZZZZ. The permittee shall also comply with all applicable requirements of 40 CFR, Part 63, Subpart A (General Provisions).

Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR, Part 63, Subpart ZZZZ, and Subpart A. The permittee shall submit a permit to install application if any emissions unit(s) become affected sources under 40 CFR, Part 63, Subpart ZZZZ.

- a) The following terms are applicable for insignificant emissions units P035:
- (1) The permittee shall comply with the applicable standards in 40 CFR, Part 63, Subpart ZZZZ, including the following sections:

63.6585, 63.6590, 63.6605, 63.6665, 63.6675 and Table 8	Subpart Applicability, General Requirements, Definitions and General Provisions
63.6602, 63.6625(j) and Table 2c	Maintenance requirements and oil analysis option
63.6625(e)(2), (h), 63.6640(a), 63.6640(f) and Table 6	Work Practice Standards and Emergency Engine Provisions
63.6625(f)	Install a non-resettable hour meter
63.6655(d), (e)(2) and (f) and 63.6660	Records of maintenance and hours of operation
63.6640(a), (b) and (e)	Reporting requirements
63.6670	Implementation and Enforcement

[40 CFR, Part 63, Subpart ZZZZ]

8. The site remediation activities at the referenced facility are exempt from the requirements of 40 CFR, Part 63, Subpart GGGGG (site remediation MACT) pursuant to 40 CFR 63.788(b)(3). The remediation activities are being conducted pursuant to the Resource Conservation and Recovery Act (RCRA) under U.S. EPA Identification Number OHD 005 051 826.

[40 CFR, Part 63, Subpart GGGGG]

9. The following insignificant emissions units at this facility must comply with all applicable State and federal regulations, as well as any emissions limitations and/or control requirements contained within the identified permit-to-install for the emissions unit. The insignificant emissions 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, 3745-21, and/or 40 CFR Part 60 or 63:

EU ID	Operations, Property and/or Equipment Description
G001	refinery gasoline/distillate dispensing facility for plant vehicles (PR 164966/164967/164968/164969)
P035	two diesel-operated firewater pumps [PBR07426, effective 11/24/09]
T224	methanol storage fixed roof tank (PR 164405) – 16,100 gallons capacity
T225	methanol storage fixed roof tank (PR 164417) – 1,500 gallons capacity
T227	methanol storage fixed roof tank (PR 100384) – 1,100 gallons capacity
T228	methanol storage fixed roof tank (PR 100341) – 1,175 gallons capacity
T229	methanol storage fixed roof tank (PR 164419) – 1,500 gallons capacity
T230	methanol storage fixed roof tank (PR 164215) – 20,000 gallons capacity
T243	advanced wastewater treatment plant aeration tanks A and B, each 6.6 million gallons [OAC rule 3745-31-03(B)(1)(l)(vi)]



T275	above ground fixed roof WWTP flow equalization storage tank A No. 152 – 10,150 gallons capacity [PTI# P0109018]
T276	above ground fixed roof WWTP flow equalization storage tank B No. 153 – 10,150 gallons capacity [PTI# P0109018]
T277	above ground fixed roof WWTP flow equalization storage tank C No. 154 – 10,150 gallons capacity [PTI# P0109018]
T278	above ground fixed roof WWTP west skimmed oil transfer storage tank No. 155 – 3,000 gallons capacity [PTI# P0109018]
T279	above ground fixed roof WWTP east skimmed oil transfer storage tank No. 156 – 3,000 gallons capacity [PTI# P0109018]

[OAC rule 3745-77-07(A)(13)]

10. Process Unit Turnarounds

- a) Each permittee of a petroleum refinery shall control the emissions of VOC from process unit turnarounds by combusting the vapors as fuel gas or by flaring the vapors until the pressure in the process vessel is 19.7 pounds per square inch absolute or less.
- b) The permittee shall maintain records for a minimum of two years for each process unit turnaround. Such records shall include:
 - (1) the date the unit was shut down;
 - (2) the approximate pressure of the vapors in the process vessel when the VOC emissions were first discharged to the ambient air; and
 - (3) the approximate total quantity of VOC emitted to the ambient air.

[OAC rule 3745-21-09(M)(3)]

11. The permittee shall maintain the following records to demonstrate that the crude oil flexibility (COF) modification project, as described in PTI application A0047911 submitted on May 29, 2013 (and subsequently modified in PTI Application A0053462 on June 23, 2015 and PTI Application A0061873 on October 5, 2018 and PTI Application A0064403 on September 23, 2019) does not trigger a major modification for PM/PM10/PM2.5, and VOC:

- a) the projected actual annual emissions for PM/PM10/PM2.5, and VOC, in tons per year, from the COF modification project as submitted in the PTI application A0047911 on May 29, 2013 (and subsequently modified in PTI Application A0053462 on June 23, 2015 and PTI Application A0061873 on October 5, 2018 and PTI Application A0064403 on September 23, 2019); and
- b) the total combined actual annual emissions for PM/PM10/PM2.5, and VOC, in tons per year, for five calendar years after commencing operation of the COF modification project for the following existing operations which are “affected” by the COF modification project:
 - (1) emissions units; B002, B003, B027, P010, P036, and facility emissions from decanted oil tank storage and facility emissions from diesel fuel tank storage.



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It should be noted that for purposes of determining the projected actual annual emissions for “modified” operations/emission units contained in PTI P0123737 and PTI P0127258 (B001, B004, F005, J011, P005, P037, P040, P049, and P050) the potential to emit reflected in allowable limitations shall be used.

[PTI P0119111, PTI P0123731 and PTI P0123737 and PTI P0127258]

- 12. The permittee shall notify the Northwest District Office in writing if annual emissions from all operations associated with the COF modification project, as specified in B.11 above, result in a significant PM/PM10/PM2.5, and/or VOC emissions increase and exceed the projected actual PM/PM10/PM2.5, and VOC emissions contained in PTI application A0047911, submitted May 29, 2013 (and subsequently modified in PTI Application A0053462 on June 23, 2015 and PTI Application A0061873 on October 5, 2018 and PTI Application A0064403 on September 23, 2019). This notification shall identify the cause for the difference from the preconstruction projection and the actual PM/PM10/PM2.5, and/or VOC emissions. This notification shall be submitted to the Northwest District Office within 60 days after the end of such year.

[PTI P0119111, PTI P0123731 and PTI P0123737 and PTI P0127258]

- 13. The permittee shall maintain the following records to demonstrate that the crude oil flexibility modification project, as described in PTI application A0061250 submitted on August 15, 2018 does not trigger a major modification. The permittee shall include new and modified natural gas piping components for emissions units B001, B004 and P049 for the COF project in the existing alternative leak detection and repair (LDAR) Monitoring Plan at the facility, which is listed in the facility’s current Title V permit, facility-wide term B.2. This requirement is established to ensure that LDAR is conducted for fugitive methane emissions associated with components in natural gas service.

[PTI P0123731 and PTI P0114527]

- 14. The crude oil flexibility project involves the installation of a new molten sulfur tank (emissions unit T285). As described in PTI application A0061250 submitted on August 15, 2018 (and subsequently modified in PTI Application A0064403 on September 23, 2019), the potential to emit from molten sulfur tank is 0.01 ton per year of hydrogen sulfide (H2S). As such, this emissions unit is considered de minimis.

[PTI P0123737 and PTI P0127258]

15. Transport Rule (TR) Trading Program Requirements

- a) The permittee shall comply with all applicable Cross-State Air Pollution Rule (CSAPR) requirements (40 CFR Part 97, Subparts AAAAA and BBBB) by the compliance date specified in 40 CFR, Part 97, Subparts AAAAA and BBBB.
- b) The TR subject unit, and the unit-specific monitoring provisions at this source, is identified in the following table. This unit is subject to the requirements for the TR NOx Annual Trading Program and TR NOx Ozone Season Trading Program.

Unit ID: B026: CE Boiler, Steam Generating Unit
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Parameter	Continuous emission monitoring system or systems (CEMS) requirements pursuant to 40 CFR part 75, subpart B (for SO ₂ monitoring) and 40 CFR part 75, subpart H (for NO _x monitoring)	Excepted monitoring system requirements for gas- and oil-fired units pursuant to 40 CFR part 75, appendix D	Excepted monitoring system requirements for gas- and oil-fired peaking units pursuant to 40 CFR part 75, appendix E	Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil-fired units pursuant to 40 CFR 75.19	EPA-approved alternative monitoring system requirements pursuant to 40 CFR part 75, subpart E
SO ₂					
NO _x	X				
Heat input	X				

- c) The above description of the monitoring used by a unit does not change, create an exemption from, or otherwise affect the monitoring, recordkeeping, and reporting requirements applicable to the unit under 40 CFR 97.430 through 97.435 (TR NO_x Annual Trading Program and 97.530 through 97.535 (TR NO_x Ozone Season Trading Program), as applicable. The monitoring, recordkeeping and reporting requirements applicable to each unit are included below in the standard conditions for the applicable TR trading programs.
- d) Owners and operators must submit to the Administrator a monitoring plan for each unit in accordance with 40 CFR 75.53, 75.62 and 75.73, as applicable. The monitoring plan for each unit is available at the EPA's website at <http://www2.epa.gov/airmarkets/monitoring-plans>.
- e) Owners and operators that want to use an alternative monitoring system must submit to the Administrator a petition requesting approval of the alternative monitoring system in accordance with 40 CFR, Part 75, Subpart E and 40 CFR 75.66 and 97.435 (TR NO_x Annual Trading Program) and 97.535 (TR NO_x Ozone Season Trading Program). The Administrator's response approving or disapproving any petition for an alternative monitoring system is available on the EPA's website at <http://www2.epa.gov/airmarkets/part-75-petition-responses>.
- f) Owners and operators that want to use an alternative to any monitoring, recordkeeping, or reporting requirement under 40 CFR 97.430 through 97.434 (TR NO_x Annual Trading Program)

and 97.530 through 97.534 (TR NOx Ozone Season Trading Program) must submit to the Administrator a petition requesting approval of the alternative in accordance with 40 CFR 75.66 and 97.435 (TR NOx Annual Trading Program) and 97.535 (TR NOx Ozone Season Trading Program). The Administrator’s response approving or disapproving any petition for an alternative to a monitoring, recordkeeping, or reporting requirement is available on EPA’s website at <http://www.epa.gov/airmarkets/part-75-petition-responses>.

g) The descriptions of monitoring applicable to the unit included above meet the requirement of 40 CFR 97.430 through 97.434 (TR NOx Annual Trading Program) and 97.530 through 97.534 (TR NOx Ozone Season Trading Program), and therefore minor permit modification procedures, in accordance with 40 CFR 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B), may be used to add to or change this unit’s monitoring system description.

h) TR NOx Annual Trading Program requirements

97.406(a), 97.413-97.418	Designated representative requirements
97.406(b), 97.430-97.435	Emissions monitoring, reporting and recordkeeping requirements
97.406(c)	NOx emissions requirements
97.406(d)	Title V permit revision requirements
97.406(e)	Additional recordkeeping and reporting requirements
97.406(f)	Liability
97.406(g)	Effect on other authorities

i) TR NOx Ozone Season Trading Program requirements

97.506(a), 97.513-97.518	Designated representative requirements
97.506(b), 97.530-97.535	Emissions monitoring, reporting and recordkeeping requirements
97.506(c)	NOx emissions requirements
97.506(d)	Title V permit revision requirements
97.506(e)	Additional recordkeeping and reporting requirements



Draft Title V Permit
Lima Refining Company
Permit Number: P0133998
Facility ID: 0302020012

Effective Date: To be entered upon final issuance

97.506(f)	Liability
97.506(g)	Effect on other authorities

[40 CFR Part 97 and OAC rule 3745-77-07(A)(13)]



Draft Title V Permit
Lima Refining Company
Permit Number: P0133998
Facility ID: 0302020012

Effective Date: To be entered upon final issuance

C. Emissions Unit Terms and Conditions

1. **B001, Vacuum Unit II - Process Heater (PR175151)**

Operations, Property and/or Equipment Description:

Refinery fuel gas or natural gas fired Vacuum unit II heater with ultra low NOx burners, 124.8 MMBtu/hr maximum heat input (PR 175151)

- 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 3745-17-10(B)(1)	See b)(2)a.
b.	OAC rule 3745-18-08(C)(1)	See b)(2)b.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from any stack shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
d.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480-7575] [In accordance with 63.7575, this emissions unit is in the 'unit designed to fire Gas 1 fuels' subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	See b)(2)o., c)(2) through c)(4) and e)(5) 63.7500(a) Table 3 requirements
e.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts off the General Provisions in 40 CFR 63.1 - 63.15 apply.
f.	40 CFR, Part 60, Subpart J [40 CFR 60.100 – 60.109]	See b)(2)c. through b)(2)e., d)(2) through d)(5).
g.	40 CFR, Part 60, Subpart Ja [40 CFR 60.100a – 60.109a]	See b)(2)e. through b)(2)g., d)(2) through d)(9).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
h.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 - 60.19.
i.	OAC rule 3745-31-05(D) (PTI No. P0123731, modification issued 11/29/18)	0.03 lb of nitrogen oxides (NOx) per MMBtu of actual heat based upon a 365 day rolling average [See b)(2)h. and b)(2)k.] 0.0075 lb of particulate emissions /particulate matter less than or equal to 10 microns in diameter/particulate matter less than or equal to 2.5 microns in diameter (PE/PM10/PM2.5) per MMBtu of actual heat input and 4.07 tons PE/PM10/PM2.5 per rolling, 12-month period 0.0054 lb of volatile organic compounds (VOC)/MMBtu of actual heat input and 2.95 tons VOC per rolling, 12-month period See b)(2)i. and b)(2)j.
j.	ORC 3704.03(T) (PTI No. P0123731, modification issued 11/29/18)	See b)(2)k.
k.	OAC rule 3745-31-05(A)(3)(a)(ii) (PTI No. P0123731, modification issued 11/29/18)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM10/PM2.5 and VOC emissions from this air contaminant source since the potential to emit is less than 10 tons/yr taking into account the federally enforceable restrictions in b)(1)i.
l.	OAC rules 3745-31-10 through 3745-31-20 (PTI No. P0123731, modification issued 11/29/18)	0.04 lb of carbon monoxide (CO) per MMBtu of actual heat input, based upon a 365-day rolling average and 21.87 tons CO per rolling, 12-month period 12.35 tons sulfur dioxide (SO2) per rolling, 12-month period Carbon dioxide equivalent (CO2e) emissions shall not exceed 66,042 tons per rolling, 12-month period. 0.03 lb of NOx per MMBtu of actual heat input, based upon a 365-day rolling average and 0.040 lb of NOx per MMBtu of actual heat input based upon a 30-day



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		rolling average and 16.40 tons NOx per rolling, 12-month period [See b)(2)k.] See b)(2)l.
m.	OAC rule 3745-110	See b)(2)m.

(2) Additional Terms and Conditions

- a. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- b. The emission limitation of 0.15 lb of SO₂ per MMBtu of actual heat input specified by OAC rule 3745-18-08(C)(1) is less stringent than the H₂S concentration limit of 85 mg/dscm (0.037 grain/dscf)(the equivalent concentration is 60 ppmv of H₂S) established by OAC rule 3745-31-10 through 3745-31-20. Therefore, compliance with the SO₂ limit is ensured by compliance with the H₂S limit.
- c. 40 CFR, Part 60, Subpart J is an applicable rule for this emissions unit. The permittee was required to comply with this New Source Performance Standard for fuel combustion by 1/18/08.
- d. The permittee shall not burn any refinery fuel gas in this emissions unit that contains hydrogen sulfide (H₂S) in excess of 230 mg/dscm (0.10 grain/dscf) (the equivalent concentration is 162 ppmv of H₂S). This H₂S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d).

The H₂S concentration limit of 162 ppmv specified by 40 CFR, Part 60, Subpart J is less stringent than the concentration limit of 60 ppmv, as a 3-hr average established by OAC rule 3745-31-10 through 3745-31-20.

- e. This emissions unit is considered an “affected facility” and is subject to the 230 mg/dscm, as a 3-hour rolling average emission limitation under 40 CFR, Part 60, Subpart Ja.

The requirements of 40 CFR, Part 60, Subpart Ja are equivalent to and/or more stringent than the requirements of 40 CFR, Part 60, Subpart J. This emissions unit shows compliance with 40 CFR, Part 60, Subpart J by demonstrating compliance with 40 CFR, Part 60, Subpart Ja. [See b)(2)c.].

- f. The permittee shall not burn any refinery fuel gas in this emissions unit that contains H₂S in excess of the following limitations:
 - i. 230 mg/dscm, as a 3-hour rolling average (0.10 grain/dscf) (the equivalent concentration is 162 ppmv of H₂S). This H₂S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts

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natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition of 40 CFR 60.101(d); or stack SO₂ not to exceed 20 ppmv, dry basis (ppmvd), corrected to zero percent excess air; and

- ii. 60 ppmvd of H₂S, as a 365-day rolling average; or stack SO₂ not to exceed 8 ppmvd, corrected to zero percent excess air.

This H₂S standard in 40 CFR 60.102a(g)(1)(ii) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101a.

The H₂S concentration limit of 162 ppmv specified by 40 CFR, Part 60, Subpart Ja is less stringent than the concentration limits of 85 mg/dscm (0.037 grain/dscf)(the equivalent concentration is 60 ppmv) established by OAC rule 3745-31-10 through 3745-31-20.

- g. The permittee shall not discharge to the atmosphere any emissions of NO_x in excess of the applicable limits in NSPS Subpart Ja.
 - i. The permittee shall comply with the limit in either paragraph b)(2)g.i.(a) or (b). The permittee may comply with either limit at any time, provided that the appropriate parameters for each alternative are monitored as specified in 40 CFR 60.107a; if fuel gas composition is not monitored as specified in 40 CFR 60.107a(d), the permittee must comply with the concentration limits in paragraph b)(2)g.i. as follows:
 - (a) 40 ppmvd (corrected to 0-percent excess air) determined daily on a 30-day rolling average basis; or
 - (b) 0.040 pound per million British thermal units (lb/MMBtu) higher heating value basis determined daily on a 30-day rolling average basis.

The permittee has elected to comply with NO_x limits in permit condition b)(2)g.i.(b). 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)(2), this will be allowed upon notification to Ohio EPA. The permittee shall submit an administrative permit modification request to Ohio EPA prior to the change.

- h. The NO_x emission limitation is established to reflect the final voluntary limits to meet a system-wide average NO_x performance level of 0.044 lb per MMBtu.
- i. It is assumed that all PE are equivalent to both PM₁₀ and PM_{2.5}.
- j. The following federally-enforceable emissions limitations were established to represent the potential to emit of this emissions unit:

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- i. 0.0075 lb PE/PM10/PM2.5 per MMBtu of actual heat input and 4.07 tons PE/PM10/PM2.5 per rolling, 12-month period; and
 - ii. 0.0054 lb of VOC/MMBtu of actual heat input and 2.95 tons VOC per rolling, 12-month period.
- k. The Vac II heater (B001) was reconstructed as part of the Lima Refining’s Crude Oil Flexibility (COF) project. After B001 was reconstructed with ultra-low NOx burners, the lower BACT limit of 0.03 lb of NOx/MMBtu of actual heat input, based upon a 365-day rolling average was established. The BAT requirements for NOx, CO, SO2 emissions under ORC 3704.03(T) have been determined to be compliance with the emission limitations and requirements established pursuant to OAC rule 3745-31-10 through 3745-31-20:
- i. 0.03 lb of NOx per MMBtu of actual heat input, based upon a 365-day rolling average;
 - ii. 0.04 lb of carbon monoxide per MMBtu of actual heat input, based upon a 365-day rolling average; and
 - iii. 12.35 tons SO2 per rolling, 12-month period
- l. The permittee shall employ Best Available Control Technology (BACT) for this emissions unit. BACT has been determined to be the following:

Pollutant	BACT Requirements
SO2	<p>Compliance with 40 CFR, Part 60, Subpart Ja and the following H2S standards:</p> <p>Compliance with hydrogen sulfide standards for refinery fuel gas, including 60 parts per million by volume (ppmv), as a 3-hour rolling average;</p> <p>or stack SO2 not to exceed 20 ppmvd, as a 3-hour rolling average, corrected to zero percent excess air; and</p> <p>60 ppmvd of H2S, as a 365-day rolling average; or stack SO2 not to exceed 8 ppmvd, corrected to zero percent excess air determined daily on a 365 successive calendar day rolling average basis</p>
CO	0.04 lb of CO per MMBtu of actual heat input, based upon a 365-day rolling average, and based on good combustion practices
CO2e	<p>Use of low-carbon gaseous fuels (refinery fuel gas or natural gas);</p> <p>Heat recovery through use of a convection section and boiler feed water preheating; and</p>



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	Excess oxygen monitoring and annual burner turning and heater inspection
NOx	Use of ultra-low NOx burners; Compliance with the 40 CFR, Part 60, Subpart Ja emission standard of 0.040 lb of NOx/MMBtu of actual heat input, based upon a 30-day rolling average; and Compliance with the NOx emission standard of 0.03 lb of NOx/MMBtu of actual heat input, based upon a 365-day rolling average

- m. Pursuant to OAC rule 3745-110-01(B)(19), this emissions unit is an existing large boiler. The emissions limitations for NOx in OAC rule 3745-110-03(C) are less stringent than the NOx BACT emission limitation established pursuant to OAC rule 3745-31-10 through 3745-31-20.
- n. This emissions unit is subject to the initial notification requirements of 40 CFR, Part 63, Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e, it is not subject to the emission limits, performance testing, monitoring, or site-specific monitoring plan requirements of Subpart DDDDD or any other requirements in 40 CFR, Part 63, Subpart A).

c) **Operational Restrictions**

- (1) The permittee shall burn only refinery fuel gas or natural gas in this emissions unit. The sulfur content of the refinery fuel gas or natural gas burned in this emissions unit shall comply with the allowable SO2 emission limitation specified in section b)(1).

[OAC rule 3745-77-07(A)(1) and PTI No. P0123731]

- (2) A process heater or boiler in the Gas 1 subcategory with a heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0123731]

- (3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0123731]

- (4) Pursuant to 40 CFR 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0123731]

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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) The permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit in order to demonstrate compliance with the emission limitations of:

- a. 230 mg/dscm, as a 3-hour rolling average (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H₂S in the refinery fuel gas [and if applicable, combined fuel firing as noted in b)(2)d. and b)(2)f. above]; or stack SO₂ not to exceed 20 ppmvd corrected to zero percent excess air; and
- b. 85 mg/dscm, as a 3-hour rolling average (0.037 grain/dscf)(the equivalent concentration of 60 ppmv of H₂S); or stack SO₂ not to exceed 8 ppmvd corrected to zero percent excess air; and
- c. 60 ppmvd of H₂S, as a 365-day rolling average; or stack SO₂ not to exceed 8 ppmvd corrected to zero percent excess air

The monitoring shall be conducted in accordance with 40 CFR 60.107a(a)(2), as follows:

- d. The span value for this instrument is 425 mg/dscm (the equivalent concentration is 300 ppmv) of H₂S.
- e. 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 H₂S in the fuel gas being burned.
- f. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. The permittee shall conduct a relative accuracy test audit (RATA) for the H₂S continuous emission monitoring equipment at a minimum frequency of annually. Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the RATAs.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (3) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA

detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the Ohio EPA, Northwest District Office upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (4) The permittee shall operate and maintain existing equipment to continuously monitor and record H₂S from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR, Part 60.13.

The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, parts per million (ppm) of H₂S for each cycle time of the analyzer, with no resolution less than one data point per minute required, emissions of H₂S in units of the applicable standard (grain/dscf and ppmv) as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (5) The permittee shall maintain a written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F.

A logbook dedicated to the monitoring systems 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 (CGAs) or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the H₂S CEMS at a minimum frequency of annually; and
- b. Conduct CGAs on the H₂S CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (6) In order to demonstrate compliance with the emission limitations of:
- a. 0.03 lb of NO_x/MMBtu of actual heat input based upon a rolling 365-day average;
 - b. 0.040 lb of NO_x/MMBtu of actual heat input, based upon a 30-day rolling average; and
 - c. 16.40 tons NO_x per rolling, 12-month period

The permittee shall install, operate and maintain an instrument for continuously monitoring and recording NO_x from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements in 40 CFR, 60.13, as follows:

- i. The span value for this instrument is 50 parts per million of NO_x.
- ii. The performance evaluations for this NO_x monitor under 40 CFR 60.13 (c) shall use Performance Specification 2 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an annual RATA for the NO_x continuous emission monitoring equipment. Method 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (7) Prior to the installation 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 2. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the Director (the Ohio EPA Northwest District Office) upon request.

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 NO_x 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 Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (8) The permittee shall 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). 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 CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATA in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the NO_x CEMS annually
- b. Conduct CGAs on the NO_x CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (9) The permittee shall 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:

- a. emissions of NO_x in ppm for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of NO_x in all units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly CGAs;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required RATA(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; and
- 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 d)(9)g. and d)(9)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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (10) The permittee shall record the following for this emissions unit:
- a. The volume, in million standard cubic feet (MMscf), of refinery fuel gas and natural gas combusted per month;

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- b. The volume, in MMscf, of refinery fuel gas and natural gas combusted per rolling, 12-month period;
- c. The CO₂e emissions from the combustion of refinery fuel gas and natural gas for each month of operation, in tons (short tons), quantified in accordance with the calculation methodologies outlined in 40 CFR Part 98 and using global warming potential (GWP) values from Table A-1 in 40 CFR, Part 98, Subpart A as such table was published in 74 FR 56374, October 30, 2009. (It should be noted that 40 CFR Part 98.33 quantifies GHG emissions in metric tons and emissions must be converted to short tons for purposes of this monitoring and recordkeeping requirement due to the establishment of BACT limitations involving short ton thresholds);
- d. The rolling, 12-month CO₂e emissions from refinery fuel gas and natural gas combustion, in tons (short tons);
- e. Heater design documents; and
- f. Heater maintenance activities, as completed.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any H₂S CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (3) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of:
 - a. All rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.105(a)(4) exceeds 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv). The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages.

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- b. All rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS exceeds 85 mg/dscm (0.037 grain/dscf)(the equivalent concentration is 60 ppmv).
- c. All rolling, 365-day periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.105(a)(4) exceeds 60 ppmvd. The rolling, 365-day average shall be determined as the arithmetic average of 365 contiguous daily averages.
- d. All rolling, 30-day periods during which the average emissions of NO_x as measured by the NO_x CEMS under 40 CFR 60.13 exceeds 0.040 lb of NO_x/MMBtu of actual heat input. The rolling, 30-day average shall be determined as the arithmetic average of 30 contiguous daily averages.
- e. All rolling, 365-day periods during which the average emissions of NO_x as measured by the NO_x CEMS under 40 CFR 60.13 exceeds 0.03 lb of NO_x/MMBtu of actual heat input.
- f. All rolling, 12-month periods during which the average emissions of NO_x as measured by the NO_x CEMS under 40 CFR 60.13 exceeds 16.40 tons.
- g. All exceedances of the 66,042 tons per rolling, 12-month period emission limitation for CO₂e emissions.

If there are no exceedances of concentrations of H₂S in the refinery fuel gas (or combined fuel stream, if applicable) or exceedances of the NO_x emission limitations during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times.

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

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (4) 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 Ohio EPA Northwest District Office, 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 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. The quarterly reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit 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 CGAs;
 - ix. unless previously submitted, results and dates of the RATA(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
 - x. unless previously submitted, the results of any RATA showing the continuous NO_x monitor out-of-control and the compliant results following any corrective actions;
 - xi. the date, time, and duration of any/each malfunction** of the continuous NO_x monitoring system, emissions unit, and/or control equipment;
 - xii. the date, time, and duration of any downtime** of the continuous NO_x monitoring system and/or control equipment while the emissions unit was in operation; and
 - xiii. the reason (if known) and the corrective actions taken (if any) for each event in e)(6)(b)xi. and e)(6)(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

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** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

(5) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):

a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[OAC rule 3745-77-07(C)(1); 40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); and 40 CFR 63.9(b) through (h)]

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 from any stack shall not exceed 20% opacity, as a six-minute average, except as provided by rule

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

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b. Emission Limitation:

85 mg/dscm (0.037 grain/dscf)(the equivalent concentration is 60 ppmv) of H₂S in the refinery fuel gas, or combine fuel stream if applicable

Applicable Compliance Method:

Compliance with the emission limitation shall be based upon the monitoring and record keeping requirements specified in section d)(2) through d)(5) for this emissions unit.



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If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

c. Emission Limitation:

230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv) of H₂S in the refinery fuel gas, or combine fuel stream if applicable

Applicable Compliance Method:

Compliance with the NSPS Subpart J emission limitation shall be based upon the monitoring and record keeping requirements specified in section d)(2) through d)(5) for this emissions unit.

If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0123731]

d. Emission Limitation:

230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv) of H₂S, as a 3-hour rolling, average, in the refinery fuel gas, or combined fuel stream if applicable

Applicable Compliance Method:

Compliance with the NSPS Subpart Ja emission limitation shall be based upon the monitoring and record keeping requirements specified in section d)(2) through d)(5) for this emissions unit.

If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CR, Part 60, Appendix A, or other U.S. EPA-approved methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

e. Emission Limitation:

60 ppmvd of H₂S, as a 365-day rolling, average, in the refinery fuel gas, or combined fuel stream if applicable

Applicable Compliance Method:

Compliance with the NSPS Subpart Ja emission limitation shall be based upon the monitoring and record keeping requirements specified in section d)(2) through d)(5) for this emissions unit.



If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CR, Part 60, Appendix A, or other U.S. EPA-approved methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

f. Emission Limitation:

85 mg/dscm, as a 3-hour rolling average (0.037 grain/dscf)(the equivalent concentration of 60 ppmv of H₂S); or stack SO₂ not to exceed 8 ppmvd, corrected to zero percent excess air

60 ppmvd of H₂S, as a 365-day rolling average; or stack SO₂ not to exceed 8 ppmvd, corrected to zero percent excess air

Applicable Compliance Method:

Compliance with the BACT requirement shall be based upon the monitoring and record keeping requirements specified in section d)(2) through d)(5) for this emissions unit.

If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CR, Part 60, Appendix A, or other U.S. EPA-approved methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

g. Emission Limitation:

0.0075 lb of PE/PM₁₀/PM_{2.5} per MMBtu of actual heat input and 4.07 tons PE/PM₁₀/PM_{2.5} per rolling, 12-month period

Applicable Compliance Method:

The PE/PM₁₀/PM_{2.5} emission limitation above was developed by dividing the PE/PM₁₀/PM_{2.5} emission factor from AP-42 Table 1.4-2 (dated 7/98) (7.6 lb/mm scf) by the average heating value for natural gas specified in AP-42, Table 1.4-2 (dated 7/98) (1020 Btu/scf). Compliance is presumed by only using gaseous fuels as required in c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the lb per MMBtu emission limitation by the maximum heat input (124.8 MMBtu/hr), and then multiplying by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the lb per MMBtu



emission limitation, compliance with the rolling, 12-month emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

h. Emission Limitation:

0.0054 lb of VOC per MMBtu of actual heat input and 2.95 tons VOC per rolling, 12-month period

Applicable Compliance Method:

The VOC emission limitation above was developed by dividing the VOC emission factor from AP-42 Table 1.4-2 (dated 7/98) (5.5 lb/mm scf) by the average heating value for natural gas specified in AP-42, Table 1.4-2 (dated 7/98) (1020 Btu/scf). Compliance is presumed by only using gaseous fuels as required in c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Methods 1 through 4, 18, 25 or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Use of Methods 18, 25 or 25A is to be selected based on the results of a 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.

The annual emission limitation was established by multiplying the lb per MMBtu of actual heat input emission limitation by the maximum heat input (124.8 MMBtu/hr), and then multiplying by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the lb per MMBtu emission limitation, compliance with the rolling, 12-month emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

i. Emission Limitation:

0.04 lb of CO per MMBtu of actual heat input based upon a 365-day rolling average and 21.87 tons CO per rolling, 12-month period

Applicable Compliance Method:

The permittee shall demonstrate compliance with the lbs of CO per MMBtu of actual heat input emission limitation by conducting emission testing in accordance with the requirements of section f)(2).

The rolling, 12-month emission limitation was established by multiplying the 0.04 lb of CO per MMBtu of actual heat input emission limitation by the maximum heat input (124.8 MMBtu/hr), and then multiplying by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is



shown with the lb per MMBtu emission limitation, compliance with the rolling, 12-month period emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

j. Emission Limitation:

12.35 tons SO₂ per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be based upon the fuel flow and H₂S monitoring and record keeping requirements specified in section d)(2) through d)(5) plus a 42 ppmv allowance for non-H₂S sulfur based on EPA published refinery test data, or more recent test value if future testing is performed.

If required, the permittee shall determine compliance with the SO₂ emission limitation by using Methods 6 of 40 CFR, Part 60, Appendix A, or other U.S. EPA-approved methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

k. Emission Limitation:

CO₂e emissions shall not exceed 66,042 tons per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in section d)(10) for this emissions unit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

l. Emission Limitation:

0.03 lb of NO_x per MMBtu of actual heat input based upon a 365-day rolling average, 0.040 lb of NO_x per MMBtu of actual heat input based upon a 30-day rolling average and 16.40 tons NO_x per rolling, 12-month period

Applicable Compliance Method:

The permittee shall demonstrate compliance with the lbs of NO_x per MMBtu of actual heat input emission limitation by conducting emission testing in accordance with the requirements of section f)(2).

Ongoing compliance with the NO_x emission limitations shall be based upon the monitoring and record keeping requirements specified in section d)(6) through d)(9). For this emissions unit and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR, Part 60.



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The rolling, 12-month emission limitation was established by multiplying the 0.03 lb of NOx per MMBtu of actual heat input emission limitation by the maximum heat input of 124.8 MMBtu/hr, then multiplying by the maximum annual hours of operation (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance is shown using the data collected as required in the monitoring and record keeping requirements section of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) Certification of the continuous NOx 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 Specifications 2; and ORC section 3704.03(I).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

g) Miscellaneous Requirements

- (1) None.

2. B002, ISO Stabilizer(PR170003)/Splitter Process Heater(PR175155)

Operations, Property and/or Equipment Description:

Refinery Fuel Gas or Natural Gas Fired ISO Stabilizer/Splitter Heaters, 170.3 MMBtu/hr maximum heat input (PR 170003/PR 175155) with selective catalytic reduction (SCR)

- 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 operations(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. 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 3745-17-10(B)(1)	0.020 lb of particulate emissions (PE)/MMBtu of actual heat input
b.	OAC rule 3745-18-08(C)(2)	1.0 lb of sulfur dioxide (SO ₂)/MMBtu of actual heat input [See b)(2)e.]
c.	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
d.	OAC rule 3745-31-05(A)(3)(a)(ii) (PTI No. P0123731, modification issued 11/29/18)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the potential to emit is less than 10 tons/year.
e.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480 - 63.7575] [In accordance with 63.7575, this emissions unit is in the 'unit designed to fire Gas 1 fuels' subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/control requirements specified in this section.]	See c)(2) through c)(4) and e)(10) 63.7500(a) Table 3 requirements
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
g.	40 CFR, Part 60, Subpart J & Ja [40 CFR 60.100 – 60.109 and 40 CFR 60.100a – 60.109a]	See b)(2)a. through b)(2)d.
h.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
i.	OAC rule 3745-31-05(D) (PTI No. P0123731, modification issued 11/29/18)	0.009 lb of nitrogen oxides (NO _x)/MMBtu of actual heat input based upon a rolling, 365-day block average See b)(2)f. through b)(2)h.

(2) Additional Terms and Conditions

- a. PTI P0119568 addressed a project which allowed for the replacement of the ISO Splitter Heater radiant coils, convection section, duct work and burners. The replacement activities resulted in “reconstruction” and as such the process heaters became affected facilities (fuel gas combustion devices) applicable to 40 CFR, Part 60 – Subpart Ja.

40 CFR, Part 60 - Subpart J is an applicable rule for this emissions unit. The permittee was required to comply with this New Source Performance Standard for fuel combustion by 1/18/08.

- b. The requirements of 40 CFR, Part 60 - Subpart Ja are equivalent to and/or more stringent than the requirements of 40 CFR, Part 60 - Subpart J. Therefore, the requirements of 40 CFR, Part 60, Subpart J were not listed in permit modification P0119568. This emissions unit is an affected fuel gas combustion device, pursuant to the definition in 40 CFR 60.101a and is therefore subject to the emissions limitations in 40 CFR 60.102a. Pursuant to 40 CFR 60.102a(g)(1)(ii), the permittee has elected to comply with the SO₂ emissions limitations in this rule by monitoring the refinery fuel gas quality with a hydrogen sulfide (H₂S) continuous emissions monitor.

Therefore, the permittee shall not burn in this emissions unit any refinery fuel gas that contains H₂S in excess of the following:

- i. 162 parts per million by volume (ppmv) determined hourly on a 3-hour rolling average basis; and
- ii. H₂S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis.

This H₂S standard in 40 CFR 60.102a(g)(1)(ii) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101a.

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The H₂S concentration limit of 162 ppmv specified by 40 CFR, Part 60, Subpart Ja is less stringent than the concentration limits of 60 ppmv, as a 3-hr rolling average established by OAC rule 3745-31-05(D).

- c. The permittee shall not discharge to the atmosphere any emissions of NO_x in excess of the applicable limits required by NSPS Subpart Ja as outlined below:
 - i. The permittee shall comply with the limit in either paragraph b)(2)c.i.(a) or (b). The permittee may comply with either limit at any time, provided that the appropriate parameters for each alternative are monitored as specified in 40 CFR 60.107a; if fuel gas composition is not monitored as specified in 40 CFR 60.107a(d), the permittee must comply with the concentration limits in paragraph b)(2)c.i.as follows.
 - (a) 40 ppmv (dry basis)(ppmvd) (corrected to 0-percent excess air) determined daily on a 30-day rolling average basis; or
 - (b) 0.040 pound per MM British thermal units (lb/MMBtu) higher heating value basis determined daily on a 30-day rolling average basis.

The permittee has elected to comply with NO_x limits in permit condition b)(2)c.i.(b). 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)(2), this will be allowed upon notification to Ohio EPA. The permittee shall submit an administrative permit modification request to Ohio EPA prior to the change.

- d. Since this emissions unit has a rated capacity of greater than 40 MMBtu/hr per hour, it is subject to the NO_x emission limitation in 40 CFR 60.102a(g)(2). The 0.040 lb of NO_x/MMBtu HHV basis is determined daily on a 30-day rolling average basis. It is also subject to the limitation of 0.009 lb of NO_x/MMBtu of actual heat input based on a 365-day rolling block average established pursuant to OAC rule 3745-31-05(D).
- e. The SO₂ emissions limitation established in OAC rule 3745-18-08(C)(2) is less stringent than the H₂S concentration limit of 60 ppmv, as a 3-hr rolling average established by OAC rule 3745-31-05(D). Therefore, compliance with the SO₂ limit is ensured by compliance with the H₂S limit.
- f. This emissions unit is one of four emissions units (B002, B003, B006 and B008) chosen by the company for installation of NO_x control equipment. Selective catalytic reduction (SCR) was installed on December 17, 2011 to meet the NO_x emissions limitation established in b)(1)i.

The NO_x emissions limitation is established to reflect the final voluntary limits to meet a system-wide average NO_x performance level of 0.044 lb/MMBtu.

- g. The following federally enforceable emissions limitation was established for the purpose of representing the potential to emit of this emissions unit:

- i. 0.009 lb of NO_x/MMBtu of actual heat input based upon a rolling, 365-day block average.
- h. The following federally enforceable emission limitation was established for purposes of demonstrating compliance with SO₂ modeling:
 - i. The H₂S concentration limits in the refinery fuel gas (or if, applicable, combined fuel firing) burned shall not exceed of 60 ppmv determined hourly on a 3-hour rolling average basis.

c) Operational Restrictions

- (1) The permittee shall burn only refinery fuel gas or natural gas in this emissions unit. The sulfur content of the refinery fuel gas or natural gas burned in this emissions unit shall comply with the allowable SO₂ emission limitation specified in section b)(1).

[OAC rule 3745-77-07(A)(1) and PTI No. P0123731]

- (2) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0123731]

- (3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0123731]

- (4) Pursuant to 40 CFR 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0123731]

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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0119568]

- (2) The permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the refinery fuel gas or combined fuel

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stream before being burned in this emissions in order to demonstrate compliance with the emission limitations of:

- a. 230 mg/dscm, as a 3-hour rolling average (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H₂S in the refinery fuel gas [and if applicable, combined fuel firing as noted in b)(2)d. above];
- b. 60 ppmvd of H₂S, as a 365-day rolling average [and if applicable, combined fuel firing as noted in b)(2)d. above]; and
- c. 60 ppmvd H₂S, as a 3-hour roiling average [and if applicable, combined fuel fired as noted in b)(2)i. above]

Such continuous monitoring and recording equipment shall comply with the requirements in 40 CFR 60.107a and 40 CFR, 60.13, as follows:

- d. The span value for this instrument is 300 ppmv of H₂S.
- e. 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 H₂S in the fuel gas being burned.
- f. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. The permittee shall conduct a relative accuracy test audit (RATA) for the H₂S continuous emission monitoring equipment per d)(5) below using Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the RATAs.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (3) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the Ohio EPA, Northwest District Office upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (4) The permittee shall operate and maintain existing equipment to continuously monitor and record H₂S to this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR, Part 60.13.

The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, parts per million of H₂S for each cycle time of the analyzer, with no resolution less than one data point per minute required, emissions of H₂S in units of the applicable

standard (ppmv) as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (5) The permittee shall maintain a written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F.

A logbook dedicated to the monitoring systems 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 (CGAs) or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the H₂S CEMS at a minimum frequency of annually; and
- b. Conduct CGAs on the H₂S CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (6) The permittee shall conduct a root cause analysis and a corrective action analysis for a fuel gas combustion device, each exceedance of an applicable short-term emissions limit in §60.102a(g)(1) if the SO₂ 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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (7) 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 d)(6).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (8) The permittee shall implement the corrective action(s) identified in the corrective action analysis conducted pursuant to 40 CFR 60.103a(d) in accordance with the applicable requirements in 40 CFR 60.103a paragraphs (e)(1) through (3).

- a. 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 40 CFR 60.108a(c)(6)(ix);

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- b. 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; and
- c. 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).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

(9) In order to demonstrate compliance with the emission limitations of:

- a. 0.009 lbs of NO_x/MMBtu of actual heat input based upon a rolling 365-day block average; and
- b. 0.040 lb of NO_x/mmBtu of actual heat input based upon a rolling 30-day average

The permittee shall operate and maintain an instrument for continuously monitoring and recording NO_x from this emissions unit in units of the applicable standard. The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR, 60.13, as follows:

- i. The span value for this instrument is 20 parts per million of NO_x.
- ii. The performance evaluations for this NO_x monitor under 40 CFR 60.13 (c) shall use Performance Specification 2 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an annual RATA for the NO_x continuous emission monitoring equipment. Method 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

(10) 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 NO_x 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 Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

(11) The permittee shall maintain a written quality assurance/quality control plan for the continuous NO_x monitoring system designed to ensure continuous valid and

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representative readings of NO_x 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 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 CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the NO_x CEMS annually; and
- b. Conduct CGAs on the NO_x CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (12) The permittee shall 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:

- a. emissions of NO_x in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of NO_x in all units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly CGAs;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required RATA(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,

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- i. the reason (if known) and the corrective actions taken (if any) for each such event in d)(12)g. and d)(12)h.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (13) The permittee shall install, operate and maintain equipment to continuously monitor and record oxygen (O₂) emitted from these emissions units, in units of percent O₂. 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 O₂ monitoring system including, but not limited to:

- a. percent O₂ for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. results of quarterly CGAs;
- c. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- d. results of required RATA(s);
- e. hours of operation of the emissions unit, continuous O₂ monitoring system;
- f. the date, time, and hours of operation of the emissions unit without the continuous O₂ monitoring system;
- g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous O₂ monitoring system; as well as,
- h. the reason (if known) and the corrective actions taken (if any) for each such event in d)(13)f. and d)(13)g.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (14) 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 O₂ monitoring system has been certified to meet the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 3. The letter/document of certification shall be made available to the Director (the Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

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- (15) The permittee shall maintain a written quality assurance/quality control plan for the continuous O₂ monitoring system designed to ensure continuous valid and representative readings of O₂ 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 O₂ monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly CGAs or RATA as required in 40 CFR, Part 60; and to conduct RATA in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the O₂ CEMS annually; and
- b. Conduct CGAs on the O₂ CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (16) Pursuant to the approval letter from U.S. EPA dated July 28, 2010, the permittee shall install and operate monitoring equipment in the SCR bypass stack to continuously monitor the temperature and draft pressure in the SCR bypass stack, subject to the following condition:

- a. The permittee must measure, report and comply with the temperature and pressure readings obtained in the bypass stack during normal operation as measured when stack testing the main stack to demonstrate initial compliance with applicable limits (i.e. – ambient temperature and a slight negative pressure in the bypass stack when the SCR induced draft fan is operating). The temperature and pressure readings are hereby incorporated into this permit as a means to assure compliance.

Note: This emissions unit has two bypass stacks. Emissions from the first bypass stack are from the splitter reboiler heater. Emissions from the second bypass stack are from the splitter and stabilizer reheaters (B002) and the first and second stage heaters (B003), combined.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (17) The permittee shall include the ISO Recycle Splitter Tower process fugitive emissions and associated components in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall be conducted in accordance with the alternative monitoring plan submitted by the permittee. The applicable requirements are listed in section B.2 of the Facility-Wide Terms and Conditions of the Title V permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any H₂S CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (3) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of:

a. All rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.105(a)(4) exceeds 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv). The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages.

b. All rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS exceeds 85 mg/dscm (0.037 grain/dscf)(the equivalent concentration is 60 ppmv).

c. All rolling, 365-day periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.105(a)(4) exceeds 60 ppmvd. The rolling, 365-day average shall be determined as the arithmetic average of 365 contiguous daily averages.

If there are no exceedances of concentrations of H₂S in the refinery fuel gas (or combined fuel stream, if applicable) during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times.

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

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (4) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any NO_x CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit

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operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (5) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any O2 CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (6) The permittee shall include in its EER quarterly reports each period of time when the SCR bypass dampers are not 100 percent closed, the reason why they were not 100 percent closed and the actions taken to prevent such occurrence from happening again.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (7) The permittee shall submit an EER quarterly 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 paragraphs e)(8)(a) through e)(8)(g) below.

- a. The date that the exceedance occurred;
- b. An explanation of the exceedance;
- c. Whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system; and
- d. A description of the action taken, if any.
- e. The information described in 40 CFR 60.108a(c)(6)(i) through (xi) for all discharges listed in 40 CFR 60.108a(c)(6).
- f. 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.



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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.

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

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (8) The permittee shall submit quarterly deviation (excursion) reports that identify any deviations from the federally and state-only enforceable emission limitations, operational restrictions, and control device operating parameter limitations, in accordance with the reporting requirements of the Standard Terms and Conditions of this permit. The quarterly reports shall include (a) the probable cause of such deviations and (b) any corrective actions or preventative measures that have been or will be taken to eliminate the deviation(s).

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (9) The permittee shall submit written reports that identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements every six months, in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (10) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):

- a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[OAC rule 3745-77-07(C)(1); 40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); and 40 CFR 63.9(b) through (h)]

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:

0.020 lb of PE/MMBtu of actual heat input



Applicable Compliance Method:

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet (MMscf)/hr, by the appropriate particulate emission factor, in lb(s)/MMscf, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the methods and procedures specified in Methods 1 through 4, and 5 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(9).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

b. Emission Limitation:

1.0 lb of SO₂/MMBtu of actual heat input

Applicable Compliance Method:

This limit is less stringent than firing refinery fuel gas (or combined fuel stream, if applicable) with a maximum H₂S content of 60 ppmv in this emissions unit. As long as the permittee maintains compliance with the H₂S emission limitation in section b)(1), compliance with the SO₂ limitation will be assumed.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and P0123731]

c. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

d. Emission Limitation:

0.009 lb of NO_x/MMBtu of actual heat input based upon a rolling, 365-day block average

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(9) through d)(16) for this emissions unit.



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If required, the permittee shall determine compliance with the NO_x emission limitation by using Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

e. Emission Limitation:

0.040 lb of NO_x/mmBtu of actual heat input based upon a rolling 30-day average

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(9) through d)(16) for this emissions unit.

If required, the permittee shall determine compliance with the NO_x emission limitation by using Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and P0123731]

f. Emission Limitation:

230 mg/dscm, as a 3-hour rolling average (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H₂S in the refinery fuel gas, or combined fuel stream if applicable

60 ppmvd of H₂S, as a 365-day rolling average refinery fuel gas, or combined fuel stream if applicable; and

60 ppmvd H₂S, as a 3-hour roiling average [refinery fuel gas, or combined fuel stream if applicable

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(2) through d)(5) for this emissions unit.

If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

g) **Miscellaneous Requirements**

- (1) PTI No. P0106610 was issued to add 40 CFR, Part 60, Subpart J as an applicable rule for this emissions unit. The permittee was required to comply with this new source performance standard (NSPS) for fuel combustion by 12/31/09.

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PTI No. P0106610 included revisions to RATA permit terms for the hydrogen sulfide (H₂S) continuous emission monitor system (CEMS) to modify the frequency to once every three years, and deletion of refinery fuel gas sampling requirements, due to use of the H₂S CEMS.

PTI No. P0112538 includes all previously established emissions limitations, and permit terms and conditions from PTI No. P0106610 which was issued final on 8/2/10.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) The ISO Stabilizer/Splitter Heaters were not modified with issuance of PTI No. P0116163. The only change to equipment previously involved modifying the ISO Recycle Splitter Tower kerosene rundown line to increase production throughput of the kerosene stream by 20,000 barrels per day, and simultaneously reducing naphtha production. New trays will be installed on the ISO Splitter Kerosene Stripper Tower (part of the isocracker process unit), along with a new air cooler and spare pumps.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (3) PTI P0119568 addressed a project which allowed for the replacement of radiant coils, convection section, duct work and burners. The project also involved the reconfiguration of trays 22, 23 and 25 within the ISO Splitter Tower. The furnace burners were replaced but did not change the maximum heat input capacity for this emissions unit.
- a. The ISO Stabilizer Heater was modified as part of this project. The replacement activities resulted in “reconstruction” and as such the process heaters become affected facilities (fuel gas combustion devices) applicable to 40 CFR, Part 60 – Subpart Ja.
 - b. The permittee demonstrated that no major modification occurred under Prevention of Significant Deterioration (PSD) regulations as the “net emissions increase” was not triggered as a result of this project. This was achieved through a comparison of baseline actual emissions to potential emissions.
 - c. The permittee has demonstrated that the allowable emissions did not increase as a result of the reconstruction project. As such, the emission limitations were not modified with PTI P0119568.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

3. B003, ISO I & II Process Heaters (PR 175152/PR 175153)

Operations, Property and/or Equipment Description:

Refinery Fuel Gas or natural gas fired ISO I & II Heaters, 74.7 MMBtu/hr maximum heat input (PR 175152/PR 175153) with selective catalytic reduction (SCR)

- 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 3745-17-10(B)(1)	0.020 lb of particulate emissions (PE)/MMBtu of actual heat input
b.	OAC rule 3745-18-08(C)(1)	0.15 lb of sulfur dioxide (SO ₂)/MMBtu of actual heat input [See b)(2)c.]
c.	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
d.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480-7575] [In accordance with 63.7575, this emissions unit is in the 'unit designed to fire Gas 1 fuels' subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/control requirements specified in this section.]	See c)(2) through c)(4) and e)(7) 63.7500(a) Table 3 requirements
e.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
f.	40 CFR, Part 60, Subpart J [40 CFR 60.100 – 60.109]	See b)(2)a. and b)(2)b.
g.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
h.	OAC rule 3745-31-05(D) (PTI No. P0123731, modification issued 11/29/18)	0.009 lb of NOx/MMBtu of actual heat input based upon a 365-day rolling block average See b)(2)d. and b)(2)e.

(2) Additional Terms and Conditions

- a. 40 CFR, Part 60 - Subpart J is an applicable rule for these emissions units. The permittee was required to comply with this New Source Performance Standard (NSPS) for fuel combustion by 1/18/08.
- b. The permittee shall not burn any refinery fuel gas in these emissions units that contains hydrogen sulfide (H2S) in excess of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume (ppmv) of H2S), as a 3-hour rolling average. This H2S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d).

The H2S concentration limit of 162 ppmv specified by 40 CFR, Part 60, Subpart J is less stringent than the concentration limit of 60 ppmv, as a 3-hr rolling average established by OAC rule 3745-31-05(D).
- c. The SO2 emissions limitation established in OAC rule 3745-18-08(C)(5) is less stringent than the H2S concentration limit of concentration limit of 60 ppmv, as a 3-hr rolling average established by OAC rule 3745-31-05(D). Therefore, compliance with the SO2 limit is ensured by compliance with the H2S limit.
- d. Emission unit B003 is one of the four emission units (B002, B003, B006 and B008) chosen by the company for installation of NOx control equipment. Selective catalytic reduction was installed on B003 on December 17, 2011 to meet the NOx emissions limitations are established to reflect the final voluntary limits to meet a system-wide average NOx performance level of 0.044 lb per MMBtu.
- e. The following federally enforceable emission limitation was established for purposes of demonstrating compliance with SO2 modeling:
 - i. The H2S concentration limits in the refinery fuel gas (or if, applicable, combined fuel firing) burned shall not exceed of 60 ppmv determined hourly on a 3-hour rolling average basis.

c) Operational Restrictions

- (1) The permittee shall burn only refinery fuel gas or natural gas in this emissions unit. The sulfur content of the refinery fuel gas or natural gas burned in this emissions unit shall comply with the allowable SO₂ emission limitation specified in section b)(1).

[OAC rule 3745-77-07(A)(1) and PTI No. P0123731]

- (2) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0123731]

- (3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0123731]

- (4) Pursuant to 40 CFR 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0123731]

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.

[OAC rule 3745-77-07(C)(1) PTI No. P0123731]

- (2) The permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit in order to demonstrate compliance with the emission limitations of:

- a. 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv) of H₂S in the refinery fuel gas [and if applicable, combined fuel firing as noted in b)(2)b. above]; and

- b. 60 ppmv of H₂S in the refinery fuel gas [and if applicable, combined fuel firing as noted in b)(2)e. above]

The monitoring shall be conducted in accordance with 40 CFR 60.105(a)(4), as follows:

- c. The span value for this instrument is 425 mg/dscm (the equivalent concentration is 300 ppmv) of H₂S.
- d. 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 H₂S in the fuel gas being burned.
- e. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. The permittee shall conduct a relative accuracy test audit (RATA) for the H₂S continuous emission monitoring equipment at a minimum frequency of once every three years. Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the RATAs.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0123731]

- (3) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the Ohio EPA, Northwest District Office upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0123731]

- (4) The permittee shall operate and maintain existing equipment to continuously monitor and record H₂S from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR, Part 60.13.

The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, ppm of H₂S for each cycle time of the analyzer, with no resolution less than one data point per minute required, emissions of H₂S in units of the applicable standard (grain/dscf and ppmv) as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0123731]

- (5) The permittee shall maintain a written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F.

A logbook dedicated to the monitoring systems must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the H₂S CEMS at a minimum frequency of once every three years; and
- b. Conduct CGAs on the H₂S CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0123731]

- (6) In order to demonstrate compliance with the emission limitation of 0.009 lb of NO_x/MMBtu of actual heat input based upon a rolling 365-day average, the permittee shall operate and maintain an instrument for continuously monitoring and recording NO_x from this emission unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR, 60.13, as follows:

- a. The span value for this instrument is 20 ppm of NO_x.
- b. The performance evaluations for this NO_x monitor under 40 CFR 60.13 (c) shall use Performance Specification 2 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an annual RATA for the NO_x continuous emission monitoring equipment. Method 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (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 NO_x 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 Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (8) The permittee shall 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). 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 CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the NO_x CEMS annually; and

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- b. Conduct CGAs on the NO_x CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (9) The permittee shall 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:

- a. emissions of NO_x in ppm for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of NO_x in all units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly CGAs;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required RATA(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 d)(9)g. and d)(9)h.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (10) The permittee shall install, operate and maintain equipment to continuously monitor and record oxygen (O₂) emitted from these emissions units, in units of percent O₂. 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 O₂ monitoring system including, but not limited to:

- a. percent O₂ for each cycle time of the analyzer, with no resolution less than one data point per minute required;



- b. results of quarterly CGAs;
- c. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- d. results of required RATA(s);
- e. hours of operation of the emissions unit, continuous O2 monitoring system;
- f. the date, time, and hours of operation of the emissions unit without the continuous O2 monitoring system;
- g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous O2 monitoring system; as well as,
- h. the reason (if known) and the corrective actions taken (if any) for each such event in d)(10)f. and d)(10)g.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (11) 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 O2 monitoring system has been certified to meet the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 3. The letter/document of certification shall be made available to the Director (the Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (12) The permittee shall maintain a written quality assurance/quality control plan for the continuous O2 monitoring system designed to ensure continuous valid and representative readings of O2 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 O2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the O2 CEMS annually; and
- b. Conduct CGAs on the O2 CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (13) Pursuant to the approval letter from U.S. EPA dated July 28, 2010, the permittee shall install and operate monitoring equipment in the SCR bypass stack to continuously monitor the temperature and draft pressure in the SCR bypass stack, subject to the following condition:
- a. The permittee must measure, report and comply with the temperature and pressure readings obtained in the bypass stack during normal operation as measured when stack testing the main stack to demonstrate initial compliance with applicable limits (i.e. – ambient temperature and a slight negative pressure in the bypass stack when the SCR induced draft fan is operating). The temperature and pressure readings are hereby incorporated into this permit as a means to assure compliance.

Note: This emissions unit has two bypass stacks. Emissions from the first bypass stack are from the first and second stage heaters. Emissions from the second bypass stack are from the splitter and stabilizer reheaters (B002) and the first and second stage heaters (B003), combined.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas or natural gas was burned in these emissions units. Each report shall be submitted within 30 days after the deviation occurs.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any H₂S CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (3) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of:
- a. All rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.105(a)(4) exceeds 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv). The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages.

- b. All rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS exceeds 85 mg/dscm (0.037 grain/dscf)(the equivalent concentration is 60 ppmv).

If there are no exceedances of concentrations of H₂S in the refinery fuel gas (or combined fuel stream, if applicable) during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times.

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

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0123731]

- (4) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any NO_x CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (5) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any O₂ CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (6) The permittee shall include in its quarterly excess emission reports each period of time when the SCR bypass dampers are not 100 percent closed, the reason why they were not 100 percent closed and the actions taken to prevent such occurrence from happening again.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (7) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):

- a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[OAC rule 3745-77-07(C)(1); 40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); and 40 CFR 63.9(b) through (h)]

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:

0.020 lb of PE/MMBtu of actual heat input

Applicable Compliance Method:

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet (MMscf)/hr, by the appropriate particulate emission factor, in lb(s)/MMscf, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the methods and procedures specified in Methods 1 through 4, and 5 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(9).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

b. Emission Limitation:

0.15 lb of SO₂ /MMBtu of actual heat input

Applicable Compliance Method:

This limit is less stringent than firing refinery fuel gas (or combined fuel stream, if applicable) with a maximum H₂S content of 85 mg/dscm (0.037 grain/dscf)(the equivalent concentration is 60 ppmv) in this emissions unit. As long as the permittee maintains compliance with the H₂S emission limitation in section b)(1), compliance with the SO₂ limitation will be assumed.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the methods and procedures specified in 40 CFR, Part 60, Appendix A, Methods 1 through 4, and 6 and the requirements specified in OAC rule 3745-18-04(E)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

c. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.



Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

d. Emission Limitation:

230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv) of H₂S in the refinery fuel gas, or combined fuel stream if applicable

60 ppmv H₂S, as a 3-hour rolling average [refinery fuel gas, or combined fuel stream if applicable]

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(2) through d)(5) for this emissions unit. If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0123731]

e. Emission Limitation:

0.009 lb of NO_x/MMBtu of actual heat input based upon a 365-day block average

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(6) through d)(13) for this emissions unit. If required, the permittee shall determine compliance with the NO_x emission limitation by using Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

g) Miscellaneous Requirements

(1) None.

4. B004, Crude II Process Heater (PR 175150)

Operations, Property and/or Equipment Description:

Refinery Fuel Gas or Natural Gas Fired Crude II Heater with Low Nitrogen Oxide Burners, 646.3 MMBtu/hr, maximum heat input (PR 175150)

- 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 operations(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. 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 3745-17-10(B)(1)	See b)(2)a.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
c.	OAC rule 3745-18-08(C)(2)	See b)(2)b.
d.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480-7575] [In accordance with 63.7575, this emissions unit is in the 'unit designed to fire Gas 1 fuels' subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/control requirements specified in this section.]	See b)(2)o. and c)(2) through c)(4) and e)(6) 63.7500(a) Table 3 requirements
e.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
f.	40 CFR, Part 60, Subpart J & Ja [40 CFR 60.100 – 60.109 and 40 CFR 60.100a – 60.109a]	See b)(2)c. through b)(2)g.
g.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
h.	OAC rule 3745-31-05(D)	0.0075 lb of particulate emissions/

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(PTI No. P0123731, issued 11/29/18)	<p>particulate matter less than or equal to 10 microns in diameter/particulate matter less than or equal to 2.5 microns in diameter (PE/PM10/PM2.5)/MMBtu of actual heat input and 21.09 tons of PE/PM10/PM2.5 per rolling, 12-month period</p> <p>0.0054 lb of volatile organic compounds (VOC)/MMBtu of actual heat input and 15.26 tons of VOC per rolling, 12-month period</p> <p>0.035 lb of nitrogen oxides (NOx)/MMBtu of actual heat input, based on a 365-day rolling average [See b)(2)n.]</p> <p>See b)(2)h., b)(2)i. and b)(2)m.</p>
i.	ORC 3704.03(T) (PTI No. P0123731, issued 11/29/18)	See b)(2)j.
j.	OAC rules 3745-31-10 through 3745-31-20 (PTI No. P0123731, issued 11/29/18)	<p>0.03 lb of NOx/MMBtu of actual heat input based upon a 365-day rolling average, 0.040 lb of NOx/MMBtu of actual heat input based upon a 30-day rolling average, and 84.92 tons NOx per rolling, 12-month period</p> <p>0.04 lb of carbon monoxide (CO)/MMBtu of actual heat average input based upon a 365-day rolling and 113.23 tons CO per rolling, 12-month period</p> <p>64.26 tons of sulfur dioxide (SO2) per rolling, 12-month period</p> <p>Carbon dioxide equivalents (CO₂e) emissions shall not exceed 342,041 tons per rolling, 12-month period</p> <p>See b)(2)k.</p>
k.	OAC rule 3745-110	See b)(2)l.

(2) Additional Terms and Conditions

- a. The emission limitation of 0.020 lb of particulate emissions (PE)/MMBtu of actual heat input specified by OAC 3745-17-10(B)(1) is less stringent than the PE limitation specified pursuant to OAC rule 3745-31-05(D).
- b. The emission limitation of 1.0 lb of sulfur dioxide (SO₂)/MMBtu of actual heat input specified by OAC 3745-18-08(C)(2) is less stringent than the SO₂ emission limitation specified pursuant to OAC rule 3745-31-10 through 3745-31-20.
- c. 40 CFR, Part 60 - Subpart J is an applicable rule for this emissions unit. The permittee was required to comply with this New Source Performance Standard for fuel combustion by 1/18/08.
- d. The requirements of 40 CFR, Part 60 - Subpart Ja are equivalent to and/or more stringent than the requirements of 40 CFR, Part 60 - Subpart J. Therefore, the requirements of 40 CFR, Part 60, Subpart J will not be listed in this permit. This emissions unit is an affected fuel gas combustion device, pursuant to the definition in 40 CFR 60.101a and is therefore subject to the emissions limitations in 40 CFR 60.102a. Pursuant to 40 CFR 60.102a(g)(1)(ii), the permittee has elected to comply with the SO₂ emissions limitations in this rule by monitoring the refinery fuel gas quality with a hydrogen sulfide (H₂S) continuous emissions monitor.
- e. Since this emissions unit has a rated capacity of greater than 40 MMBtu/hr, it is subject to the NO_x emission limitation in 40 CFR 60.102a(g)(2). The 0.040 lb of NO_x/MMBtu HHV basis is determined daily on a 30-day rolling average basis. It is also subject to the limitation of 0.03 lb of nitrogen oxides (NO_x)/MMBtu of actual heat input based upon a 365-day rolling average established pursuant to OAC rule 3745-31-10 through 3745-31-20.
- f. The permittee shall not burn any refinery fuel gas in this emissions unit that contains hydrogen sulfide (H₂S) in excess of the following limitations:
 - i. 162 ppm, as a 3-hour rolling average. This H₂S standard in 40 CFR 60.102a(g)(1)(ii) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101a; or stack SO₂ not to exceed 20 parts per million by volume (ppmv), dry basis (ppmvd), corrected to zero percent excess air; and
 - ii. 60 ppmvd of H₂S, as a 365-day rolling average; or stack SO₂ not to exceed 8 ppmvd corrected to zero percent excess air.

This H₂S standard in 40 CFR 60.102a(g)(1)(ii) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101a.

The H₂S concentration limit of 162 ppmv specified by 40 CFR, Part 60, Subpart Ja is less stringent than the concentration limits of 85 mg/dscm

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(0.037 grain/dscf)(the equivalent concentration is 60 ppmv) established by OAC rule 3745-31-10 through 3745-31-20.

- g. The permittee shall not discharge to the atmosphere any emissions of NO_x in excess of the applicable limits required by NSPS Subpart Ja as outlined below:
 - i. The permittee shall comply with the limit in either paragraph b)(2)g.i.(a) or (b). The permittee may comply with either limit at any time, provided that the appropriate parameters for each alternative are monitored as specified in 40 CFR 60.107a; if fuel gas composition is not monitored as specified in 40 CFR 60.107a(d), the permittee must comply with the concentration limits in paragraph b)(2)g.i.as follows.
 - (a) 40 ppmvd, corrected to 0-percent excess air determined daily on a 30-day rolling average basis; or
 - (b) 0.040 lb NO_x/MMBtu higher heating value basis determined daily on a 30-day rolling average basis.

The permittee has elected to comply with NO_x limits in permit condition b)(2)g.i.(b). 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)(2), this will be allowed upon notification to Ohio EPA. The permittee shall submit an administrative permit modification request to Ohio EPA prior to the change.

- h. It is assumed that all PE are equivalent to both PM₁₀ and PM_{2.5}.
- i. The following federally-enforceable emissions limitations were established to represent the potential to emit of the emissions unit:
 - i. 0.0075 lb of PE/PM₁₀/PM_{2.5}/MMBtu of actual heat input and 21.09 tons of PE/PM₁₀/PM_{2.5} per rolling, 12-month period; and
 - ii. 0.0054 lb of VOC/MMBtu of actual heat input and 15.26 tons of VOC per rolling, 12-month period.
- j. The BAT requirements for NO_x, CO and SO₂ emissions under ORC 3704.03(T) have been determined to be compliance with the following emission limitations and requirements established pursuant to OAC rule 3745-31-10 through 3745-31-20:
 - i. 0.03 lb of NO_x/MMBtu of actual heat input based upon a 365-day rolling average;
 - ii. 0.04 lb of CO/MMBtu of actual heat input based upon a 365-day rolling average; and
 - iii. 64.26 tons of SO₂ per rolling, 12-month period



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The BAT requirements for PM10/PM2.5 and VOC under ORC 3704.03(T) has been determined to be the following federally enforceable emission limitations established pursuant to OAC rule 3745-31-05(D):

- i. 0.0075 lbs of PM10/PM2.5/MMBtu of actual heat input; and
 - ii. 0.0054 lbs of VOC/MMBtu of actual heat input.
- k. The permittee shall employ Best Available Control Technology (BACT) for this emissions unit. BACT has been determined to be the following:

Pollutant	BACT Requirements
NOx	Use of ultra-low NOx burners; Compliance with the 40 CFR, Part 60, Subpart Ja emission standard of 0.040 lb of NOx/MMBtu of actual heat input, based upon a 30-day rolling average; and Compliance with the NOx emission standard of 0.03 lb of NOx/MMBtu of actual heat input, based upon a 365-day rolling average
SO2	Compliance with 40 CFR, Part 60, Subpart Ja and the following H2S standards: Compliance with hydrogen sulfide standards for refinery fuel gas, including 60 ppmv, as a 3-hour rolling average; or stack SO2 not to exceed 8 ppmvd, as a 3-hour rolling average, corrected to zero percent excess air; and 60 ppmvd of H2S, as a 365-day rolling average; or stack SO2 not to exceed 8 ppmvd, corrected to zero percent excess air determined daily on a 365 successive calendar day rolling average basis
CO	0.04 lb of CO/MMBtu of actual heat input, based upon a 365-day rolling average, and based on good combustion practices
CO _{2e}	Use of low-carbon gaseous fuels (refinery fuel gas or natural gas); Heat recovery through use of a convection section and boiler feed water preheating; and Excess oxygen monitoring and annual burner tuning and heater inspection

- I. Pursuant to OAC rule 3745-110-01(B)(19), this emissions unit is an existing large boiler. The emissions limitations for NO_x in OAC rule 3745-110-03(C) are less stringent than the NO_x BACT emission limitation established pursuant to OAC rule 3745-31-10 through 3745-31-20.
- m. This permit maintains a facility requested NO_x emission limitation of 0.035 lb per MMBtu of actual heat input initially established in PTI No. P0109701. The NO_x emission limitation of 0.035 lb per MMBtu of actual heat input was reiterated as part of PTI No. P0116161 to reflect the final voluntary limits to meet a system-wide average NO_x performance level of 0.044 lb per MMBtu.
- n. The NO_x BACT emission limitation established pursuant to OAC rule 3745-31-10 through 3745-31-20 is more stringent than the NO_x emission limitation established pursuant to OAC rule 3745-31-05(D).
- o. This emissions unit is subject to the initial notification requirements of 40 CFR, Part 63, Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, or site-specific monitoring plan requirements of Subpart DDDDD or any other requirements in 40 CFR, Part 63, Subpart A).

c) Operational Restrictions

- (1) The permittee shall burn only refinery fuel gas or natural gas in this emissions unit. The sulfur content of the refinery fuel gas or natural gas burned in this emissions unit shall comply with the allowable SO₂ emission limitation specified in section b)(1).

[OAC rule 3745-77-07(A)(1) and PTI No. P0123731]

- (2) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0123731]

- (3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0123731]

- (4) Pursuant to 40 CFR 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P01122832]

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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) The permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit in order to demonstrate compliance with the emission limitations of:

- a. 230 mg/dscm, as a 3-hour rolling average (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H₂S in the refinery fuel gas [and if applicable, combined fuel firing as noted in b)(2)f. and b)(2)k. above]; or stack SO₂ not to exceed 20 ppmvd, corrected to zero percent excess air;
- b. 60 ppmvd of H₂S, as a 365-day rolling average in the refinery fuel gas [and if applicable, combined fuel firing as noted in b)(2)f. and b)(2)k. above]; or stack SO₂ not to exceed 8 ppmvd, as a 365-day rolling average corrected to zero percent excess air; and
- c. 60 ppmvd of H₂S, as a 3-hour rolling average in the refinery fuel gas; or stack SO₂ not to exceed 8 ppmvd, as a 3-hour rolling average corrected to zero percent excess air

The monitoring shall be conducted in accordance with 40 CFR 60.107a(a)(2), as follows:

- d. The span value for this instrument is 300 ppmv of H₂S.
- e. 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 H₂S in the fuel gas being burned.
- f. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. The permittee shall conduct a relative accuracy test audit (RATA) for the H₂S continuous emission monitoring equipment at a minimum frequency of annually. Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the RATAs.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (3) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA

detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the Ohio EPA, Northwest District Office upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (4) The permittee shall operate and maintain existing equipment to continuously monitor and record H₂S from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR, Part 60.13.

The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, parts per million of H₂S for each cycle time of the analyzer, with no resolution less than one data point per minute required, emissions of H₂S in units of the applicable standard (ppmv) as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (5) The permittee shall maintain a written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F.

A logbook dedicated to the monitoring systems 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 (CGAs) or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the H₂S CEMS at a minimum frequency of annually; and
- b. Conduct CGAs on the H₂S CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (6) In order to demonstrate compliance with the emission limitations of:
- a. 0.03 lb of NO_x/MMBtu of actual heat input based upon a rolling 365-day average;
 - b. 0.040 lb of NO_x/MMBtu of actual heat input, based upon a 30-day rolling average; and
 - c. 84.92 tons NO_x per rolling, 12-month period

The permittee shall operate and maintain an instrument for continuously monitoring and recording NO_x from this emissions unit in units of the applicable



standard. Such continuous monitoring and recording equipment shall comply with the requirements in 40 CFR, 60.13, as follows:

- i. The span value for this instrument is 50 parts per million of NO_x.
- ii. The performance evaluations for this NO_x monitor under 40 CFR 6.13 (c) shall use Performance Specification 2 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an annual RATA for the NO_x continuous emission monitoring equipment. Method 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (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 NO_x 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 Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (8) The permittee shall 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). 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 CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the NO_x CEMS annually; and
- b. Conduct CGAs on the NO_x CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (9) The permittee shall 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:

- a. emissions of NO_x in ppm for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of NO_x in all units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly CGAs;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required RATA(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 d)(9)g. and d)(9)h.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (10) The permittee shall install, operate and maintain equipment to continuously monitor and record oxygen (O₂) emitted from this emissions unit, in units of percent O₂. 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 O₂ monitoring system including, but not limited to:

- a. percent O₂ for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. results of quarterly CGAs;
- c. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- d. results of required RATA(s);
- e. hours of operation of the emissions unit, continuous O₂ monitoring system;

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- f. the date, time, and hours of operation of the emissions unit without the continuous O2 monitoring system;
- g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous O2 monitoring system; as well as,
- h. the reason (if known) and the corrective actions taken (if any) for each such event in d)(10)f. and d)(10)g.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (11) 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 O2 monitoring system has been certified to meet the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 3. The letter/document of certification shall be made available to the Director (the Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (12) The permittee shall maintain a written quality assurance/quality control plan for the continuous O2 monitoring system designed to ensure continuous valid and representative readings of O2 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 O2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the O2 CEMS annually; and
- b. Conduct CGAs on the O2 CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (13) The permittee shall record the following for this emissions unit:
 - a. the volume, in million standard cubic feet (MMscf), of refinery fuel gas and natural gas combusted per month;
 - b. the volume, in MMscf, of refinery fuel gas and natural gas combusted per rolling, 12-month period;

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- c. the CO₂e emissions from the combustion of refinery fuel gas and natural gas for each month of operation, in tons (short tons), quantified in accordance with the calculation methodologies outlined in 40 CFR Part 98 and using global warming potential (GWP) values from Table A-1 in 40 CFR Part 98 Subpart A as such table was published in 74 FR 56374, Oct. 30, 2009. (It should be noted that 40 CFR Part 98.33 quantifies GHG emissions in metric tons and emissions must be converted to short tons for purposes of this monitoring and recordkeeping requirement due to the establishment of BACT limitations involving short ton thresholds);
- d. the rolling 12-month CO₂e emissions from refinery fuel gas and natural gas combustion, in tons (short tons);
- e. heater design documents; and
- f. heater maintenance activities, as completed.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any H₂S CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (3) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any NO_x CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken.

The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (4) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any O₂ CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (5) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of:
- a. All rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.107a(a)(2) exceeds 162 ppmv. The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages.
 - b. All rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS exceeds 85 mg/dscm (0.037 grain/dscf)(the equivalent concentration is 60 ppmv).
 - c. All rolling, 365-day periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.107(a)(2) exceeds 60 ppmvd. The rolling, 365-day average shall be determined as the arithmetic average of 365 contiguous daily averages.
 - d. All rolling, 30-day periods during which the average emissions of NO_x as measured by the NO_x CEMS under 40 CFR 60.13 exceeds 0.040 lb of NO_x/MMBtu of actual heat input. The rolling, 30-day average shall be determined as the arithmetic average of 30 contiguous daily averages.
 - e. All rolling, 365-day periods during which the average emissions of NO_x as measured by the NO_x CEMS under 40 CFR 60.13 exceeds 0.03 lb of NO_x/MMBtu of actual heat input;
 - f. All rolling, 12-month periods during which the average emissions of NO_x as measured by the NO_x CEMS under 40 CFR 60.13 exceeds 84.92 tons.
 - g. All exceedances of the 342,041 tons per rolling, 12-month period emission limitation for CO_{2e} emissions.

If there are no exceedances of concentrations of H₂S in the refinery fuel gas (or combined fuel stream, if applicable) or exceedances of the NO_x emission limitations; during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times.



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

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (6) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):

- a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[OAC rule 3745-77-07(C)(1); 40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); and 40 CFR 63.9(b) through (h)]

f) Testing Requirements

- (1) 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 approximately 2.5 years after the effective date of the Title V renewal permit (Title V Permit P0133998) and within 6 months prior to the permit expiration.
- b. The emission testing shall be conducted to demonstrate compliance with the lb of CO/MMBtu of actual heat input and the lb of NOx/MMBtu of actual heat input emission limitation.

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

For NOx – Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A; and

For CO – 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.

- c. The test(s) shall be conducted at a Maximum Source Operating Rate (MSOR), unless otherwise specified or approved by the Ohio EPA, Northwest District Office. MSOR is defined as the condition that is most likely to challenge the emission control measures with regards to meeting the applicable emission standard(s). Although it 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 at the MSOR is justification for not accepting the test results as a demonstration of compliance.
- d. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northwest District Office. 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).

- e. 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.
- f. 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.

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

- (2) 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 from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- b. Emission Limitation:

230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv) of H₂S, as a 3-hour rolling average, in the refinery fuel gas, or combined fuel stream if applicable

Applicable Compliance Method:

Compliance with the NSPS Subpart Ja emission limitation shall be based upon the monitoring and record keeping requirements specified in section d)(2) through d)(5) for this emissions unit.



If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CR, Part 60, Appendix A, or other U.S. EPA-approved methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

c. Emission Limitation:

60 ppmvd of H₂S, as a 365-day rolling average, in the refinery fuel gas, or combined fuel stream if applicable

Applicable Compliance Method:

Compliance with the NSPS Subpart Ja emission limitation shall be based upon the monitoring and record keeping requirements specified in section d)(2) through d)(5) for this emissions unit.

If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CR, Part 60, Appendix A, or other U.S. EPA-approved methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

d. Emission Limitation:

85 mg/dscm, as a 3-hour rolling average (0.037 grain/dscf)(the equivalent concentration of 60 ppmv of H₂S); or stack SO₂ not to exceed 8 ppmvd, corrected to zero percent excess air

60 ppmvd of H₂S, as a 365-day rolling average; or stack SO₂ not to exceed 8 ppmvd, corrected to zero percent excess air

Applicable Compliance Method:

Compliance with the BACT requirement shall be based upon the monitoring and record keeping requirements specified in section d)(2) through d)(5) for this emissions unit.

If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CR, Part 60, Appendix A, or other U.S. EPA-approved methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

e. Emission Limitations:

0.0075 lb of PE/PM₁₀/PM_{2.5}/MMBtu of actual heat input and 21.09 tons of PE/PM₁₀/PM_{2.5} per rolling, 12-month period



Applicable Compliance Method:

The PE/PM10/PM2.5 emission limitation above was developed by dividing the PM10/PM2.5 emission factor from AP-42, Table 1.4-2 (dated 7/98) (7.6 lb/MMscf) by the average heating value for natural gas specified in AP-42, Table 1.4-2 (dated 7/98) (1,020 Btu/scf). Compliance is presumed by only using gaseous fuels as required in C.4.(c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Methods 201, 201A and 202 of 40 CFR, Part 51, Appendix M. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the lb/MMBtu emission limitation by the design heat input (646.3 MMBtu/hr), then multiplying by the maximum operating schedule of 8,760 hrs/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/MMBtu emission limitation, compliance with the rolling, 12-month emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

f. Emission Limitations:

0.0054 lb of VOC/MMBtu of actual heat input and 15.26 tons of VOC per rolling, 12-month period

Applicable Compliance Method:

The VOC emission limitation above was developed by dividing the VOC emission factor from AP-42, Table 1.4-2 (dated 7/98) (5.5 lb/MMscf) by the average heating value for natural gas specified in AP-42, Table 1.4-2 (dated 7/98) (1,020 Btu/scf). Compliance is presumed by only using gaseous fuels as required in C.4.(c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in 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 a 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.

The annual emission limitation was established by multiplying the lb/MMBtu emission limitation by the design heat input (646.3 MMBtu/hr), and then multiplying by the maximum operating schedule of 8,760 hrs/yr and dividing by 2,000 lbs/ton.



Therefore, provided compliance is shown with the lb/MMBtu emission limitation, compliance with the rolling, 12-month emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

g. Emission Limitations:

0.03 lb of NO_x/MMBtu of actual heat input based upon a 365-day rolling average, 0.040 lb of NO_x/MMBtu of actual heat input based upon a 30-day rolling average, and 84.92 tons NO_x per rolling, 12-month period

Applicable Compliance Method:

The permittee shall demonstrate compliance with the lb of NO_x/MMBtu of actual heat input emission limitation by conducting emission testing in accordance with the requirements of section f)(1).

Ongoing compliance with the NO_x emission limitations shall be based upon the monitoring and record keeping requirements specified in section d)(6) through d)(9). For this emissions unit and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR, Part 60.

The rolling, 12-month emission limitation was established by multiplying the 0.03 lb of NO_x/MMBtu of actual heat input emission limitation by the maximum heat input of 646.3 MMBtu/hr, then multiplying by the maximum annual hours of operation (8,760 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, compliance is shown using the data collected as required in the Monitoring and Record keeping Section of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

h. Emission Limitations:

0.04 lb of CO/MMBtu of actual heat input based upon a 365-day rolling average and 113.23 tons CO per rolling, 12-month period

Applicable Compliance Method:

The permittee shall demonstrate compliance with the lb of CO/MMBtu of actual heat input emission limitation by conducting emission testing in accordance with the requirements of section f)(1).

The rolling, 12-month emission limitation was established by multiplying the 0.04 lb of CO/MMBtu of actual heat input emission limitation by the maximum heat input of 646.3 MMBtu/hr, then multiplying by the maximum annual hours of operation (8,760 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, provided



compliance is shown with the lb/MMBtu of actual heat input emission limitation, compliance with the rolling, 12-month period emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

i. Emission Limitation:

64.26 tons of SO₂ per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be based upon the fuel flow and the H₂S monitoring and record keeping requirements specified in sections d)(2) through d)(5) plus a 42 ppmv allowance for non-H₂S sulfur based on EPA published refinery test data, or more recent test value if future testing is performed.

If required, the permittee shall determine compliance with the SO₂ emission limitation by using Method 6 of 40 CFR, Part 60, Appendix A, or other U.S. EPA-approved methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

j. Emission Limitation:

CO₂e emissions shall not exceed 342,041 tons per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in section d)(13) for this emissions unit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

g) **Miscellaneous Requirements**

- (1) In a previously issued PTI No. P0107906, the permittee requested federally enforceable limitations for NO_x of 0.10 lb/MMBtu of actual heat input, 269.55 tons of NO_x/yr, 24.62 lbs CO/hr, and 107.82 tons of CO/yr. The federally enforceable limitations were established in accordance with OAC rule 3745-31-05(A)(3). The permittee originally requested federally enforceable NO_x and CO emission limitations for purposes of avoiding Prevention of Significant Deterioration (PSD) permitting by emissions netting, as established in PTI No. 03-13794, which was superseded by PTI No. P0107906. PTI No. P0109701 established a new NO_x emission limitation of 0.035 lb/MMBtu of actual heat input.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

5. B006, UltraFormer Process Preheater, Reheater 1, Reheater 2, Reheater 3 (PR 175156-175159)

Operations, Property and/or Equipment Description:

Refinery Fuel Gas or natural gas fired 822 MMBtu/hr U/F PRE, 1, 2, & 3 Heater (PR 175156-175159), with selective catalytic reduction (SCR)

- 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 3745-17-10(B)(1)	0.020 lb of particulate emissions (PE)/MMBtu of actual heat input
b.	OAC rule 3745-18-08(C)(1)	0.15 lb of sulfur dioxide (SO ₂)/MMBtu of actual heat input [See b)(2)d.]
c.	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
d.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480 - 63.7575] [In accordance with 63.7575, this emissions unit is in the 'unit designed to fire Gas 1 fuels' subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/control requirements specified in this section.]	See c)(2) through c)(4) and e)(9) 63.7500(a) Table 3 requirements
e.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
f.	40 CFR, Part 60, Subpart J & Ja [40 CFR 60.100 – 60.109 and 40 CFR 60.100a – 60.109a]	See b)(2)a. through b)(2)c.
g.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
h.	OAC rule 3745-31-05(D) (PTI No. P0122660, modification issued 6/8/17)	0.008 lb of NOx/MMBtu of actual heat input based upon a 365-day rolling block average See b)(2)e.

(2) Additional Terms and Conditions

- a. PTI No. P0118574 addressed a project which allowed for the replacement of radiant furnace modules, tubes, and headers. The replacement activities result in “reconstruction” and as such the process heaters become affected facilities (fuel gas combustion devices) applicable to 40 CFR, Part 60 – Subpart Ja.

40 CFR, Part 60 - Subpart J is an applicable rule for this emissions unit. The permittee was required to comply with this New Source Performance Standard for fuel combustion by 1/18/08.

- b. The requirements of 40 CFR, Part 60 - Subpart Ja are equivalent to and/or more stringent than the requirements of 40 CFR, Part 60 - Subpart J. Therefore, the requirements of 40 CFR, Part 60, Subpart J were not listed in permit modification P0118574. This emissions unit is an affected fuel gas combustion device, pursuant to the definition in 40 CFR 60.101a and is therefore subject to the emissions limitations in 40 CFR 60.102a. Pursuant to 40 CFR 60.102a(g)(1)(ii), the permittee has elected to comply with the SO2 emissions limitations in this rule by monitoring the refinery fuel gas quality with a hydrogen sulfide (H2S) continuous emissions monitor.

Therefore, the permittee shall not burn in this emissions unit any refinery fuel gas that contains H2S in excess of 162 parts per million by volume (ppmv) determined hourly on a 3-hour rolling average basis and H2S in excess of 60 ppmv determined daily on a 365-successive calendar day rolling average basis. This H2S standard in 40 CFR 60.102a(g)(1)(ii) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101a.

- c. Since this emissions unit has a rated capacity of greater than 40 MMBtu/hr, it is subject to the NOx emission limitation in 40 CFR 60.102a(g)(2). The 0.040 lb of NOx/MMBtu HHV basis is determined daily on a 30-day rolling average basis. It is also subject to the limitation of 0.008 lb of NOx/MMBtu of actual heat input based on a 365-day rolling block average established pursuant to OAC rule 3745-31-05(D).
- d. The SO2 emissions limitation established in OAC rule 3745-18-08(C)(1) is less stringent than the hydrogen sulfide (H2S) concentration 162 ppmv established by Subpart Ja, 40 CFR 60.102a(g)(1)(ii). Therefore, compliance with the SO2 limit is ensured by compliance with the H2S limit.

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- e. This emissions unit is one of the four emissions units (B002, B003, B006 and B008) chosen by the company for installation of NOx control equipment. Selective catalytic reduction (SCR) was installed on B002, B003 and B006 on December 17, 2011.

The NOx emissions limitation is established to reflect the final voluntary limits to meet a system-wide average NOx performance level of 0.044 lb/MMBtu.

- f. The purpose of PTI P0118574 was to address the emissions unit's reconstruction under applicable rules promulgated by the administrator under Section 112 of the Clean Air Act pursuant to OAC rule 3745-31-01(SSS)(1)(a)(iv) [See g)(1) below].

c) **Operational Restrictions**

- (1) The permittee shall burn only refinery fuel gas or natural gas in this emissions unit. The sulfur content of the refinery fuel gas or natural gas burned in this emissions unit shall comply with the allowable SO₂ emission limitation specified in section b)(1)f.

[OAC rule 3745-77-07(A)(1) and PTI No. P0122660]

- (2) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0122660]

- (3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0122660]

- (4) Pursuant to 40 CFR 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0122660]

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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (2) In order to demonstrate compliance with the emission limitation of 162 ppmv of H₂S in the refinery fuel gas [and if applicable, combined fuel firing as noted in b)(2)b. above], the permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit. The monitoring shall be conducted in accordance with 40 CFR 60.107a, as follows:
- a. The span value for this instrument is 300 ppmv of H₂S.
 - b. 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 H₂S in the fuel gas being burned.
 - c. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. The permittee shall conduct a relative accuracy test audit (RATA) for the H₂S continuous emission monitoring equipment per d)(5) below using Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the RATAs.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0122660]

- (3) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the Ohio EPA, Northwest District Office upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0122660]

- (4) The permittee shall operate and maintain existing equipment to continuously monitor and record H₂S from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR, Part 60.13.

The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, parts per million (ppm) of H₂S for each cycle time of the analyzer, with no resolution less than one data point per minute required, emissions of H₂S in units of the applicable standard (grain/dscf and ppmv) as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0122660]

- (5) The permittee shall maintain a written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F.

A logbook dedicated to the monitoring systems must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the H2S CEMS at a minimum frequency of once every three years; and
- b. Conduct CGAs on the H2S CEMS during each quarter when a RATA test audit is not conducted.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0122660]

- (6) The permittee shall conduct a root cause analysis and a corrective action analysis for a fuel gas combustion device, each exceedance of an applicable short-term emissions limit in 40 CFR 60.102a(g)(1) if the SO₂ 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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0122660]

- (7) 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 d)(6).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0122660]

- (8) The permittee shall implement the corrective action(s) identified in the corrective action analysis conducted pursuant to 40 CFR 60.103a(d) in accordance with the applicable requirements in 40 CFR 60.103a paragraphs (e)(1) through (3).

- a. 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 40 CFR 60.108a(c)(6)(ix);
- b. 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; and
- c. 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 40 CFR 60.108a(c)(6)(x).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0122660]

- (9) In order to demonstrate compliance with the emission limitations of 0.008 lb of NO_x/MMBtu of actual heat input based upon a rolling 365-day average, the permittee shall operate and maintain an instrument for continuously monitoring and recording NO_x from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR, 60.13, as follows:

- a. The span value for this instrument is 20 ppm of NO_x.
- b. The performance evaluations for this NO_x monitor under 40 CFR 60.13 (c) shall use Performance Specification 2 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an annual RATA for the NO_x continuous emission monitoring equipment. Method 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (10) 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 NO_x 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 Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (11) The permittee shall 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). 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 (CGAs) or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the NO_x CEMS annually; and
- b. Conduct CGAs on the NO_x CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (12) 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 data obtained by the continuous NOx monitoring system including, but not limited to:

- a. emissions of NOx in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of NOx in all units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly CGAs;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required RATA(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous NOx 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 NOx 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 NOx monitoring system; as well as,
- i. the reason (if known) and the corrective actions taken (if any) for each such event in d)(12)g. and d)(12)h.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (13) The permittee shall install, operate and maintain equipment to continuously monitor and record oxygen (O2) emitted from these emissions units, in units of percent O2. 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 O2 monitoring system including, but not limited to:

- a. percent O2 for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. results of quarterly CGAs;
- c. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

- d. results of required RATA(s);
- e. hours of operation of the emissions unit, continuous O₂ monitoring system;
- f. the date, time, and hours of operation of the emissions unit without the continuous O₂ monitoring system;
- g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous O₂ monitoring system; as well as,
- h. the reason (if known) and the corrective actions taken (if any) for each such event in d)(13)f. and d)(13)g.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (14) 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 O₂ monitoring system has been certified to meet the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 3. The letter/document of certification shall be made available to the Director (the Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (15) The permittee shall maintain a written quality assurance/quality control plan for the continuous O₂ monitoring system designed to ensure continuous valid and representative readings of O₂ 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 O₂ monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the O₂ CEMS annually; and
- b. Conduct CGAs on the O₂ CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (16) Pursuant to the approval letter from U.S. EPA dated July 28, 2010, the permittee shall install and operate monitoring equipment in the SCR bypass stacks to continuously monitor the temperature and draft pressure in the SCR bypass stacks, subject to the following condition:

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- a. The permittee must measure, report and comply with the temperature and pressure readings obtained in the bypass stacks during normal operation as measured when stack testing the main stack to demonstrate initial compliance with applicable limits (i.e. – ambient temperature and a slight negative pressure in the bypass stacks when the SCR induced draft fan is operating). The temperature and pressure readings are hereby incorporated into this permit as a means to assure compliance.

Note: This emissions unit has two bypass stacks. Emissions from the first bypass stack are from the preheater and reheater one. Emissions from the second bypass stack are from reheater 2 and reheater 3.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas or natural gas was burned in these emissions units. Each report shall be submitted within 30 days after the deviation occurs.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any H₂S CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0122660]

- (3) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of all H₂S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis and H₂S in excess of 60 ppmv determined daily on a 365-successive calendar day rolling average basis.

The notification shall include a copy of the record and shall be sent to the Director (the Ohio EPA, Northwest District Office) by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0122660]

- (4) If there are no concentrations of H₂S in the refinery fuel gas (or combined fuel stream, if applicable) greater than 162 ppmv during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (5) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any NOx CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (6) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any O2 CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (7) The permittee shall include in its quarterly excess emission reports each period of time when the SCR bypass dampers are not 100 percent closed, the reason why they were not 100 percent closed and the actions taken to prevent such occurrence from happening again.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (8) The permittee shall submit an excess emissions report for all periods of excess emissions according to the requirements of 40 CFR 60.7(c) except that the report shall contain the information specified in paragraphs (e)(8)(a) through (e)(8)(g) below.

- a. The date that the exceedance occurred;
- b. An explanation of the exceedance;
- c. Whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system; and
- d. A description of the action taken, if any.
- e. The information described in 40 CFR 60.108a(c)(6)(i) through (xi) for all discharges listed in 40 CFR 60.108a(c)(6).
- f. 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.

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

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0122660]

- (9) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):

- a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[OAC rule 3745-77-07(C)(1); 40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); and 40 CFR 63.9(b) through (h)]

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:

0.020 lb of PE/MMBtu of actual heat input

Applicable Compliance Method:

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet (MMscf)/hr by the appropriate particulate emission factor, in lb(s)/MMscf, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the methods and procedures specified in Methods 1 through 4, and 5 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(9).

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- b. Emission Limitation:

0.15 lb of SO₂/MMBtu of actual heat input



Applicable Compliance Method:

This limit is less stringent than firing refinery fuel gas (or combined fuel stream, if applicable) with a maximum H₂S content of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv) of H₂S in this emissions unit. As long as the permittee maintains compliance with the H₂S emission limitation in section b)(1), compliance with the SO₂ limitation will be assumed. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the methods and procedures specified in 40 CFR, Part 60, Appendix A, Methods 1 through 4, and 6 and the requirements specified in OAC rule 3745-18-04(E)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

c. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

d. Emission Limitation:

Refinery fuel gas that contains H₂S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis and H₂S in excess of 60 ppmv determined daily on a 365-successive calendar day rolling average basis in the refinery fuel gas, or combined fuel stream if applicable.

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(2) through d)(8) for this emissions unit. If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0122660]

e. Emission Limitation:

0.008 lb of NO_x/MMBtu of actual heat input based upon a 365-day block average



Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(9) through d)(16) for this emissions unit. If required, the permittee shall determine compliance with the NOx emission limitation by using Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

g) Miscellaneous Requirements

(1) PTI No. P0118574 addresses a project which will allow for the replacement of radiant furnace modules, tubes, and headers. The furnace burners will be replaced decreasing the maximum heat input capacity of the burners from 843.4 MMBtu/hour to 822 MMBtu/hour.

- a. The permittee has demonstrated that no major modification will occur under Prevention of Significant Deterioration (PSD) regulations as the “net emissions increase” was not triggered as a result of this project. This was achieved through a comparison of baseline actual emissions to potential emissions.
- b. The permittee has demonstrated that the allowable emissions will not increase as a result of the reconstruction project. As such, the emission limitations will not be modified with this PTI No. P0118574. Additionally, Best Available Technology is not applicable.

[PTI No. P0118574]

6. B007, Reformer Regenerator Process Heater (PR 175162)

Operations, Property and/or Equipment Description:

Refinery Fuel Gas or natural gas fired Reformer Regenerator Heater, 85.3 MMBtu/hr maximum heat input (PR 175162)

- 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 operations(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. 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 3745-17-10(B)(1)	0.020 lb of particulate emissions (PE)/MMBtu of actual heat input
b.	OAC rule 3745-18-08(C)(1)	0.15 lb of sulfur dioxide (SO ₂)/MMBtu of actual heat input [See b)(2)c.]
c.	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
d.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480 - 63.7575] [In accordance with 63.7575, these emissions units are in the 'unit designed to fire Gas 1 fuels' subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/control requirements specified in this section.]	See c)(2) through c)(4) and e)(5) 63.7500(a) Table 3 requirements
e.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
f.	40 CFR, Part 60, Subpart J [40 CFR 60.100 – 60.109]	See b)(2)a. and b)(2)b.
g.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
h.	OAC rule 3745-31-05(D) (PTI No. P0116161, modification issued 5/20/14)	0.116 lb of NOx/MMBtu of actual heat input based upon a 3-hour block average See b)(2)d.

(2) Additional Terms and Conditions

- a. 40 CFR, Part 60 - Subpart J is an applicable rule for these emissions units. The permittee was required to comply with this New Source Performance Standard (NSPS) for fuel combustion by 1/18/08.

The permittee shall not burn any refinery fuel gas in these emissions units that contains hydrogen sulfide (H₂S) in excess of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume (ppmv) of H₂S, as a 3-hour rolling average. This H₂S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d).

- b. The SO₂ emissions limitation established in OAC rule 3745-18-08(C)(1) is less stringent than the hydrogen sulfide (H₂S) concentration limit of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv, as a 3-hour rolling average established by Subpart J, 40 CFR 60.104(a)(1). Therefore, compliance with the SO₂ limit is ensured by compliance with the H₂S limit.
- c. The NO_x emissions limitations are established to reflect the final voluntary limits to meet a system-wide average NO_x performance level of 0.044 lb/MMBtu.

c) Operational Restrictions

- (1) The permittee shall burn only refinery fuel gas or natural gas in this emissions unit. The sulfur content of the refinery fuel gas or natural gas burned in this emissions unit shall comply with the allowable SO₂ emission limitation specified in section b)(1)b.

[OAC rule 3745-77-07(A)(1) and PTI No. P0116161]

- (2) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0116161]

- (3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or

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process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0116161]

- (4) Pursuant to 40 CFR 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0116161]

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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]

- (2) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv), as a 3-hour rolling average of H₂S in the refinery fuel gas (and if applicable, combined fuel firing as noted in b)(2)c. above), the permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit. The monitoring shall be conducted in accordance with 40 CFR 60.105(a)(4), as follows:

- a. The span value for this instrument is 425 mg/dscm (the equivalent concentration is 300 ppmv) of H₂S.
- b. 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 H₂S in the fuel gas being burned.
- c. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. The permittee shall conduct a relative accuracy test audit (RATA) for the H₂S continuous emission monitoring equipment at a minimum frequency of once every three years. Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the RATAs.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

- (3) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the Ohio EPA, Northwest District Office upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

- (4) The permittee shall operate and maintain existing equipment to continuously monitor and record H₂S from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, parts per million of H₂S for each cycle time of the analyzer, with no resolution less than one data point per minute required, emissions of H₂S in units of the applicable standard (grain/dscf and ppmv) as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

- (5) The permittee shall maintain a written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F.

A logbook dedicated to the monitoring systems 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 (CGAs) or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the H₂S CEMS at a minimum frequency of once every three years; and
- b. Conduct CGAs on the H₂S CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas or natural gas was burned in these emissions units. Each report shall be submitted within 30 days after the deviation occurs.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any H₂S CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

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The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

- (3) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of all rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.105(a)(4) exceeds 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv). The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages.

The notification shall include a copy of the record and shall be sent to the Director (the Ohio EPA, Northwest District Office) by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

- (4) If there are no concentrations of H₂S in the refinery fuel gas (or combined fuel stream, if applicable) greater than 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv), as a 3-hour rolling average during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

- (5) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):
- a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[OAC rule 3745-77-07(C)(1); 40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); and 40 CFR 63.9(b) through (h)]

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:
0.020 lb of PE/MMBtu of actual heat input



Applicable Compliance Method:

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet (MMscf)/hr, by the appropriate particulate emission factor, in lb(s)/MMscf, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the methods and procedures specified in Methods 1 through 4, and 5 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(9).

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]

b. Emission Limitation:

0.15 lb of SO₂/MMBtu of actual heat input

Applicable Compliance Method:

This limit is less stringent than firing refinery fuel gas (or combined fuel stream, if applicable) with a maximum H₂S content of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv) of H₂S in this emissions unit. As long as the permittee maintains compliance with the H₂S operational restriction in section 1.b)(2)c., compliance with the SO₂ limitation will be assumed. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the methods and procedures specified in 40 CFR, Part 60, Appendix A, Methods 1 through 4, and 6 and the requirements specified in OAC rule 3745-18-04(E)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]

c. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]

d. Emission Limitation:

230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv), as a 3-hour rolling average of H₂S in the refinery fuel gas, or combined fuel stream if applicable



Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(2) through d)(5) for this emissions unit. If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

e. Emission Limitation:

0.116 lb of NO_x/MMBtu of actual heat input based upon a 3-hour block average

Applicable Compliance Method:

Compliance with the lb of NO_x/MMBtu emissions limitations have been demonstrated by past stack testing.

If required, the permittee shall determine compliance with the NO_x emissions limitations by using Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]

g) Miscellaneous Requirements

(1) None.

7. **B008, HDS Process Heater (PR 175169)**

Operations, Property and/or Equipment Description:

Refinery Fuel Gas or Natural Gas Fired HDS Heater, with low nitrogen oxide burners, 156.4 MMBtu/hr maximum heat input (PR 175169)

- 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 operations(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. 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 3745-17-10(B)(1)	0.020 lb of particulate emissions (PE)/MMbtu of actual heat input
b.	OAC rule 3745-18-08(C)(1)	0.15 lb of sulfur dioxide (SO ₂)/MMBtu of actual heat input [See b)(2)d.]
c.	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
d.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480 - 63.7575] [In accordance with 63.7575, this emissions unit is in the 'unit designed to fire Gas 1 fuels' subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	See c)(2) through c)(4) and e)(7) 63.7500(a) Table 3 requirements
e.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
f.	40 CFR, Part 60, Subpart J [40 CFR 60.100 – 60.109]	See b)(2)a. and b)(2)b.
g.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
h.	OAC rule 3745-31-05(D) (PTI No. P0122660, modification issued 6/8/17)	0.050 lb of nitrogen oxides (NOx)/MMBtu of actual heat input, based upon a 365-day rolling block average See b)(2)e.

(2) Additional Terms and Conditions

- a. 40 CFR, Part 60 - Subpart J is an applicable rule for this emissions unit. The permittee was required to comply with this New Source Performance Standard (NSPS) for fuel combustion by 1/18/08.
- b. The permittee shall not burn any refinery fuel gas in this emissions unit that contains hydrogen sulfide (H2S) in excess of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume (ppmv), as a 3-hour rolling average. This H2S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d).
- c. PTI No. P0106732, issued 8/26/10 involved installation of new continuous emission monitors (CEMS) for NOx and oxygen (O2) for this emissions unit.

The CEMS were installed on 5/3/10 and certification testing was completed on 5/18/10, and a certification letter was issued to the permittee on 7/1/10 stating that the CEMS certification date is 5/18/10.
- d. The SO2 emissions limitation established in OAC rule 3745-18-08(C)(1) is less stringent than the H2S concentration limit of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv) established by Subpart J, 40 CFR 60.104(a)(1). Therefore, compliance with the SO2 limit is ensured by compliance with the H2S limit.
- e. The NOx emissions limitation is established to reflect the final voluntary limits to meet a system-wide average NOx performance level of 0.044 lb/MMBtu.

c) Operational Restrictions

- (1) The permittee shall burn only refinery fuel gas or natural gas in this emissions unit. The sulfur content of the refinery fuel gas or natural gas burned in this emissions unit shall comply with the allowable SO2 emission limitation specified in section b)(1).

[OAC rule 3745-77-07(A)(1) and PTI No. P0122660]

- (2) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0122660]

- (3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0122660]

- (4) Pursuant to 40 CFR 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0122660]

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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (2) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv), as a 3-hour rolling average of H₂S in the refinery fuel gas (and if applicable, combined fuel firing as noted in b)(2)c. above), the permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit. The monitoring shall be conducted in accordance with 40 CFR 60.105(a)(4), as follows:

- a. The span value for this instrument is 425 mg/dscm (the equivalent concentration is 300 ppmv) of H₂S.
- b. 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 H₂S in the fuel gas being burned.
- c. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. The permittee shall conduct a relative accuracy test audit (RATA) for the H₂S continuous emission monitoring equipment at a minimum frequency of once every three years. Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the RATAs.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

- (3) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the Ohio EPA, Northwest District Office upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

- (4) The permittee shall operate and maintain existing equipment to continuously monitor and record hydrogen sulfide from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR, Part 60.13.

The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, parts per million of H₂S for each cycle time of the analyzer, with no resolution less than one data point per minute required, emissions of H₂S in units of the applicable standard (grain/dscf and ppmv) as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

- (5) The permittee shall maintain a written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F.

A logbook dedicated to the monitoring systems 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 (CGAs) or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the H₂S CEMS at a minimum frequency of once every three years; and
- b. Conduct CGAs on the H₂S CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

- (6) In order to demonstrate compliance with the emission limitations of 0.050 lb of NO_x/MMBtu of actual heat input based upon a rolling 365-day average, the permittee shall operate and maintain an instrument for continuously monitoring and recording NO_x from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR, 60.13, as follows:

- a. The span value for this instrument is 50 parts per million of NO_x.

- b. The performance evaluations for this NO_x monitor under 40 CFR 60.13 (c) shall use Performance Specification 2 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an RATA for the NO_x continuous emission monitoring equipment. Method 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (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 NO_x 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 Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (8) The permittee shall 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). 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 CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the NO_x CEMS annually; and
- b. Conduct CGAs on the NO_x CEMS during each quarter when RATA is not conducted.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (9) The permittee shall 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:

- a. emissions of NO_x in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;

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- b. emissions of NO_x in all units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly CGAs;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required RATA(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 d)(9)g. and d)(9)h.

[OAC rule 3745-77-07(C)(1) and PTI P0122660]

- (10) The permittee shall operate and maintain equipment to continuously monitor and record oxygen (O₂) emitted from this emissions unit, in units of percent O₂. 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 O₂ monitoring system including, but not limited to:

- a. percent O₂ for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. results of quarterly CGAs;
- c. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- d. results of required RATA(s);
- e. hours of operation of the emissions unit, continuous O₂ monitoring system;
- f. the date, time, and hours of operation of the emissions unit without the continuous O₂ monitoring system;
- g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous O₂ monitoring system; as well as,

- h. the reason (if known) and the corrective actions taken (if any) for each such event in d)(10)f. and d)(10)g.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (11) 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 O₂ monitoring system has been certified to meet the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 3. The letter/document of certification shall be made available to the Director (the Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (12) The permittee shall maintain a written quality assurance/quality control plan for the continuous O₂ monitoring system designed to ensure continuous valid and representative readings of O₂ 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 O₂ monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the O₂ CEMS annually; and
- b. Conduct cylinder gas audits on the O₂ CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any H₂S CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

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The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

- (3) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of all rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.105(a)(4) exceeds 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv). The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages. The notification shall include a copy of the record and shall be sent to the Director (the Ohio EPA, Northwest District Office) by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

- (4) If there are no concentrations of H₂S in the refinery fuel gas (or combined fuel stream, if applicable) greater than 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv) , as a 3-hour rolling average during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

- (5) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any NO_x CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (6) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any O₂ CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]



Effective Date: To be entered upon final issuance

(7) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):

a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[OAC rule 3745-77-07(C)(1); 40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); and 40 CFR 63.9(b) through (h)]

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:

0.020 lb of PE/MMBtu of actual heat input

Applicable Compliance Method:

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet (MMscf)/hr, by the appropriate particulate emission factor, in lb(s)/MMscf, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the methods and procedures specified in 40 CFR, Part 60, Appendix A, Methods 1 through 4, and 5 and the requirements specified in OAC rule 3745-17-03(B)(9).

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

b. Emission Limitation:

0.15 lb of SO₂/MMBtu of actual heat input

Applicable Compliance Method:

This limit is less stringent than firing refinery fuel gas (or combined fuel stream, if applicable) with a maximum H₂S content of 230 mg/dscm (0.10 grain/dscf) (the equivalent concentration is 162 ppmv) of H₂S in this emissions unit. As long as the permittee maintains compliance with the H₂S emission limitation in section b)(1), compliance with the SO₂ limitation will be assumed. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the methods and procedures specified in 40 CFR, Part 60, Appendix A, Methods 1 through 4, and 6 and the requirements specified in OAC rule 3745-18-04(E)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]



c. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in 40 CFR, Part 60, Appendix A, Method 9 and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

d. Emission Limitation:

230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv) of H₂S, as a 3-hour rolling average in the refinery fuel gas, or combined fuel stream if applicable

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(2) through d)(5) for this emissions unit. If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

e. Emission Limitation:

0.050 lb of NO_x /MMBtu of actual heat input, based upon a 365-day rolling block average

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(6) through d)(12) for this emissions unit. If required, the permittee shall determine compliance with the NO_x emission limitation by using Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]

g) Miscellaneous Requirements

(1) None.

8. Emissions Unit Group - Process Heaters Group: B022, B024

EU ID	Operations, Property and/or Equipment Description
B022	Refinery Fuel Gas or Natural Gas Fired Hot Belt Oil Heater - Aromatics, 201.1 MMBtu/hr maximum heat input (PR 175102)
B024	Refinery Fuel Gas or Natural Gas Fired Isomerization Heater, 46.5 MMBtu/hr maximum heat input (PR 175110)

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 operations(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. 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 60, Subpart J [40 CFR 60.100 – 60.109]	See b)(2)a., b)(2)b., d)(1) through d)(4), e)(3) and e)(4)
b.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
c.	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-31-05(A)(3) (PTI No. P0116161, modification issued 5/20/14)	0.014 lb of PE/MMBtu of actual heat input 0.024 lb of sulfur dioxide (SO ₂)/MMBtu of actual heat input, as a monthly average 0.082 lb of carbon monoxide (CO)/MMBtu of actual heat input [See b)(2)c.] See b)(2)d.
f.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480 - 63.7575] [In accordance with 63.7575, these emissions units are in the 'unit	See c)(2) through c)(4) and e)(5) 63.7500(a) Table 3 requirements

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	designed to fire Gas 1 fuels' subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/control requirements specified in this section.]	
g.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
h.	OAC rule 3745-31-05(D) (PTI No. P0116161, modification issued 5/20/14)	B022 – 0.084 lb of NOx/MMBtu of actual heat input based upon a 3-hour block average B024 - 0.109 lb of NOx/MMBtu of actual heat input based upon a 3-hour block average See b)(2)e.
i.	OAC rule 3745-18-06(E)	See b)(2)f.

(2) Additional Terms and Conditions

- a. 40 CFR, Part 60 - Subpart J is an applicable rule for these emissions units. The permittee was required to comply with this New Source Performance Standard (NSPS) for fuel combustion by 1/18/08.
- b. The permittee shall not burn any refinery fuel gas in this emissions unit that contains hydrogen sulfide (H₂S) in excess of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume (ppmv)), as a 3-hour rolling average. This H₂S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d).
- c. The CO emission limitation is based on a revised emission factor published in AP-42, Fifth Edition, Section 1.4 (July 1998).
- d. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR 60.104(a)(1).
- e. The NO_x emissions limitations are established to reflect the final voluntary limits to meet a system-wide average NO_x performance level of 0.044 lb/MMBtu.
- f. This emissions unit is fuel burning equipment which combusts refinery fuel gas or natural gas. When firing natural gas, the emissions unit is exempt from OAC rule

3745-18-06 per OAC rule 3745-18-06(A). When firing refinery fuel gas, OAC rule 3745-18-06(E) does not establish an emission limitation because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-18-01(B)(14).

c) Operational Restrictions

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

[OAC rule 3745-77-07(A)(1) and PTI No. P0116161]

- (2) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0116161]

- (3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0116161]

- (4) Pursuant to 40 CFR 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0116161]

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv), as a 3-hour rolling average of H₂S in the refinery fuel gas (and if applicable, combined fuel firing as noted in b)(2)a. above), the permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit. The monitoring shall be conducted in accordance with 40 CFR 60.105(a)(4), as follows:

- a. The span value for this instrument is 425 mg/dscm (the equivalent concentration is 300 ppmv) of H₂S.
- b. 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 H₂S in the fuel gas being burned.

- c. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an annual relative accuracy test audit (RATA) for the H₂S continuous emission monitoring equipment. Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

- (2) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the Ohio EPA, Northwest District Office upon request.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

- (3) The permittee shall operate and maintain existing equipment to continuously monitor and record hydrogen sulfide from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13. The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, parts per million of H₂S for each cycle time of the analyzer, with no resolution less than one data point per minute required, emissions of H₂S in units of the applicable standard (grain/dscf and ppmv) as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

- (4) The permittee shall maintain a written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F. A logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

- (5) 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.

[OAC rule 3745-77-07(A)(1) and PTI No. P0116161]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any H₂S CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken.

The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and CEMS malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

- (3) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of all rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.105(a)(4) exceeds 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv). The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages. The notification shall include a copy of the record and shall be sent to the Director (the Ohio EPA, Northwest District Office) by January 30, April 30, July 30 and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

- (4) If there are no concentrations of H₂S in the refinery fuel gas (or combined fuel stream, if applicable) greater than 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv), as a 3-hour rolling average during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times. These quarterly reports shall be submitted by January 30, April 30, July 30 and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

- (5) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):
- a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[OAC rule 3745-77-07(C)(1); 40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); and 40 CFR 63.9(b) through (h)]

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:

230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv), as a 3-hour rolling average of H₂S in the refinery fuel gas, or combined fuel stream if applicable

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(1) and d)(3) for this emissions unit. If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

b. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]

c. Emission Limitation:

0.014 lb of PE/MMBtu of actual heat input

Applicable Compliance Method:

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet (MMscf)/hr, by the appropriate particulate emission factor, in lb(s)/MMscf, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 5 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]



d. Emission Limitation:

0.024 lb of SO₂/MMBtu of actual heat input, as a monthly average

Applicable Compliance Method:

This limit is less stringent than firing refinery fuel gas (or combined fuel stream, if applicable) with a maximum H₂S content of 230 mg/dscm (0.10 grain/dscf) (the equivalent concentration is 162 ppmv) of H₂S in this emissions unit. As long as the permittee maintains compliance with the H₂S additional term in section b)(2)b., compliance with the SO₂ limitation will be assumed.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 6 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]

e. Emission Limitation:

0.082 lb of CO/MMBtu of actual heat input

Applicable Compliance Method:

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet (MMscf)/hr, by the appropriate CO emission factor, in lb(s)/MMscf, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 10 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]

f. Emission Limitations:

B022 – 0.084 lb of NO_x/MMBtu of actual heat input based upon a 3-hour block average

B024 – 0.109 lb of NO_x/MMBtu of actual heat input based upon a 3-hour block average

Applicable Compliance Method:

Compliance with the lb of NO_x/MMBtu emission limitations has been demonstrated by past stack testing.



Draft Title V Permit
Lima Refining Company
Permit Number: P0133998
Facility ID: 0302020012

Effective Date: To be entered upon final issuance

If required, the permittee shall determine compliance with the NO_x emission limitations by using Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]

g) Miscellaneous Requirements

(1) None.

9. B026, CE Boiler, Steam Generating Unit (PR 175007)

Operations, Property and/or Equipment Description:

Refinery Fuel Gas or Natural Gas Fired CE Power Boiler, 329.7 MMBtu/hr maximum heat input (PR 175007)

- 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 operations(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. 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 (PE) from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
b.	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
c.	40 CFR, Part 60, Subpart Db [40 CFR 60.40b – 60.49b]	See b)(2)a.
d.	OAC rule 3745-31-05(A)(3) (PTI No. P0122660, modification issued 6/8/17)	2.86 lbs of PE/hr [See b)(2)b.] 31.65 lbs of carbon monoxide (CO)/hr [See b)(2)b.] 2.07 lbs of volatile organic compounds (VOC)/hr [See b)(2)b. and b)(2)c.] 10.12 lbs of sulfur dioxide (SO ₂)/hr 0.13 lb nitrogen oxides (NO _x)/MMBtu, based upon a 30-day rolling average [See b)(2)g.] See b)(2)f.
e.	40 CFR, Part 60, Subpart J [40 CFR 60.100 – 60.109]	See b)(2)d., b)(2)e., d)(2) through d)(5), e)(3) and e)(4)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
g.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480 - 63.7575] [In accordance with 63.7575, this emissions unit is in the 'unit designed to fire Gas 1 fuels' subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	See c)(2) through c)(4) and e)(6) 63.7500(a) Table 3 requirements
h.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
i.	OAC rule 3745-31-05(D) (PTI No. P0122660, modification issued 6/8/17)	0.100 lb of NOx/MMBtu of actual heat input, based upon a 365-day rolling block average See b)(2)g.
j.	OAC rule 3745-18-06(E)	See b)(2)h.
k.	40 CFR Parts 97 and 75	See b)(2)i. and Facility-Wide Term and Condition B.14

(2) Additional Terms and Conditions

- a. 40 CFR, Part 60, Subpart Db is an applicable rule for this emissions unit, since the emissions unit was constructed after June 19, 1984 and the heat input capacity is greater than 100 MMBtu/hr. Natural gas and/or a mixture of natural gas and refinery fuel gas are burned in this emissions unit. The NOx limitations listed in 40 CFR 60.44b are applicable as well as the performance test methods, monitoring, recordkeeping and reporting requirements for NOx listed under 40 CFR 60.46b, 60.48b and 60.49b. The NOx emission limitation of 0.20 lb/MMBtu in 40 CFR 60.44b is less stringent than the NOx emission limitation of 0.13 lb/MMBtu established by OAC rule 3745-31-05(A)(3) for this emissions unit.

Coal and oil are not burned in this emissions unit; therefore, the SO₂, PE and visible PE limitations listed in 40 CFR 60.42b and 60.43b are not applicable; and performance test methods, monitoring, recordkeeping and reporting requirements in 40 CFR 60.45b and 60.47b are also not applicable.

- b. The PE, CO and VOC emission limitations are based on revised emission factors published in AP-42, Fifth Edition, Section 1.4 (July 1998).

- c. The emission limitation of 2.07 lbs of VOC/hr includes fugitive VOC emissions.
- d. 40 CFR, Part 60 - Subpart J is an applicable rule for this emissions unit. The permittee was required to comply with this New Source Performance Standard (NSPS) for fuel combustion by 1/18/08.
- e. The permittee shall not burn any refinery fuel gas in this emissions unit that contains hydrogen sulfide (H₂S) in excess of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume (ppmv)), as a 3-hour rolling average. This H₂S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d).
- f. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR, Part 60, Subpart J.
- g. The NO_x emission limitation of 0.100 lb of NO_x/MMBtu of actual heat input, based upon a 365-day rolling block average is established to reflect the final voluntary limits to meet a system-wide average NO_x performance level of 0.044 lb/MMBtu.

PTI No. 03-04991, issued 11/21/08 previously established an emission limitation of 0.13 lb of NO_x/MMBtu of actual heat input based upon a 30-day rolling average which is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D), and is retained in this permit as a short-term emission limitation.
- h. This emissions unit is fuel burning equipment which combusts refinery fuel gas or natural gas. When firing natural gas, the emissions unit is exempt from OAC rule 3745-18-06 per OAC rule 3745-18-06(A). When firing refinery fuel gas, OAC rule 3745-18-06(E) does not establish an emission limitation because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-18-01(B)(14).
- i. The permittee shall ensure that any affected emissions unit complies with the requirements established under 40 CFR Part 75.

c) **Operational Restrictions**

- (1) The permittee shall burn only refinery fuel gas or natural gas in this emissions unit.
[OAC rule 3745-77-07(A)(1) and PTI No. P0122660]
- (2) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0122660]

- (3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0122660]

- (4) Pursuant to 40 CFR 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0122660]

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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]

- (2) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv), as a 3-hour rolling average of H₂S in the refinery fuel gas (and if applicable, combined fuel firing as noted in b)(2)d. above), the permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit. The monitoring shall be conducted in accordance with 40 CFR 60.105(a)(4), as follows

- a. The span value for this instrument is 425 mg/dscm (the equivalent concentration is 300 ppmv) of H₂S.
- b. 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 H₂S in the fuel gas being burned.
- c. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an annual relative accuracy test audit (RATA) for the H₂S continuous emission monitoring equipment. Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

- (3) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40

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CFR, Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the Ohio EPA, Northwest District Office upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0116161]

- (4) The permittee shall operate and maintain existing equipment to continuously monitor and record hydrogen sulfide from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR, Part 60.13.

The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, parts per million of H₂S for each cycle time of the analyzer, with no resolution less than one data point per minute required, emissions of H₂S in units of the applicable standard (grain/dscf and ppmv) as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

- (5) The permittee shall maintain a written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F.

A logbook dedicated to the monitoring systems must be kept on site and available for inspection during regular office hours.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

- (6) In order to demonstrate compliance with the emission limitations of 0.13 lb of NO_x/MMBtu of actual heat input and 0.100 lb of NO_x/MMBtu of actual heat input based upon a rolling 365-day average, the permittee shall operate and maintain an instrument for continuously monitoring and recording NO_x from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR, Part 60.13, as follows:

- a. The span value for this instrument is 200 parts per million of NO_x.
- b. The performance evaluations for this NO_x monitor under 40 CFR 60.13(c) shall use Performance Specification 2 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an annual RATA for the NO_x continuous emission monitoring equipment. Method 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (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 NO_x 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 Ohio EPA, Northwest District Office) upon request.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (8) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (9) 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 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 (CGAs) or RATAs as required in 40 CFR, Part 60; and to conduct RATAs of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the NOx CEMS annually; and
- b. Conduct CGAs on the NOx CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (10) 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 has installed this CEMS to meet requirements for monitoring in 40 CFR, Part 60, Subpart Db.

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

- a. emissions of NOx in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of NOx in all units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly CGAs;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required RATA(s), including results in units of the applicable standard(s);

- f. hours of operation of the emissions unit, continuous NOx 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 NOx monitoring system;
- h. malfunction of the control equipment and/or the continuous NOx monitoring system; as well as,
- i. the reason (if known) and the corrective actions taken (if any) for each such event in d)(10)g. and d)(10)h.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any H2S CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken.

The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

- (3) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of all rolling, 3-hour periods during which the average concentration of H2S as measured by the H2S CEMS under 40 CFR 60.105(a)(4) exceeds 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv). The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages. The notification shall include a copy of the record and shall be sent to the Director (the Ohio EPA, Northwest District Office) by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

- (4) If there are no concentrations of H2S in the refinery fuel gas (or combined fuel stream, if applicable) greater than 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv), as a 3-hour rolling average during the calendar quarter, then the permittee

shall submit a statement to that effect along with the emissions unit and monitor operating times.

These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

- (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 Ohio EPA Northwest District Office, 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 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).

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 date of quarterly CGAs or linearity checks;
- ix. unless previously submitted, results and date of the RATA(s), including results in units of the applicable standard(s), (during appropriate quarter(s));



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- x. unless previously submitted, the results of any RATA showing the continuous NO_x monitor out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction** of the continuous NO_x monitoring system, emissions unit, and/or control equipment;
- xii. the date, time, and duration of any downtime** of the continuous NO_x monitoring system and/or control equipment while the emissions unit was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (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

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (6) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):
 - a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[OAC rule 3745-77-07(C)(1); 40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); and 40 CFR 63.9(b) through (h)]

f) Testing Requirements

- (1) 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 2.5 years after permit issuance and should be performed in conjunction with the NO_x RATA cycle.
 - b. The emission testing shall be conducted to demonstrate compliance with the hourly CO emission limitation.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate for CO: Methods 1 - 4 and 10 of 40 CFR, Part 60, Appendix A.

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

- d. During the emissions testing, the emissions unit shall be operated under operational conditions approved in advance by the appropriate Ohio EPA District Office or local air agency. Operational conditions that may need to be approved include, but are not limited to, the production rate, the type of material processed, material make-up (solvent content, etc.), or control equipment operational limitations (burner temperature, precipitator voltage, etc.). In general, testing shall be done under "worst case" conditions expected during the life of the permit. As part of the information provided in the "Intent to Test" notification form described below, the permittee shall provide a description of the emissions unit operational conditions they will meet during the emissions testing and describe why they believe "worst case" operating conditions will be met. Prior to conducting the test(s), the permittee shall confirm with the appropriate Ohio EPA District Office or local air agency that the proposed operating conditions constitute "worst case". Failure to test under the approved conditions may result in Ohio EPA 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 Ohio EPA, Northwest District Office. 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, Northwest District Office's refusal to accept the results of the emission test(s).
- f. Personnel from the Ohio EPA, Northwest District Office 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 Ohio EPA, Northwest District Office 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 Ohio EPA, Northwest District Office.

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

- (2) 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 from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.



Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

b. Emission Limitation:

2.86 lbs of PE/hr

Applicable Compliance Method:

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet (MMscf)/hr, by the appropriate particulate emission factor, in lb(s)/MMscf, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the CE power boiler.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 5 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

c. Emission Limitation:

0.13 lb of NO_x/MMBtu of actual heat input

Applicable Compliance Method:

The permittee shall demonstrate compliance with the emission limitation in accordance with the testing requirements in f)(1).

Ongoing compliance based upon the monitoring and record keeping requirements specified in sections d)(6) through d)(9) for this emissions unit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

d. Emission Limitation:

31.65 lbs of CO/hr

Applicable Compliance Method:

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet(MMscf)/hr, by the appropriate carbon monoxide emission



factor, in lb(s)/MMscf, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the CE power boiler.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 10 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

e. Emission Limitation:

2.07 lbs of VOC/hr

Applicable Compliance Method:

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet (MMscf)/hr, by the appropriate volatile organic compound emission factor, in lb(s)/MMscf, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the CE power boiler.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

f. Emission Limitation:

10.12 lbs of SO₂/hr

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(1) through d)(5) for this emissions unit, based on use of CEM data for H₂S.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 6 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

g. Emission Limitation:

230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv) of H₂S. as a 3-hour rolling average in the refinery fuel gas, or combined fuel stream if applicable



Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(1) through d)(5) for this emissions unit.

If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0122660]

h. Emission Limitation:

0.100 lb of NO_x/MMBtu of actual heat input, based upon a 365-day rolling block average

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(6) through d)(10) for this emissions unit.

If required, the permittee shall determine compliance with the NO_x emission limitation by using Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116161]

g) Miscellaneous Requirements

- (1) None.

10. B027, Coker Furnace – Process Heater (PR 170002)

Operations, Property and/or Equipment Description:

Refinery Fuel Gas or Natural Gas Fired Coker Furnace, 211.3 MMBtu/hr maximum heat input (PR 170002)

- 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 operations(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. 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 No. P0123731, modification issued 11/29/18)	1.84 lbs of particulate emissions (PE)/hr 20.29 lbs of carbon monoxide (CO)/hr 1.33 lbs of volatile organic compounds (VOC)/hr 2.56 lbs of sulfur dioxide (SO ₂)/hr See b)(2)a.
b.	40 CFR, Part 60, Subpart J [40 CFR 60.100 – 60.109]	See b)(2)b. and b)(2)c.
c.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
d.	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480 - 63.7575] [In accordance with 63.7575, this emissions unit is in the 'unit designed to fire Gas 1 fuels' subcategory existing process heater located at a	See c)(2) through c)(4) and e)(4) 63.7500(a) Table 3 requirements

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	
g.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
h.	OAC rule 3745-31-05(D) (PTI No. P0123731, modification issued 11/29/18)	0.060 lb nitrogen oxides (NOx)/MMBtu of actual heat input based upon a 3-hour block average See b)(2)d. and b)(2)e.
i.	OAC rule 3745-18-06(E)	See b)(2)f.

(2) Additional Terms and Conditions

- a. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR 60.104(a)(1).
- b. 40 CFR, Part 60 - Subpart J is an applicable rule for this emissions unit. The permittee was required to comply with this New Source Performance Standard (NSPS) for fuel combustion by 1/18/08.
- c. The permittee shall not burn any refinery fuel gas in this emissions unit that contains hydrogen sulfide (H₂S) in excess of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume (ppmv)), as a 3-hour rolling average. This H₂S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d).

The H₂S concentration limit of 162 ppmv specified by 40 CFR, Part 60, Subpart J is less stringent than the concentration limit of 60 ppmv, as a 3-hr rolling average established by OAC rule 3745-31-05(D).
- d. The NO_x emission limitation is established to reflect the final voluntary limit to meet a system-wide average NO_x performance level of 0.044 lb/MMBtu.
- e. The federally-enforceable emissions limitations in b)(1)a. were established for purposes of demonstrating compliance with SO₂ modeling:
 - i. The H₂S concentration in the refinery fuel gas (or if, applicable, combined fuel firing) burned shall not exceed of 60 ppmv determined hourly on a 3-hour rolling average basis.

- f. This emissions unit is fuel burning equipment which combusts refinery fuel gas or natural gas. When firing natural gas, the emissions unit is exempt from OAC rule 3745-18-06 per OAC rule 3745-18-06(A). When firing refinery fuel gas, OAC rule 3745-18-06(E) does not establish an emission limitation because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-18-01(B)(14).

c) **Operational Restrictions**

- (1) The permittee shall burn only refinery fuel gas or natural gas in this emissions unit.
[OAC rule 3745-77-07(A)(1) and PTI No. P0123731]
- (2) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.
[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0123731]
- (3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.
[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0123731]
- (4) Pursuant to 40 CFR 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.
[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0123731]

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.
[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]
- (2) The permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit in order to demonstrate compliance with the emission limitations of:

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- a. 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume) of H₂S in the refinery fuel gas [and if applicable, combined fuel firing as noted in b)(2)c. above]; and
- b. 60 ppmv of H₂S in the refinery fuel gas [and if applicable, combined fuel firing as noted in b)(2)e. above]:

The monitoring shall be conducted in accordance with 40 CFR 60.105(a)(4), as follows:

- c. The span value for this instrument is 425 mg/dscm (the equivalent concentration is 300 ppmv) of H₂S.
- d. 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 H₂S in the fuel gas being burned.
- e. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B.

The permittee shall conduct an annual relative accuracy test audit (RATA) for the H₂S continuous emission monitoring equipment. Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0123731]

- (3) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the Ohio EPA, Northwest District Office upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0123731]

- (4) The permittee shall operate and maintain existing equipment to continuously monitor and record hydrogen sulfide from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, parts per million of H₂S for each cycle time of the analyzer, with no resolution less than one data point per minute required, emissions of H₂S in units of the applicable standard (grain/dscf and ppmv) as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0123731]

- (5) The permittee shall maintain a written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F. A logbook dedicated to the

monitoring system must be kept on site and available for inspection during regular office hours.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0123731]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any H₂S CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken.

The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0123731]

- (3) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of:
 - a. All rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.105(a)(4) exceeds 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv). The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages.
 - b. All rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS exceeds 85 mg/dscm (0.037 grain/dscf)(the equivalent concentration is 60 ppmv).

If there are no exceedances of concentrations of H₂S in the refinery fuel gas (or combined fuel stream, if applicable) during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times.

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

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0123731]

- (4) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):



- a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[OAC rule 3745-77-07(C)(1); 40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); and 40 CFR 63.9(b) through (h)]

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 from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- b. Emission Limitation:

1.84 lbs of PE/hr

Applicable Compliance Method:

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet per hour, by the appropriate particulate emission factor, in lb(s) per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), and then dividing by 211.3 mmBtu/hr (the maximum heat input to the coker furnace).

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 5 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- c. Emission Limitation:

20.29 lbs of CO/hr



Applicable Compliance Method:

The permittee has demonstrated compliance with this emission limitation through past emission testing. Per Engineering Guide No. 16, periodic testing is no longer required.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in 40 CFR, Part 60, Appendix A, Methods 1 through 4, and 10.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

d. Emission Limitation:

1.33 lbs of VOC/hr

Applicable Compliance Method:

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet per hour, by the appropriate volatile organic compound emission factor, in pound(s) per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), and then dividing by 211.3 mmBtu/hr (the maximum heat input to the coker furnace).

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

e. Emission Limitation:

2.56 lbs of SO₂/hr

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(2) through d)(5) for this emissions unit, based on use of CEM data for H₂S.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 6 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]



f. Emission Limitation:

85 mg/dscm (0.037 grain/dscf)(the equivalent concentration is 60 ppmv) of H₂S in the refinery fuel gas, or combined fuel stream if applicable

60 ppmv H₂S, as a 3-hour rolling average [refinery fuel gas, or combined fuel stream if applicable]

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in sections d)(2) through d)(5) for this emissions unit.

If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0123731]

g. Emission Limitation:

0.060 lb of NO_x/MMBtu of actual heat input based upon a 3-hour block average

Applicable Compliance Method:

Compliance with the lb of NO_x/MMBtu emission limitation has been demonstrated by past stack testing.

If required, the permittee shall determine compliance with the NO_x emission limitations by using Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

g) Miscellaneous Requirements

(1) None.

11. B028, Catalytic Gasoline Hydrotreater Process Heater (PR 170007)

Operations, Property and/or Equipment Description:

Refinery Fuel Gas or Natural Gas Fired Process Heater for Catalytic Gasoline Hydrotreating Unit [aka Gasoline Desulfurization Unit (GDU)], with Low Nitrogen Oxide Burners, 24.6 MMBtu/hr maximum heat input (PR 170007)

- 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 operations(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. 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 No. P0107904, modification issued 6/9/11)	3.31 tons sulfur dioxide (SO ₂)/yr 0.043 lb of nitrogen oxides (NO _x)/MMBtu of actual heat input [See b)(2)a.] 4.63 tons NO _x /yr 2.36 lbs carbon monoxide (CO)/hr, 10.34 tons CO/yr 0.155 lb volatile organic compounds (VOC)/hr, 0.68 ton VOC/yr 0.214 lb of particulate emissions (PE)/hr, 0.94 ton PE/yr See b)(2)c.
b.	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
c.	OAC rule 3745-17-10(B)(1)	See b)(2)d.
d.	OAC rule 3745-18-06(E)	See b)(2)e.
e.	40 CFR, Part 60, Subpart J [40 CFR 60.100 – 60.109]	See b)(2)b., d)(2) through d)(5), e)(3) and e)(4)
f.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
g.	40 CFR, Part 63, Subpart DDDDD	See c)(2) through c)(4) and e)(5)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	<p>[40 CFR 63.7480 – 63.7575]</p> <p>[In accordance with 63.7575, this emissions unit is in the 'unit designed to fire Gas 1 fuels' subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]</p>	<p>63.7500(a) Table 3 requirements</p>
h.	<p>40 CFR, Part 63, Subpart A</p>	<p>Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 – 63.15 apply.</p>

(2) Additional Terms and Conditions

- a. Best available technology (BAT) control requirements for this emissions unit have been determined to be use of low NOx burners meeting 0.043 lb of NOx/MMBtu of actual heat input.
- b. The permittee shall not burn any refinery fuel gas in this emissions unit that contains hydrogen sulfide (H2S) in excess of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume (ppmv), as a 3-hour rolling average. This H2S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d).
- c. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR, Part 60, Subpart J.
- d. The emission limitation specified by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- e. This emissions unit is fuel burning equipment which combusts refinery fuel gas or natural gas. When firing natural gas, the emissions unit is exempt from OAC rule 3745-18-06 per OAC rule 3745-18-06(A). When firing refinery fuel gas, OAC rule 3745-18-06(E) does not establish an emission limitation because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-18-01(B)(14).

c) Operational Restrictions

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

[OAC rule 3745-77-07(A)(1) and PTI No. P0107904]

- (2) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

- (3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

- (4) Pursuant to 40 CFR 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.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

- (2) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (162 ppmv) of H₂S in the refinery fuel gas (and if applicable, combined fuel firing as noted in b)(2)b. above), as a 3-hour rolling average, the permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit. The monitoring shall be conducted in accordance with 40 CFR 60.105(a)(4), as follows:

- a. The span value for this instrument is 425 mg/dscm (the equivalent concentration is 300 ppmv) of H₂S.
- b. 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 H₂S in the fuel gas being burned.
- c. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an annual relative accuracy test audit (RATA) for the H₂S continuous

emission monitoring equipment. Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107904]

- (3) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the Ohio EPA Northwest District Office upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107904]

- (4) The permittee shall operate and maintain existing equipment to continuously monitor and record hydrogen sulfide from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13. The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, parts per million of H₂S for each cycle time of the analyzer, with no resolution less than one data point per minute required, emissions of H₂S in units of the applicable standard as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107904]

- (5) The permittee shall maintain a quality assurance/quality control plan for the refinery fuel gas H₂S continuous emission monitor designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F. A logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107904]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any H₂S CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

- (3) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of all rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.105(a)(4) exceeded 230 mg/dscm (162 ppmv). The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages. The notification shall include a copy of the record and shall be sent to the Director (the Ohio EPA, Northwest District Office) by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107904]

- (4) If there were no concentrations of H₂S in the refinery fuel gas (or combined fuel stream, if applicable) that exceeded the value specified in section b)(2)b. during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107904]

- (5) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):
 - a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[OAC rule 3745-77-07(C)(1); 40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); and 40 CFR 63.9(b) through (h)]

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:

0.214 lb PE/hr, 0.94 ton PE/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet (MMscf)/hr, by the appropriate particulate emission factor, in lb(s)/MMscf, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission



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testing in accordance with the requirements specified in Methods 1 through 4, and 5 of 40 CFR, Part 60, Appendix A,

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

b. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

c. Emission Limitation:

3.31 tons SO₂/yr

Applicable Compliance Method:

The annual emission limitation was established in accordance with the following equation:

$$\text{Tons SO}_2/\text{yr} = (0.10 \text{ gr H}_2\text{S}/\text{scf})(\text{lb H}_2\text{S}/7,000 \text{ gr H}_2\text{S})$$

$$(64.1 \text{ lb SO}_2/34.1 \text{ lb H}_2\text{S})(28,114 \text{ cf/hr})(8,760 \text{ hrs/yr})(\text{ton}/2,000 \text{ lbs})$$

where:

$$(0.10 \text{ gr H}_2\text{S}/\text{scf}) = 40 \text{ CFR } 60.104(a)(1) \text{ emission limitation}$$

(64.1 lb SO₂/34.1 lb H₂S) = conversion of hydrogen sulfide to sulfur dioxide assuming all H₂S is converted to SO₂

(28,114 cf/hr) = maximum fuel flow rate

(8,760 hrs/yr) = maximum operating schedule

All other values are conversion factors.



Compliance with the annual emission limitation will be shown as long as the permittee maintains compliance with the H₂S emission limitation in 40 CFR 60.104(a)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

d. Emission Limitation:

0.043 lb of NO_x/MMBtu of actual heat input, 4.63 tons NO_x/yr

Applicable Compliance Method:

The emission limitation is based on the burner manufacturer's emissions data for low NO_x burners to be installed on this emissions unit. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the 0.043 lb of NO_x/MMBtu emission limitation times the maximum heat input capacity of 24.6 MMBtu/hr for the process heater, then multiplying by 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the 0.043 lb of NO_x/MMBtu emission limitation is maintained.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

e. Emission Limitation:

2.36 lbs CO/hr, 10.34 tons CO/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet (MMscf)/hr, by the appropriate CO emission factor, in lb(s)/MMscf, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with Methods 1 through 4, and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

f. Emission Limitation:

0.155 lb VOC/hr, 0.68 ton VOC/yr



Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet (MMscf)/hr, by the appropriate VOC emission factor, in lb(s)/MMscf, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with Methods 1 through 4, and 18, 25, or 25A, as appropriate of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

g. Emission Limitation:

230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv), as a 3-hour rolling average of H₂S in the refinery fuel gas, or combined fuel stream if applicable

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated in accordance with the continuous emission monitoring requirements specified in section d)(2) through d)(4).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107904]

g) Miscellaneous Requirements

(1) None.

12. B029, Diesel Hydrotreater Process Heater

Operations, Property and/or Equipment Description:

Refinery Fuel Gas or Natural Gas Fired Reactor Feed Furnace for Diesel Hydrotreater Unit, with Low Nitrogen Oxide Burners, 29.7 MMBtu/hr maximum heat input

- 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 operations(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. 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 No. P0107905, modification issued 6/9/11)	7.77 tons sulfur dioxide (SO ₂)/yr 0.06 lb of nitrogen oxides (NO _x)/MMBtu of actual heat input [See b)(2)a.] 7.81 tons NO _x /yr 5.54 lbs carbon monoxide (CO)/hr, 24.28 tons CO/yr 0.36 lb volatile organic compounds, (VOC)/hr, 1.59 tons VOC/yr 0.502 lb of particulate emissions (PE)/hr, 2.2 tons PE/yr See b)(2)c.
b.	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
c.	OAC rule 3745-17-10(B)(1)	See b)(2)d.
d.	OAC rule 3745-21-09(T)	See b)(2)f. and Facility-Wide Term and Condition B.2
e.	OAC rule 3745-18-06(E)	See b)(2)e.
f.	OAC rule 3745-21-09(DD)	See b)(2)f.
g.	40 CFR, Part 60, Subpart J [40 CFR 60.100 – 60.109]	See b)(2)b., d)(2) through d)(5), e)(2) through e)(4), and f)(1)



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
h.	40 CFR, Part 60, Subpart VV [40 CFR 60.480 – 60.489]	See b)(2)f.
i.	40 CFR, Part 60, Subpart GGG [40 CFR 60.590 – 60.593]	See b)(2)f.
j.	40 CFR, Part 61, Subpart V [40 CFR 61.240 – 61.247]	See b)(2)f.
k.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
l.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358]	See b)(2)g.
m.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
n.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source since it contains Group 1 process vents that are routed to the LIU flare (emissions unit P007) with backup to the FCC/Coker flare (emissions unit P006)]	See b)(2)f., b)(2)h., b)(2)i., c)(2), d)(6) and e)(5)
o.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
p.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480 – 63.7575] [In accordance with 63.7575, this emissions unit is in the ‘unit designed to fire Gas 1 fuels’ subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	See c)(3) through c)(5) and e)(6) 63.7500(a) Table 3 requirements

(2) Additional Terms and Conditions

- a. Best available technology (BAT) control requirements for this emissions unit has been determined to be use of low NOx burners meeting 0.06 lb of NOx/MMBtu of actual heat input.
- b. The permittee shall not burn any refinery fuel gas in this emissions unit that contains hydrogen sulfide (H2S) in excess of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv). as a 3-hour rolling average. This H2S

standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d).

- c. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR, Part 60, Subpart J.
- d. The emission limitation specified by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- e. This emissions unit is fuel burning equipment which combusts refinery fuel gas or natural gas. When firing natural gas, the emissions unit is exempt from OAC rule 3745-18-06 per OAC rule 3745-18-06(A). When firing refinery fuel gas, OAC rule 3745-18-06(E) does not establish an emission limitation because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-18-01(B)(14).
- f. The previously issued permit, PTI No. 03-16188, issued 9/7/04 for this emissions unit, was issued to accommodate production of federally mandated low sulfur diesel fuel. The diesel hydrotreater unit (DHT) point source emissions are from the reactor feed furnace, emissions unit B029.

The remainder of the emissions from the DHT are fugitive VOC. Fugitive VOC emissions from the DHT are subject to the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of OAC rule 3745-21-09(T) - Leaks from petroleum refinery equipment; OAC rule 3745-21-09(DD) - Leaks from process units that produce organic chemicals; 40 CFR, Part 60, Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry); 40 CFR, Part 60, Subpart GGG (Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries; 40 CFR, Part 61, Subpart V (National Emission Standard for Equipment Leaks - Fugitive Emission Sources); and 40 CFR, Part 63, Subpart CC (Petroleum Refinery MACT Standards).

The permittee has submitted an alternative leak detection and repair (LDAR) monitoring plan pursuant to OAC rule 3745-21-09(T)(4) and 40 CFR, Part 63, Subpart CC. The permittee shall include the fugitive VOC emission sources for the DHT into the alternative LDAR plan, which has been incorporated into Section B.2 - Facility-Wide Terms and Conditions.

- g. The permittee shall include the DHT in the current site benzene waste operations program. The program shall comply with the appropriate provisions (includes operational restrictions, monitoring and record keeping, reporting, and testing) of 40 CFR, Part 61, Subpart FF [See emissions unit P025].
- h. The previously issued permit, PTI No. 03-16188, issued 9/7/07 for this emissions unit included three process vent emission sources that are subject to regulations in 40 CFR, Part 63, Subpart CC, National Emission Standards for Hazardous Air Pollutants (NESHAP) from Petroleum Refineries. These process vents include the vacuum dryer, sour water flash drum, and amine stripper flash drum. Each of the

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three vents is considered a Group 1 miscellaneous process vent, as defined in 40 CFR 63.641: 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 VOC emissions are greater than or equal to 33 kilograms per day for existing sources and 6.8 kilograms per day for new sources at the outlet of the final recovery device (if any) and prior to any control device and prior to discharge to the atmosphere.

- i. This emissions unit is vented to a flare. All operational restrictions, monitoring, record keeping, reporting and testing requirements for the flare are established in the terms and conditions for emissions units P006 and P007 and are also applicable to emissions unit B029. Therefore, no additional monitoring, record keeping, reporting and testing requirements are necessary for the flare in this emissions unit.

c) Operational Restrictions

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

[OAC rule 3745-77-07(A)(1) and PTI No. P0107905]

- (2) The permittee shall comply with the applicable miscellaneous process vent provisions under 40 CFR, Part 63, Subpart CC, including the following sections:

40 CFR 63.643(a)	Control requirements for HAPs
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[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0107905]

- (3) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

- (4) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

- (5) Pursuant to 40 CFR 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.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107905]

- (2) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (162 ppm) of H₂S in the refinery fuel gas (and if applicable, combined fuel firing as noted in Section b)(2)b. above), as a 3-hour rolling average, the permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit. The monitoring shall be conducted in accordance with 40 CFR 60.105(a)(4), as follows:

- a. The span value for this instrument is 425 mg/dscm (the equivalent concentration is 300 ppmv) of H₂S.
- b. 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 H₂S in the fuel gas being burned.
- c. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an annual relative accuracy test audit (RATA) for the H₂S continuous emission monitoring equipment. Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107905]

- (3) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the Ohio EPA, Northwest District Office upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107905]

- (4) The permittee shall operate and maintain existing equipment to continuously monitor and record hydrogen sulfide to this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, parts per million of H₂S for each cycle time of the analyzer, with no resolution less than one data point per minute required, emissions of H₂S in units of the applicable standard as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.



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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107905]

- (5) The permittee shall maintain a quality assurance/quality control plan for the refinery fuel gas H₂S continuous emission monitor designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F. A logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107905]

- (6) The permittee shall comply with the applicable monitoring and recording requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

40 CFR 63.644(a) through (e)	Monitoring provisions for miscellaneous process vents
40 CFR 63.655(i)*	Record keeping

*except for section 63.655(i)(1) which is not applicable

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0107905]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0107905]

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any H₂S CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107905]

- (3) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of all rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.105(a)(4) exceeded 230 mg/dscm (162 ppm). The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages.

The notification shall include a copy of the record and shall be sent to the Director (the Ohio EPA, Northwest District Office) by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.



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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107905]

- (4) If there were no concentrations of H₂S in the refinery fuel gas (or combined fuel stream, if applicable) that exceeded the value specified in Section b)(2)b during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107905]

- (5) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

40 CFR 63.655(e) through 63.655(h)*	Reporting requirements
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*except for sections 63.655(f)(1)(i), 63.655(f)(1)(v), 63.655(f)(5), 63.655(g)(1) through 63.655(g)(5), 63.655(g)(8), 63.655(h)(2), 63.655(h)(3) and 63.655(h)(6)(ii), which are not applicable

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0107905]

- (6) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):
 - a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); 40 CFR 63.9(b) through (h); and 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:

7.77 tons SO₂/yr

Applicable Compliance Method:

The annual emission limitation was established in accordance with the following equation:

$$\text{Tons SO}_2/\text{yr} = (0.10 \text{ gr H}_2\text{S}/\text{scf})(\text{lb H}_2\text{S}/7,000 \text{ gr H}_2\text{S})(64.1 \text{ lb SO}_2/34.1 \text{ lb H}_2\text{S})(66,000 \text{ cf/hr})(8,760 \text{ hrs/yr})(\text{ton}/2,000 \text{ lbs})$$



where:

(0.10 gr H₂S/scf) = 40 CFR 60.104(a)(1) emission limitation

(64.1 lb SO₂/34.1 lb H₂S) = conversion of hydrogen sulfide to sulfur dioxide

assuming all H₂S is converted to SO₂

(66,000 cf/hr) = maximum fuel flow rate

(8,760 hrs/yr) = maximum operating schedule

All other values are conversion factors.

Compliance with the annual emission limitation will be shown as long as the permittee maintains compliance with the H₂S emission limitation in 40 CFR 60.104(a)(1).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107905]

b. Emission Limitation:

0.06 lb of NO_x/MMBtu of actual heat input, 7.81 tons NO_x/yr

Applicable Compliance Method:

The emission limitation is based on the burner manufacturer's emissions data for low NO_x burners to be installed on this emissions unit. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the 0.06 lb of NO_x/MMBtu emission limitation times the maximum heat input capacity of 29.7 MMBtu/hr for the process heater, then multiplying by 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the 0.06 lb of NO_x /MMBtu emission limitation is maintained.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107905]

c. Emission Limitation:

5.54 lbs CO/hr, 24.28 tons CO/yr

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate CO emission factor of 84 lbs/million standard cubic feet (MMscf), from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 66,000 scf/hr. If required, the permittee shall demonstrate compliance with the hourly



emission limitation by conducting emission testing in accordance with Methods 1 through 4, and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107905]

d. Emission Limitation:

0.36 lb VOC/hr, 1.59 tons VOC/yr

Applicable Compliance Method:

The permittee may demonstrate compliance with this limitation by multiplying the appropriate VOC emission factor of 5.5 lbs/MMscf, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 66,000 scf/hr. If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with Methods 1 through 4, and 18, 25, or 25A, as appropriate of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107905]

e. Emission Limitation:

0.502 lb PE/hr, 2.2 tons PE/yr

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate particulate emission factor of 7.6 lbs/MMscf, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 66,000 scf/hr. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107905]



f. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0107905]

g. Emission Limitation:

230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv), as a 3-hour rolling average of H₂S in the refinery fuel gas, or combined fuel stream if applicable

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated in accordance with the continuous emission monitoring requirements specified in Sections d)(2) through d)(4).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107905]

g) Miscellaneous Requirements

(1) None.

13. B032, Nebraska Boiler (PR 170026)

Operations, Property and/or Equipment Description:

247.7 MMBtu/hr Natural Gas-Fired Steam Boiler (PR-170026)

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 operations(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. 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 No. P0122660, modification issued 6/8/17)	0.075 lb of carbon monoxide (CO)/MMBtu of actual heat input See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) (PTI No. P0122660, modification issued 6/8/17)	The BAT requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the emissions of sulfur dioxide (SO ₂), volatile organic compounds (VOC), and particulate matter less than 10 microns in size (PM ₁₀) from this air contaminant source since the uncontrolled potential to emit for SO ₂ , VOC, and PM ₁₀ are each less than 10 tons per year.
c.	OAC rule 3745-31-05(D) (PTI No. P0122660, modification issued 6/8/17)	0.035 lb of nitrogen oxides (NO _x)/MMBtu of actual heat input, based upon a 365-day rolling block average See b)(2)g.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity as a six-minute average, except as provided by rule.
e.	OAC rule 3745-17-10(B)(1)	0.020 lb of PE/MMBtu of actual heat input
f.	OAC rule 3745-18-06	Exempt [See b)(2)c.]
g.	OAC rule 3745-110-03	See b)(2)h.
h.	40 CFR, Part 60, Subpart Db [40 CFR 60.40b – 60.49b]	No permittee shall cause to be discharged into the atmosphere any gases that contain NO _x in excess of 0.20 lb/MMBtu [See b)(2)d.]

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
i.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
j.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480 – 63.7575] [In accordance with 63.7575, this emissions unit is in the ‘unit designed to fire Gas 1 fuels’ subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	See c)(2) through c)(4) and e)(4) 63.7500(a) Table 3 requirements
k.	40 CFR, Part 63, Subpart A [40 CFR 63.1 – 63.15]	Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirements under ORC 3704.03(T) have been determined to be compliance with the emission limitation of 0.035 lb of NOx/MMBtu of actual heat input, based upon a 365-day rolling block average established under OAC rule 3745-31-05(D) and the emission limitation of 0.075 lb of CO/MMBtu of actual heat input.
- b. The mass emission rate limitation in b)(1)a. above represent the potential to emit (PTE) (defined as the maximum capacity to emit an air pollutant under the physical and operational design). Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure compliance with the CO emission limitation. For NOx emissions, the permittee is required to operate a continuous emission monitor, since the NOx emission limit is less than 0.06 lb/MMBtu of actual heat input.
- c. This emission unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
- d. The requirements of this rule are less stringent than those required under ORC 3704.03(T).
- e. Each continuous NOx monitoring system shall be certified to meet the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 2. Prior to the certification testing of the continuous NOx monitoring system(s) required by permit term f)(3), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NOx 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 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 (CGAs) or relative accuracy audits (RATAs) as required in 40 CFR, Part 60 and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60.

f. 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.

g. The federally enforceable emissions limitation* in b)(1)c. was established for the purpose of representing the potential to emit of this emissions unit.

*The NOx emissions limitation is established to reflect the final voluntary limits to meet a system-wide average NOx performance level of 0.044 lb/MMBtu.

h. The requirements of this rule are less stringent than those required under ORC 3704.03(T).

c) Operational Restrictions

(1) The permittee shall only burn natural gas in this emissions unit.

[OAC rule 3745-77-07(A)(1) and PTI No. P0122660]

(2) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0122660]

(3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0122660]

- (4) Pursuant to 40 CFR 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.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0122660]

d) Monitoring and/or Recordkeeping Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (2) In order to demonstrate compliance with the emission limitations of 0.035 lb of NO_x/MMBtu of actual heat input based upon a rolling 365-day average, the permittee shall operate and maintain an instrument for continuously monitoring and recording NO_x from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR, 60.13, as follows:

- a. The span value for this instrument is 50 parts per million of NO_x.
- b. The performance evaluations for this NO_x monitor under 40 CFR 60.13 (c) shall use Performance Specification 2 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an annual RATA for the NO_x continuous emission monitoring equipment. Method 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (3) 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 NO_x 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 Ohio EPA, Northwest District Office) upon request. [40 CFR Part 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 processing hardware and software.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (4) The permittee shall 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). 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 NOx monitoring system must be kept on site and available for inspection during regular office hours.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (5) The plan shall include the requirement to conduct quarterly CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.
- a. Conduct a RATA of the NOx CEMS annually; and
 - b. Conduct CGAs on the NOx CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (6) 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 has installed this CEMS previously to meet requirements for monitoring in 40 CFR, Part 60, Subpart Db.

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

- a. emissions of NOx in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of NOx in all units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly CGAs;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required RATA(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous NOx 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 NOx 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 NOx monitoring system; and

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- i. the reason (if known) and the corrective actions taken (if any) for each such event in d)(6)g. and d)(6)h.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (7) The permittee is subject to the monitoring requirements specified in 40 CFR 60.48b and the recordkeeping requirements specified in 40 CFR 60.49b.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

e) Reporting Requirements

- (1) The permittee shall submit deviation reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (2) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NOx 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 Northwest District Office, documenting all instances of NOx 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 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 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 NOx and other associated monitors;
- iii. a description of any change in the equipment that comprises the continuous emissions monitoring system (CEMS), including any changes 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 NOx emissions for the calendar quarter (tons);



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- vi. the total operating time (hours) of the emissions unit;
- vii. the total operating time of the continuous NOx monitoring system while the emissions unit was in operation;
- viii. results and dates of quarterly CGAs;
- ix. unless previously submitted, results and dates of the RATA(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
- x. unless previously submitted, the results of any RATA showing the continuous NOx monitor out of control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any downtime** of the continuous NOx monitoring system and/or control equipment while the emissions unit was in operation; and
- xii. the reason (if known) and the corrective actions taken (if any) for each event in b.xi. and xii.

* 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.

** each downtime and malfunction event shall be reported regardless if there is an exceedance of the applicable limit.

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (3) The permittee is subject to the reporting requirements specified in 40 CFR 60.49b.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

- (4) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):
 - a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); 40 CFR 63.9(b) through (h); and 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:

0.035 lb of NO_x/MMBtu of actual heat input, based upon a 365-day rolling block average

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(2) and d)(6) for this emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation pursuant to Methods 1 – 4 and 7 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

b. Emission Limitation:

0.075 lb of CO/MMBtu of actual heat input

Applicable Compliance Method:

This emission limitation represents the potential to emit of this unit and is based on manufacturer's data.

If required, the permittee shall demonstrate compliance with this emission limitation pursuant to Methods 1 – 4 and 10 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

c. Emission Limitation:

No permittee shall cause to be discharged into the atmosphere any gases that contain NO_x in excess of 0.20 lb/MMBtu

Applicable Compliance Method:

If required, compliance with the limitation above shall be determined in accordance with Methods 1 – 4 and 7 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

d. Emission Limitation:

Visible PE shall not exceed 20% opacity as a six-minute average except as provided by rule



Applicable Compliance Method:

If required, compliance with the visible emission limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

e. Emission Limitation:

0.020 lb of PE/MMBtu of actual heat input

Applicable Compliance Method:

The permittee may demonstrate compliance with this limitation by multiplying the maximum hourly gas consumption rate (245,000 ft³/hr) by the emission factor from AP-42, Table 1.4-2 (7/98) of 1.90 lbs of PE (filterable)/MMscf, and then dividing by the maximum heat input capacity of the boiler (247.7 MMBtu/hr).

If required, compliance with the lb/MMBtu limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(9).

[OAC rule 3745-77-07(C)(1) and PTI No. P0122660]

g) Miscellaneous Requirements

(1) None.



14. B033, KHT Process Feed Heater (PR 170020)

Operations, Property and/or Equipment Description:

Refinery Fuel Gas/Natural Gas Fired Feed Heater (PR-170020) for Catalytic Kerosene Hydrotreating (KHT) Unit, with Low Nitrogen Oxide Burners, 30.0 MMBtu/hr maximum heat input

- 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 No. P0107028, issued 3/2/11)	0.168 lb of carbon monoxide (CO)/MMBtu of actual heat input See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(A)(3)	The BAT requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the emissions of nitrogen oxides (NOx), sulfur dioxide (SO2), volatile organic compounds (VOC), and particulate matter less than 10 microns in size (PM10) from this air contaminant source since the uncontrolled potential to emit (PTE) for NOx, SO2, VOC, and PM10 are each less than 10 tons per year.
c.	OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-10(B)(1)	0.020 lb of PE/MMBtu heat input
e.	OAC rule 3745-18-06(E)	See b)(2)e.
f.	OAC rule 3745-21-09(T)(4)(a)	See b)(2)f. and Facility-Wide Term and Condition B.2
g.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480 - 63.7575] [In accordance with 63.7575, this emissions unit is in the 'unit designed to fire Gas 1 fuels' subcategory	See c)(2) through c)(4) and e)(7) 63.7500(a) Table 3 requirements



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	
h.	40 CFR, Part 60, Subpart Ja [40 CFR 60.100a – 60.109a] In accordance with 40 CFR 60.101a, this emissions unit is an affected fuel gas combustion device]	See b)(2)c., d)(2) through d)(8), e)(3), e)(4), and f)(1)c.
i.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358]	See b)(2)g.
j.	40 CFR, Part 60, Subpart VVa [40 CFR 60.480a – 60.489a]	See b)(2)f.
k.	40 CFR, Part 60, Subpart GGGa [40 CFR 60.590a – 60.593a]	See b)(2)f.
l.	40 CFR, Part 61, Subpart V [40 CFR 61.240 – 61.247]	See b)(2)f.
m.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source since it contains Group 1 process vents that are routed to either the LIU flare (emissions unit P007) with backup to the FCC/Coker flare (emissions unit P006)]	See b)(2)f., b)(2)h., c)(5), d)(9), e)(5) and f)(2)
n.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply. Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirements under ORC 3704.03(T) have been determined to be an emission limitation of 0.168 lb of CO/MMBtu heat input.

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- b. The mass emission rate limitation in b)(1)a. above represent the potentials to emit (PTE) (defined as the maximum capacity to emit an air pollutant under the physical and operational design). Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure compliance with these emission limitations. See f)(1)b. for details regarding the PTE.
- c. The permittee shall not burn in this emissions unit any refinery fuel gas that contains H₂S in excess of 162 parts per million by volume (ppmv) determined hourly on a 3-hour rolling average basis and H₂S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis. This H₂S standard in 40 CFR 60.102a(g)(1)(ii) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101a. Pursuant to 40 CFR 60.102a(g)(1)(ii), the permittee has elected to comply with the SO₂ emissions limitations in this rule by monitoring the refinery fuel gas quality with a H₂S continuous emissions monitor.
- d. It should also be noted that all emissions of particulate matter (PM) from this emissions unit are PM₁₀. In addition, the Prevention of Significant Deterioration (PSD) requirements for particulate matter equal to or less than 2.5 microns in size PM_{2.5} are being implemented through the PM₁₀ Surrogate Policy issued by U.S. EPA in 1997. For the purposes of demonstrating that PM₁₀ is a reasonable surrogate for PM_{2.5}, all emissions of PM₁₀ will be considered PM_{2.5}.
- e. This emissions unit is fuel burning equipment which combusts refinery fuel gas or natural gas. When firing natural gas, the emissions unit is exempt from OAC rule 3745-18-06 per OAC rule 3745-18-06(A). When firing refinery fuel gas, OAC rule 3745-18-06(E) does not establish an emission limitation because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-18-01(B)(14).
- f. The fugitive VOC emissions from the KHT unit are subject to the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of OAC rule 3745-21-09(T) - Leaks from petroleum refinery equipment; OAC rule 3745-21-09(DD) - Leaks from process units that produce organic chemicals; 40 CFR, Part 60, Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry); 40 CFR, Part 60, Subpart VVa (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry); 40 CFR, Part 60, Subpart GGG (Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries); 40 CFR, Part 61, Subpart V (National Emission Standard for Equipment Leaks - Fugitive Emission Sources); and 40 CFR, Part 63, Subpart CC (Petroleum Refinery MACT Standards).

The permittee has submitted an alternative leak detection and repair (LDAR) monitoring plan pursuant to OAC rule 3745-21-09(T)(4) and 40 CFR, Part 63, Subpart CC. The permittee shall include the fugitive VOC emission sources for the KHT into the alternative LDAR plan, which has been incorporated into the facilities TV permit.



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- g. The permittee shall include the KHT in the current site benzene waste operations program. The program shall comply with the appropriate provisions (includes operational restrictions, monitoring and record keeping, reporting, and testing) of 40 CFR, Part 61, Subpart FF [See emissions unit P025].
- h. This emissions unit is vented to a flare. All operational restrictions, monitoring, record keeping, reporting and testing requirements for the flare are established in the terms and conditions for emissions units P006 and P007 and are also applicable to emissions unit B033. Therefore, no additional monitoring, record keeping, reporting and testing requirements are necessary for the flare in this emissions unit.

c) Operational Restrictions

- (1) The permittee shall burn only refinery fuel gas or natural gas in this emissions unit.
[OAC rule 3745-77-07(A)(1) and PTI No. P0107028]
- (2) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.
[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]
- (3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.
[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]
- (4) Pursuant to 40 CFR 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.
[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]
- (5) The permittee shall comply with the applicable miscellaneous process vent provisions under 40 CFR, Part 63, Subpart CC, including the following sections:

40 CFR 63.643(a) and (b)	Control requirements for HAPs
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[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0107028]

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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107028]

- (2) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (162 ppm) of H₂S in the refinery fuel gas (and if applicable, combined fuel firing as noted in b)(2)b. above), the permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit. The monitoring shall be conducted in accordance with 40 CFR 60.107a(a), as follows:

- a. The span value for this instrument is a ppm equivalent of 300 ppmv of H₂S.
- b. 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 H₂S in the fuel gas being burned.
- c. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an annual relative accuracy test audit (RATA) for the H₂S continuous emission monitoring equipment. Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Ja]

- (3) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 7.

Proof of certification shall be made available to representatives of the Ohio EPA Northwest District Office upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0107028]

- (4) The permittee shall operate and maintain existing equipment to continuously monitor and record hydrogen sulfide from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13. The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, parts per million of H₂S on an instantaneous (1-minute) basis, emissions of H₂S in units of the applicable standard as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Ja]

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- (5) The permittee shall maintain a quality assurance/quality control plan for the refinery fuel gas H₂S continuous emission monitor designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F. A logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Ja]

- (6) The permittee shall conduct a root cause analysis and a corrective action analysis for a fuel gas combustion device, each exceedance of an applicable short-term emissions limit in 40 CFR 60.102a(g)(1) if the SO₂ 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.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Ja]

- (7) 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 d)(6).

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Ja]

- (8) The permittee shall implement the corrective action(s) identified in the corrective action analysis conducted pursuant to 40 CFR 60.103a(d) in accordance with the applicable requirements in 40 CFR 60.103a paragraphs (e)(1) through (3).

- a. 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 40 CFR 60.108a(c)(6)(ix);
- b. 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; and
- c. 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 40 CFR 60.108a(c)(6)(x).

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Ja]

- (9) The permittee shall comply with the applicable monitoring and recording requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

40 CFR 63.644(a) through (e)	Monitoring provisions for miscellaneous process vents
40 CFR 63.654(i)*	Record keeping
40 CFR, Part 63, Appendix to Subpart CC, Table 10	Miscellaneous Process Vents - Monitoring, Recordkeeping and Reporting Requirements for Complying With 98 Weight-Percent Reduction of Total Organic HAP Emissions or a Limit of 20 ppmv

*except for section 63.654(i)(1) which is not applicable

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0107028]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0107028]

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any H₂S CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; and PTI No. P0107028]

- (3) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of all H₂S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis and H₂S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis

The notification shall include a copy of the record and shall be sent to the Director (the Ohio EPA, Northwest District Office) by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Ja]

- (4) If there were no concentrations of H₂S in the refinery fuel gas (or combined fuel stream, if applicable) that exceeded the value specified in section b)(2)e. during the calendar



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quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Ja]

- (5) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

40 CFR 63.655(e) through 63.655(h)*	Reporting requirements
40 CFR, Part 63, Appendix to Subpart CC, Table 10	Miscellaneous Process Vents - Monitoring, Recordkeeping and Reporting Requirements for Complying With 98 Weight-Percent Reduction of Total Organic HAP Emissions or a Limit of 20 ppmv

*except for sections 63.654(f)(1)(i), 63.654(f)(1)(v), 63.654(f)(5), 63.654(g)(1) through 63.654(g)(5), 63.654(g)(8), 63.654(h)(2), 63.654(h)(3) and 63.654(h)(6)(ii), which are not applicable

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0107028]

- (6) Pursuant to New Source Performance Standards (NSPS), the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. construction date (no later than 30 days after such date);
 - b. actual start-up date (within 15 days after such date); and
 - c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

 Ohio EPA, Northwest District Office
 Division of Air Pollution Control
 347 N. Dunbridge Rd.
 Bowling Green, Ohio 43402

[OAC rule 3745-77-07(C)(1) and PTI No. P0107028]

- (7) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):
 - a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[OAC rule 3745-77-07(C)(1); 40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); and 40 CFR 63.9(b) through (h)]

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:

0.020 lb of PE/MMBtu heat input

Applicable Compliance Method:

The permittee may demonstrate compliance with this limitation by multiplying the worst case fuel flow rate of 0.060 MMscf/hr multiplied by the PM10 emission factor of 7.60 lbs/MMscf (AP-42 Table 1.4-2 [7/98]), and divided by the maximum heat input rate of the unit (30.0 MMBtu/hr).

If required, compliance with the lb/MMBtu limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(9).

[OAC rule 3745-77-07(C)(1) and PTI No. P0107028]

b. Emission Limitation:

0.168 lb of CO/MMBtu heat input

Applicable Compliance Method:

This emission limitation represents the potential to emit, and is based on the worst case fuel flow rate of 0.060 MMscf/hr multiplied by the CO emission factor of 84.0 lbs/MMscf (AP-42 Table 1.4-2 [7/98]), and divided by the maximum heat input rate of the unit (30.0 MMBtu/hr).

If required, the permittee shall demonstrate compliance with the hourly emission limitation pursuant to Methods 1 through 4, and 10 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107028]

c. Emission Limitation:

Refinery fuel gas that contains H₂S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis and H₂S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis in the refinery fuel gas, or combined fuel stream if applicable.



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Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated in accordance with the continuous emission monitoring requirements specified in section d)(2) through d)(8). If required, the permittee shall determine compliance with the H2S emission limitation by using Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0107028]

d. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation pursuant to the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0107028]

- (2) The permittee shall comply with the applicable testing requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

40 CFR 63.645(a) through (i)	Test methods and procedures for miscellaneous process vents
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0107028]

g) Miscellaneous Requirements

- (1) None.

15. B034, KHT Reboiler Process Heater (PR 170021)

Operations, Property and/or Equipment Description:

Refinery Fuel Gas/Natural Gas Fired Stabilizer Reboiler (PR-170021) for Catalytic Kerosene Hydrotreating (KHT) Unit, with Low Nitrogen Oxide Burners, 38.75 MMBtu/hr maximum heat input

- 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 No. P0107028, issued 3/2/11)	0.060 lb of nitrogen oxides (NOx)/MMBtu heat input 0.168 lb of carbon monoxide (CO)/MMBtu heat input See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) (PTI No. P0107028, issued 3/2/11)	The BAT requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the emissions of sulfur dioxide (SO ₂), volatile organic compounds (VOC), and particulate matter less than 10 microns in size (PM ₁₀) from this air contaminant source since the uncontrolled potential to emit for SO ₂ , VOC, and PM ₁₀ are each less than 10 tons per year.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-10(B)(1)	0.020 lb of PE/MMBtu heat input
e.	OAC rule 3745-18-06(E)	See b)(2)d.
f.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480 - 63.7575] [In accordance with 63.7575, this emissions unit is in the 'unit designed to fire Gas 1 fuels' subcategory	See c)(2) through c)(4) and e)(5) 63.7500(a) Table 3 requirements

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	
g.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
h.	40 CFR, Part 60, Subpart Ja [40 CFR 60.100a – 60.109a]	See b)(2)c., d)(2) through d)(5), e)(3) e)(4), and f)(1)d.
i.	40 CFR, Part 60, Subpart VVa [40 CFR 60.480a – 60.489a]	See b)(2)e.
j.	40 CFR, Part 60, Subpart GGGa [40 CFR 60.590a – 60.593a]	See b)(2)e.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirements under ORC 3704.03(T) have been determined to be the emission limitations of 0.060 lb of NOx/MMBtu heat input and 0.168 lb of CO/MMBtu heat input
- b. The mass emission rate limitations in b)(1)a. and b)(2)a. above represent the potentials to emit (PTE) (defined as the maximum capacity to emit an air pollutant under the physical and operational design). Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure compliance with these emission limitations. See f)(1)b. through f)(1)c. for details regarding the PTE.
- c. The permittee shall not burn in this emissions unit any refinery fuel gas that contains H2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis and H2S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis. This H2S standard in 40 CFR 60.102a(g)(1)(ii) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101a. Pursuant to 40 CFR 60.102a(g)(1)(ii), the permittee has elected to comply with the SO2 emissions limitations in this rule by monitoring the refinery fuel gas quality with a hydrogen sulfide (H2S) continuous emissions monitor.
- d. This emissions unit is fuel burning equipment which combusts refinery fuel gas or natural gas. When firing natural gas, the emissions unit is exempt from OAC rule 3745-18-06 per OAC rule 3745-18-06(A). When firing refinery fuel gas, OAC rule 3745-18-06(E) does not establish an emission limitation because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-18-01(B)(14).

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- e. The fugitive VOC emissions from the KHT unit are subject to the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of OAC rule 3745-21-09(T) - Leaks from petroleum refinery equipment; OAC rule 3745-21-09(DD) - Leaks from process units that produce organic chemicals; 40 CFR, Part 60, Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry); 40 CFR, Part 60, Subpart GGG (Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries; 40 CFR, Part 61, Subpart V (National Emission Standard for Equipment Leaks - Fugitive Emission Sources); and 40 CFR, Part 63, Subpart CC (Petroleum Refinery MACT Standards).

The permittee has submitted an alternative leak detection and repair (LDAR) monitoring plan pursuant to OAC rule 3745-21-09(T)(4) and 40 CFR, Part 63, Subpart CC. The permittee shall include the fugitive VOC emission sources for the KHT into the alternative LDAR plan, which has been incorporated into the facilities TV permit.

c) Operational Restrictions

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

[OAC rule 3745-77-07(A)(1) and PTI No. P0107028]

- (2) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu/hr or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

- (3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

- (4) Pursuant to 40 CFR 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.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107028]

- (2) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (162 ppm) of H₂S in the refinery fuel gas (and if applicable, combined fuel firing as noted in b)(2)b. above), the permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit. The monitoring shall be conducted in accordance with 40 CFR 60.105(a)(4), as follows:

- a. The span value for this instrument is a ppm equivalent of 300 ppmv of H₂S.
- b. 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 H₂S in the fuel gas being burned.
- c. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an annual relative accuracy test audit (RATA) for the H₂S continuous emission monitoring equipment. Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0107028]

- (3) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the Ohio EPA Northwest District Office upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0107028]

- (4) The permittee shall operate and maintain existing equipment to continuously monitor and record hydrogen sulfide from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, parts per million of H₂S on an instantaneous (1-minute) basis, emissions of H₂S in units of the applicable standard as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0107028]

- (5) The permittee shall maintain a quality assurance/quality control plan for the refinery fuel gas H₂S continuous emission monitor designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F. A logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0107028]

- (6) The permittee shall conduct a root cause analysis and a corrective action analysis for a fuel gas combustion device, each exceedance of an applicable short-term emissions limit in 40 CFR 60.102a(g)(1) if the SO₂ 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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0107028]

- (7) 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 d)(6).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0107028]

- (8) The permittee shall implement the corrective action(s) identified in the corrective action analysis conducted pursuant to 40 CFR 60.103a(d) in accordance with the applicable requirements in 40 CFR 60.103a paragraphs (e)(1) through (3).

- a. 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 40 CFR 60.108a(c)(6)(ix);
- b. 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; and
- c. 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 40 CFR 60.108a(c)(6)(x).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0107028]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0107028]

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any H₂S CEMS downtime while the emissions unit was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of source and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0107028]

- (3) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of all H₂S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis and H₂S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis

The notification shall include a copy of the record and shall be sent to the Director (the Ohio EPA, Northwest District Office) by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0107028]

- (4) If there were no concentrations of H₂S in the refinery fuel gas (or combined fuel stream, if applicable) that exceeded the value specified in section b)(2)e. during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times.

These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0107028]

- (5) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):
 - a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[OAC rule 3745-77-07(C)(1); 40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); and 40 CFR 63.9(b) through (h)]

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:

0.020 lb of PE/MMBtu heat input

Applicable Compliance Method:

The permittee may demonstrate compliance with this limitation by multiplying the worst case fuel flow rate of 0.0775 MMscf/hr multiplied by the PM10 emission factor of 7.60 lbs/MMscf (AP-42 Table 1.4-2 [7/98]), and divided by the maximum heat input rate of the unit (38.75 MMBtu/hr).

If required, compliance with the lb/MMBtu limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(9).

[OAC rule 3745-77-07(C)(1) and PTI No. P0107028]

b. Emission Limitation:

0.060 lb of NOx/MMBtu heat input

Applicable Compliance Method:

The emission limitation is based on the burner manufacturer's emissions data for the low NOx burners to be installed on this emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation pursuant to Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107028]

c. Emission Limitation:

0.168 lb of CO/MMBtu heat input

Applicable Compliance Method:

This emission limitation represents the potential to emit, and is based on the worst case fuel flow rate of 0.0775 MMscf/hr multiplied by the CO emission factor of 84.0 lbs/MMscf (AP-42 Table 1.4-2 [7/98]), and divided by the maximum heat input rate of the unit (38.75 MMBtu/hr).



If required, the permittee shall demonstrate compliance with the hourly emission limitation pursuant to Methods 1 through 4, and 10 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107028]

d. Emission Limitation:

Refinery fuel gas that contains H₂S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis and H₂S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis in the refinery fuel gas, or combined fuel stream if applicable.

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated in accordance with the continuous emission monitoring requirements specified in section d)(2) through d)(8). If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0107028]

e. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation pursuant to the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0107028]

g) Miscellaneous Requirements

- (1) None.

16. B035, B & W Boiler (PR 170027)

Operations, Property and/or Equipment Description:

Natural Gas and refinery fuel gas fired B & W 800 psi. steam boiler, 249.9 MMBtu/hr maximum heat input

- 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 No. P0116164, modification issued 5/20/14)	<u>Emissions from combustion products:</u> 0.038 lb of nitrogen oxides (NOx)/MMBtu of actual heat input and 41.59 tons NOx/yr 0.0375 lb of carbon monoxide (CO)/MMBtu of actual heat input and 41.05 tons CO/yr 0.00745 lb of particulate matter less than 10 microns in size (PM10)/MMBtu of actual heat input and 8.16 tons PM10/yr 0.0054 lb of volatile organic compounds (VOC)/MMBtu of actual heat input and 5.91 tons VOC/yr 7.70 lbs of sulfur dioxide (SO2) per hour and 12.46 tons SO2/yr 142,972 tons of carbon dioxide equivalent compounds (CO2e)/yr See b)(2)a.
b.	ORC 3704.03(T)	See b)(2)b.
c.	OAC rule 3745-31-05(A)(3) (PTI No. P0116164, modification issued 5/20/14)	BAT requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the emissions of PM10 and VOC from this air



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		contaminant source since the controlled potential to emit (PTE) is less than 10 tons per year taking into consideration federally enforceable requirements established under OAC rule 3745-31-05(D).
d.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity as a six-minute average, except as provided by rule
e.	OAC rule 3745-17-10(B)(1)	See b)(2)c.
f.	OAC rule 3745-18-08(C)(1)	0.15 lb of sulfur dioxide (SO ₂)/MMBtu of actual heat input [See b)(2)d.]
g.	OAC rule 3745-110-03	See b)(2)e.
h.	40 CFR, Part 60, Subpart Db [40 CFR 60.40b – 60.49b]	See b)(2)e.
i.	40 CFR, Part 60, Subpart Ja [40 CFR 60.100a – 60.109a]	See b)(2)f. and b)(2)g.
j.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
k.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480 – 63.7575] [In accordance with 63.7575, this emissions unit is a new unit designed to burn gas 1 fuels located at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	See b)(2)h., c)(2) through c)(4), d)(9), e)(6) and e)(7). 63.7500(a) Table 3 requirements
l.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The federally enforceable emission limitations in b)(1)a. were established for the purpose of limiting potential to emit (PTE) to avoid Prevention of Significant Deterioration (PSD) requirements. The federally enforceable emission limitations are based on the operational restriction contained in c)(1) which requires a limitation of the annual heat input.
- b. BAT requirements under ORC 3704.03(T) have been determined to be compliance with the emission limitations of 0.038 lb of NO_x/MMBtu of actual heat input, 0.0375 lb of CO/MMBtu of actual heat input and 7.70 lbs of SO₂ per hour, established pursuant to OAC rule 3745-31-05(D).

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- c. The emission limitation established by this rule is less stringent than the PM₁₀ limitation established pursuant to OAC rule 3745-31-05(D) All emissions of particulate matter from this emissions unit are PM₁₀.
- d. The emission limitation established by this rule is less stringent than the SO₂ emissions limitations established pursuant to 40 CFR, Part 60, Subpart Ja.
- e. The requirements of this rule are less stringent than those required under ORC 3704.03(T).
- f. This emissions unit is an affected fuel gas combustion device, pursuant to the definition in 40 CFR 60.101a and is therefore subject to the emissions limitations in 40 CFR 60.102a. Pursuant to 40 CFR 60.102a(g)(1)(ii), the permittee has elected to comply with the SO₂ emissions limitations in this rule by monitoring the refinery fuel gas quality with a hydrogen sulfide (H₂S) continuous emission monitor.

Therefore, the permittee shall not burn in this emissions unit any fuel gas that contains H₂S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis and H₂S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis.

- g. Since this emissions unit has a rated capacity greater than 40 MMBtu/hr, it is subject to the NO_x emission limitation in 40 CFR 60.102a(g)(2). However, this emission limitation is less stringent than the limitation of 0.038 lb of NO_x/MMBtu of actual heat input established pursuant to OAC rule 3745-31-05(D).
- h. Emissions unit B035 is not subject to emission limits under 40 CFR, Part 63, Subpart DDDDD but shall meet the tune-up requirements identified in Table 3 of that subpart as applicable to the unit and outlined in condition c)(2) or (3) below.
- i. Each continuous NO_x monitoring system shall be certified to meet the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 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 (CGAs) or relative accuracy audits (RATAs) as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60.

- j. Each continuous O₂ monitoring system shall be certified to meet the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 3. At least 45 days before commencing certification testing of the continuous O₂ monitoring

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system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of O₂ 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 O₂ monitoring system must be kept on site and available for inspection during regular office hours.

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

- k. 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 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 CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60.

- l. The NO_x, O₂ and hydrogen sulfide continuous emission monitoring systems 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.
- m. PTI No. P0108137 allowed for the installation of emissions unit B035 to serve as a replacement for two existing emissions units, B005 – Reformate Splitter Reboiler Furnace and B009 – Riley Boiler. The permit review for this new boiler took credit for a decrease in emissions from the shutdown of this old reboiler furnace and old boiler. As a replacement, startup of the new boiler can occur prior to the shutdown of the Reformate Splitter Reboiler Furnace and Riley Boiler. However, the Reformate Splitter Reboiler Furnace was permanently shut down on 8/31/2011 and Riley Boiler was permanently shut down on 12/29/2013. Both the Reformate Splitter Reboiler Furnace and the Riley Boiler must be shut down before the end of the shakedown period of the new boiler, not to exceed 180 days after its initial startup.
- n. The original design maximum heat input for emissions unit B035 was 337 MMBtu/hr. After further evaluation by the permittee, it was determined that a smaller burner capacity could accommodate the expected maximum steam requirement, and thus, this boiler will be constructed with a maximum burner

capacity of 249.9 MMBtu/hr. PTI No. P0116164 addressed the reduction in maximum burner capacity.

c) Operational Restrictions

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

[OAC rule 3745-77-07(A)(1) and PTI No. P0116164]

- (2) Boilers without a continuous oxygen trim system and with a heat input capacity greater than 10 MMBtu/hr must have a tune-up and inspection completed annually (no more than 13 months after the previous tune-up and inspection) as specified in 40 CFR 63.7540(a)(10) and Table 3 #3 of Subpart DDDDD. The inspection includes measuring the concentration of CO in the effluent gas stream in ppmv and oxygen in volume percent, at high fire or typical operating load and both before and after the tune-up; and maintaining a record/report of the results of the inspection and the fuel(s) burned in the boiler during the year if capable of burning more than one type of fuel. For a new boiler, an initial tune-up must be completed within the applicable annual, biennial, or 5-year schedule, as specified in Table 3 to the subpart, following initial startup of the unit.

[40 CFR 63.7540(a)(10) and (13); 40 CFR 63.7515(d); 40 CFR 63.7510(g); 40 CFR, Part 63, Subpart DDDDD, Table 3 #3; OAC rule 3745-77-07(A)(1) and PTI No. P0116164]

- (3) Boilers with a continuous oxygen trim system that maintains an optimum air to fuel ratio must have a tune-up and inspection completed every 5 years (no more than 61 months after the previous tune-up and inspection) as specified in 40 CFR 63.7540(a)(10) and Table 3 #1 of Subpart DDDDD. The inspection includes measuring the concentration of CO in the effluent gas stream in ppmv and oxygen in volume percent, at high fire or typical operating load and both before and after the tune-up; and maintaining a record/report of the results of the inspection and the fuel(s) burned in the boiler during the year if capable of burning more than one type of fuel. For a new boiler, an initial tune-up must be completed within the applicable annual, biennial, or 5-year schedule, as specified in Table 3 to the subpart, following initial startup of the unit.

[40 CFR 63.7540(a)(10) and (13); 40 CFR 63.7515(d); 40 CFR 63.7510(g); 40 CFR, Part 63, Subpart DDDDD, Table 3 #1; OAC rule 3745-77-07(A)(1) and PTI No. P0116164]

- (4) The boiler and associated air pollution control and monitoring equipment must be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions.

[40 CFR 63.7500(a)(3); OAC rule 3745-77-07(A)(1) and PTI No. P0116164]

d) Monitoring and/or Recordkeeping Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- (2) Prior to the installation 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 2. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the Director (the Northwest District Office) upon request.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- (3) 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 all 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, with no resolution less than one data point per minute required;
- b. emissions of NO_x in units of the applicable standard(s) over the appropriate averaging period;
- c. results of quarterly CGAs;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required RATA(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).

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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- (4) Prior to the installation of the continuous O₂ 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 3. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous O₂ monitoring system meets the requirements of Performance Specification 3. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the Director (the Ohio EPA, Northwest District Office) upon request.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- (5) The permittee shall operate and maintain equipment to continuously monitor and record O₂ emitted from this emissions unit in percent O₂. 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 O₂ monitoring system including, but not limited to:

- a. percent O₂ for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. results of quarterly CGAs;
- c. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- d. results of required RATA(s);
- e. hours of operation of the emissions unit, continuous O₂ monitoring system;
- f. the date, time, and hours of operation of the emissions unit without the continuous O₂ monitoring system;
- g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous O₂ monitoring system; as well as,
- h. the reason (if known) and the corrective actions taken (if any) for each such event in (f) and (g).

All valid data points generated and recorded by the continuous emission monitoring (CEMS) and data acquisition and handling system shall be used in the calculation of the percent O₂ over the appropriate averaging period.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- (6) 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 Ohio EPA, Northwest District Office) upon request.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- (7) 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 data obtained by the continuous hydrogen sulfide monitoring system including, but not limited to:

- a. emissions of hydrogen sulfide in ppm for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. results of quarterly CGAs;
- c. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- d. results of required RATA(s), including results in units of the applicable standard(s);
- e. hours of operation of the emissions unit, continuous hydrogen sulfide monitoring system, and control equipment;
- f. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous hydrogen sulfide monitoring system;
- g. 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,
- h. the reason (if known) and the corrective actions taken (if any) for each such event in (f) and (g).

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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- (8) The permittee is subject to the monitoring requirements specified in 40 CFR 60.48b and the recordkeeping requirements specified in 40 CFR 60.49b.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Db; and PTI No. P0116164]

- (9) The permittee shall maintain records of the following information for the boiler in order to meet the record keeping requirements of 40 CFR 63.7525, 40 CFR 63.7555, 40 CFR 63.10(b) and (c), and to demonstrate compliance with the Subpart DDDDD:

- a. a copy of each notification and report that is submitted to comply with Part 63 Subpart DDDDD, including all documentation supporting the Initial Notification and all subsequent Notifications of Compliance Status and/or semiannual compliance reports; and

- b. records of the calendar date, time, occurrence, and duration of each startup and shutdown; and the record of the type(s) and amount(s) of fuels burned during each startup and shutdown.

These records shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[40 CFR 63.7555; 40 CFR 63.7560; OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- (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 Ohio EPA, Northwest District Office, 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 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 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)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);

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- vi. the total operating time (hours) of the emissions unit;
- vii. the total operating time of the continuous NOx monitoring system CEMS while the emissions unit was in operation;
- viii. results and dates of quarterly CGAs;
- ix. unless previously submitted, results and dates of the (RATAs), including results in units of the applicable standard(s), (during appropriate quarter(s));
- x. unless previously submitted, the results of any RATA showing the continuous NOx monitor CEMS out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction** of the continuous NOx monitoring system, emissions unit, and/or control equipment;
- xii. the date, time, and duration of any downtime** of the continuous NOx monitoring system and/or control equipment while the emissions unit was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (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) CEMS has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- (3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous O2 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 Ohio EPA, Northwest District Office, documenting all instances of continuous O2 monitoring system downtime and malfunction while the emissions unit was on line.
 - 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;

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- ii. the manufacturer and model number of the continuous O₂ 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 total operating time (hours) of the emissions unit;
- v. the total operating time of the continuous O₂ monitoring system while the emissions unit was in operation;
- vi. results and dates of quarterly CGAs;
- vii. unless previously submitted, results and dates of the RATAs (during appropriate quarter(s));
- viii. unless previously submitted, the results of any RATA showing the continuous O₂ monitor out-of-control and the compliant results following any corrective actions;
- ix. the date, time, and duration of any/each malfunction* of the continuous O₂ monitoring system while the emissions unit was in operation;
- x. the date, time, and duration of any downtime* of the continuous O₂ monitoring system while the emissions unit was in operation; and
- xi. 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.

* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- (4) 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 Ohio EPA, Northwest District Office, 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 exceedance, as well as, the reason (if known) and the corrective actions taken (if

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any) for each exceedance. 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 H₂S and other associated CEMS;
 - 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 CGAs;
 - viii. unless previously submitted, results and dates of the RATAs, including results in units of the applicable standard(s), (during appropriate quarter(s));
 - ix. unless previously submitted, the results of any RATA showing the continuous hydrogen sulfide monitor out-of-control and the compliant results following any corrective actions;
 - x. the date, time, and duration of any/each malfunction** of the continuous hydrogen sulfide monitoring system, emissions unit, and/or control equipment;
 - xi. 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; and
 - xii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (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

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- (5) The permittee is subject to the reporting requirements specified in 40 CFR 60.49b.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Db; and PTI No. P0116164]

- (6) The permittee shall submit, to the Ohio EPA, Northwest District Office, the following notifications in accordance with the applicable requirements of 40 CFR 63.7545, 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and (6), and 40 CFR 63.9(b) through (h):

- a. semiannual, annual, or 5 year (as applicable) compliance reports containing the information identified in 40 CFR 63.7550.

[40 CFR 63.7545; 40 CFR 63.7530(e), (f), and (g); 40 CFR 63.9(b) through (h); OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- (7) The permittee shall submit each applicable report in Table 9 to Part 63, Subpart DDDDD. For boilers that are subject only to a requirement to conduct an annual, biennial, or 5-year tune-up according to 40 CFR 63.7540(a)(10), (11), or (12) respectively, and not subject to emission limits or operating limits, only an annual, biennial, or 5-year compliance report is required.

Unless otherwise approved, the first compliance report must be postmarked or submitted no later than July 31 or January 31, following the end of the first calendar half after the compliance date. The first annual, biennial, or 5-year compliance report must be postmarked or delivered no later than January 31. Each subsequent compliance report must be submitted in accordance with the same applicable schedule; and, except where only required to submit annual, biennial, or 5-year reports, must cover each semiannual reporting period from January 1st through June 30th and from July 1 through December 31 of each year.

[40 CFR 63.7550(a) through (e); 40 CFR 63.7535(d); 40 CFR 63.7540(b); 40 CFR 63.7515(f); 40 CFR, Part 63, Subpart DDDDD, Tables 8 and 9; OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

f) Testing Requirements

- (1) 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 5 years after permit issuance and should be performed in conjunction with the NO_x RATA cycle.
- b. The emission testing shall be conducted to demonstrate compliance with the lb of NO_x/MMBtu of actual heat input emission limitation.

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

For NO_x – Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A; and

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

- c. During the emissions testing, the emissions unit shall be operated under operational conditions approved in advance by the appropriate Ohio EPA District Office or local air agency. Operational conditions that may need to be approved include, but are not limited to, the production rate, the type of material processed, material make-up (solvent content, etc.), or control equipment operational limitations (burner temperature, precipitator voltage, etc.). In general, testing shall be done under “worst case” conditions expected during the life of the permit. As part of the information provided in the “Intent to Test” notification form described below, the permittee shall provide a description of the emissions unit operational conditions they will meet during the emissions testing and describe why they believe “worst case” operating conditions will be met. Prior to conducting the test(s), the permittee shall confirm with the Ohio EPA Northwest District Office that the proposed operating conditions constitute “worst case”. Failure to test under the approved conditions may result in Ohio EPA not accepting the test results as a demonstration of compliance.

- d. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northwest District Office. 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).

- e. Personnel from the Ohio EPA Northwest District Office 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.
- f. 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 Ohio EPA Northwest District Office 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 Ohio EPA Northwest District Office.

[OAC rule 3745-77-07(C)(1) and PTI No. P01116164]

- (2) Ongoing compliance with the O₂ monitoring requirements 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 demonstration of compliance with the quality assurance/quality control plan, which shall meet all of the testing and recertification requirements of 40 CFR, Part 60.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- (3) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- (4) 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. Emissions Limitations:

0.038 lb of NO_x/MMBtu of actual heat input and 41.59 tons NO_x/yr

Applicable Compliance Method:

The lb of NO_x/MMBtu of actual heat input emission limitation represents the potential to emit of this unit and is based on manufacturer's data. Compliance with the lb of NO_x/mmBtu of actual heat input shall be determined in accordance with the testing requirements in f)(1).

Ongoing compliance with this limitation shall be based upon the monitoring and record keeping requirements specified in sections d)(3) and d)(5). If required, the permittee shall demonstrate compliance with this emission limitation pursuant to Methods 3A and 7 of 40 CFR, Part 60, Appendix A.

The tons NO_x per year limitation was established by multiplying the lb/MMBtu limitation, times the rated boiler heat input and 8,760 hours per year, and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/MMBtu limitation, compliance with the tons per year limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

- b. Emissions Limitations:

0.0375 lb of CO/MMBtu of actual heat input and 41.05 tons CO/yr

Applicable Compliance Method:

The lb of CO/MMBtu of actual heat input emission limitation represents the potential to emit of this unit and is based on manufacturer's data.

If required, the permittee shall demonstrate compliance with this emission limitation pursuant to Methods 1 - 4 and 10 of 40 CFR, Part 60, Appendix A.



The tons CO per year limitation was established by multiplying the lb/MMBtu limitation, times the rated boiler heat input and 8,760 hours/year, and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/MMBtu limitation, compliance with the tons per year limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

c. Emissions Limitations:

0.00745 lb of PM10/MMBtu of actual heat input and 8.16 tons PM10/yr

Applicable Compliance Method:

The lb of PM10/MMBtu

of actual heat input emission limitation represents the potential to emit (PTE) of this unit. The PTE is based on a ratio of heat content for refinery fuel gas to natural gas of 875 to 1,020 Btu/scf and a PM10 emission factor of 7.60 lbs/MMscf (AP-42 Table 1.4-2 [7/98]).

If required, the permittee shall demonstrate compliance with this emission limitation pursuant to Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M.

The tons PM10 per year limitation was established by multiplying the lb/MMBtu limitation, times the rated boiler heat input and 8,760 hours/year, and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/MMBtu limitation, compliance with the tons per year limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

d. Emissions Limitations:

0.0054 lb of VOC/MMBtu of actual heat input and 5.91 tons VOC/yr

Applicable Compliance Method:

The lb of VOC/MMBtu of actual heat input emission limitation represents the potential to emit (PTE) of this unit. The PTE is based on a ratio of heat content for refinery fuel gas to natural gas of 875 to 1,020 Btu/scf and a VOC emission factor of 5.5 lbs/MMscf (AP-42 Table 1.4-2 [7/98]).

If required, the permittee shall demonstrate compliance with this emission limitation pursuant to Methods 1 – 4 and 18, 25, or 25A of 40 CFR, Part 60, Appendix A.

The tons VOC per year limitation was established by multiplying the lb/MMBtu limitation, times the rated boiler heat input and 8,760 hours/year, and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/MMBtu limitation, compliance with the tons per year limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

e. Emissions Limitations:

7.70 lbs of SO₂/hr and 12.46 tons SO₂/yr

Applicable Compliance Method:

The short term limitation of 7.70 lbs of SO₂ per hour was derived by multiplying the maximum short term boiler heat input of 249.9 MMBtu/hr times an SO₂ emission factor of 26.9 lbs/ MMscf of refinery fuel gas fired (based on the maximum short term SO₂ limit in 40 CFR, Part 60, Subpart Ja of 20 ppmv); and then dividing by the refinery fuel gas heat content of 875 Btu per standard cubic foot.

Compliance with the hourly emission limitation shall be demonstrated by complying with the short term hydrogen sulfide content in the refinery fuel gas by monitoring and record keeping requirements in sections d)(7) and d)(8) for this emissions unit.

The annual limitation of 12.46 tons SO₂ per year was derived by multiplying the rated boiler heat input of 249.9 MMBtu/hr times an emission factor of 9.96 lbs/MMscf of refinery fuel gas fired (based on the maximum long term SO₂ limit in 40 CFR, Part 60, Subpart Ja of 8 ppmv; then dividing by the refinery fuel gas heat content of 875 Btu Btu/scf; multiplying by a maximum operating schedule of 8,760 hours per year; and dividing by 2,000 lbs per ton.

Compliance with the tons per year limitation shall be demonstrated by complying with the long term hydrogen sulfide content in the refinery fuel gas by monitoring and record keeping requirements in sections d)(7) and d)(8) for this emissions unit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

f. Emission Limitation:

142,972 tons of CO₂e/yr

Applicable Compliance Method:

The emission limitation was derived by multiplying the summation of emission factors (in kilograms/MMBtu) for carbon dioxide, methane and nitrous oxides in Tables C-1 and C-2 of 40 CFR, Part 98 for fuel gas and petroleum times the total boiler heat input; and applying the appropriate global warming potential values from Table A-1 of 40 CFR, Part 98; to obtain the total emissions of carbon dioxide equivalent compounds.

Since the tons of CO₂e per year emission limitation is based on the potential to emit, no monitoring or record keeping requirements are necessary to demonstrate compliance with the emission limitation.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]



g. Emission Limitation:

Visible PE shall not exceed 20% opacity as a six-minute average except as provided by rule

Applicable Compliance Method:

If required, compliance with the visible emission limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

h. Emissions Limitations:

The permittee shall not burn in this emissions unit any fuel gas that contains H₂S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis and H₂S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in sections d)(6) and d)(7) for this emissions unit. If required, the permittee shall determine compliance with the H₂S emissions limitations by using Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0116164]

g) Miscellaneous Requirements

1. None

17. B036, FCC Furnace - Process Heater

Operations, Property and/or Equipment Description:

New Refinery Fuel Gas or Natural Gas Fired FCC Furnace, 76.8 million Btu/hr maximum heat input

- 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 operations(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. 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 No. P0124219, issued 5/15/18)	0.0075 lb of particulate emissions/particulate matter less than or equal to 10 microns in diameter/particulate matter less than or equal to 2.5 microns in diameter (PE/PM10/PM2.5)/MMBtu of actual heat input and 2.51 tons of PE/PM10/PM2.5/rolling, 12-month period 0.0054 lb of volatile organic compounds (VOC)/MMBtu of actual heat input and 1.81 tons of VOC/rolling, 12-month period 0.150 lb nitrogen oxides (NOx)/MMBtu of actual heat input based upon a 3-hour block rolling average [See b)(2)k.] 0.03 lb of NOx/mmBtu of actual heat input based upon a 365-day rolling average; 0.040 lb of NOx/MMBtu of actual heat input based upon a 30-day rolling average and 10.09 tons NOx/rolling, 12-month period 0.04 lb of carbon monoxide (CO)/MMBtu of actual heat input based upon a 365-day rolling average and 13.46 tons CO/rolling, 12-month period

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		6.53 tons of sulfur dioxide (SO ₂)/rolling, 12-month period See b)(2)a., b)(2)b. and b)(2)l.
b.	ORC 3704.03(T)	See b)(2)c.
d.	OAC rule 3745-31-05(A)(3)(a)(ii)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM ₁₀ /PM _{2.5} , VOC and SO ₂ emissions from this air contaminant source since the potential to emit is less than 10 tons/year.
e.	OAC rule 3745-17-10(B)(1)	0.020 lb of particulate emissions (PE) per million Btu of actual heat input [See b)(2)i.]
f.	OAC rule 3745-18-06(E)	See b)(2)g.
g.	OAC rule 3745-17-07(A)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
h.	40 CFR, Part 63, Subpart DDDDD [40 CFR 63.7480 - 63.7575] [In accordance with 63.7575, this emissions unit is in the 'unit designed to fire Gas 1 fuels' subcategory new process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/control requirements specified in this section.]	See b)(2)k., c)(2) through c)(5), e)(3) and e)(4) 63.7500(a) Table 3 requirements
i.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 10 to 40 CFR, Part 63, Subpart DDDDD – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
j.	40 CFR, Part 60, Subpart Ja [40 CFR 60.100 – 60.109]	See b)(2)g. through b)(2)h., d)(2) through d)(17) and e)(5) through e)(8)
k.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
l.	OAC rule 3745-110	See b)(2)j.

(2) Additional Terms and Conditions

- a. The federally enforceable emissions limitations in b)(1)a. were established for the purpose of representing the potential to emit of this emissions unit.

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- b. The following federally enforceable emissions limitations were established for purposes of demonstrating compliance with SO₂ modeling associated with the permittee's Crude Oil Flexibility (COF) project:
- i. The H₂S concentration limits in the refinery fuel gas (or if, applicable, combined fuel firing) burned shall not exceed of 60 parts per million by volume (ppmv), (dry basis, corrected to 0-percent excess air) determined hourly on a 3-hour rolling average basis;
 - ii. The H₂S concentration limits in the refinery fuel gas (or if, applicable, combined fuel firing) burned shall not exceed of 60 ppmv (dry basis, corrected to 0-percent excess air) determined hourly on a 365-day rolling average basis; and
 - iii. 6.53 tons of SO₂/rolling, 12-month period.
- c. The BAT requirements for NO_x and CO emissions under ORC 3704.03(T) have been determined to be compliance with the following:
- i. 0.03 lb of NO_x/MMBtu of actual heat input based upon a 365-day rolling average emission limitation as established in b)(1)a.; and
 - ii. 0.04 lb of CO/MMBtu of actual heat input based upon a 365-day rolling average emission limitation as established in b)(1)a.
- d. The permittee shall not burn any refinery fuel gas in this emissions unit that contains H₂S in excess of the following limitations:
- i. 162 ppmv, dry basis determined hourly on a 3-hour rolling average basis and H₂S in excess of 60 ppmv, dry basis determined daily on a 365-successive calendar day rolling average basis. This H₂S standard in 40 CFR 60.102a(g)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition of 40 CFR 60.101(d); or
 - ii. stack SO₂ shall not exceed 20 ppmv (dry basis, corrected to 0-percent excess air) determined hourly on a 3-hour rolling average basis and SO₂ in excess of 8 ppmv (dry basis, corrected to 0-percent excess air), determined daily on a 365-successive calendar day rolling average basis.
- The H₂S concentration limit of 162 ppmv, dry basis specified by 40 CFR, Part 60, Subpart Ja is less stringent than the concentration limits of 60 ppmv, dry basis established by OAC rule 3745-31-05(D).
- e. The permittee shall not discharge to the atmosphere any emissions of NO_x in excess of the applicable limits in NSPS Subpart Ja.
- i. The permittee shall comply with the limit in either paragraph b)(2)d.i.(a) or (b). The permittee may comply with either limit at any time, provided that the appropriate parameters for each alternative are monitored as specified

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in 40 CFR 60.107a; if fuel gas composition is not monitored as specified in 40 CFR 60.107a(d), the permittee must comply with the concentration limits in paragraph b)(2)d.i. as follows:

- (a) 40 ppmv (dry basis, corrected to 0-percent excess air) determined daily on a 30-day rolling average basis; or
- (b) 0.040 lb/MMBtu higher heating value basis determined daily on a 30-day rolling average basis.

The permittee has elected to comply with NO_x limits in permit condition b)(2)d.i.(b). 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)(2), this will be allowed upon notification to Ohio EPA. The permittee shall submit an administrative permit modification request to Ohio EPA prior to the change.

- f. The permittee shall conduct a root cause analysis and corrective action plan of each exceedance of an applicable short-term emissions limit in §60.102a(g)(1) if the SO₂ discharge to the atmosphere is 500 lbs 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.
- g. This emissions unit is fuel burning equipment which combusts refinery fuel gas or natural gas. When firing natural gas, the emissions unit is exempt from OAC rule 3745-18-06 per OAC rule 3745-18-06(A). When firing refinery fuel gas, OAC rule 3745-18-06(E) does not establish an emission limitation because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-18-01(B)(14).
- h. PTI No. P0124219 addressed the replacement of the FCC furnace (B016) with a new FCC furnace (B036). The NO_x emission limitation of 0.150 lb/MMBtu of actual heat input based upon a 3-hour block rolling average was initially established as part of B016 (FCC furnace) in PTI P0116161. The permittee has requested to retain the 0.150 lb/MMBtu of actual heat input emission limitation established to reflect the final voluntary limits to meet a system-wide average NO_x performance level of 0.044 lb per MMBtu.

The NO_x emission limitations of 0.03 lb of NO_x/mmBtu of actual heat input based upon a 365-day rolling average; 0.040 lb of NO_x/MMBtu of actual heat input based upon a 30-day rolling average, and 10.09 tons NO_x/rolling, 12-month period established pursuant to OAC rule 3745-31-05(D) are more stringent than the previous NO_x emission limitation established pursuant to OAC rule 3745-31-05(D).

- i. The lb PE/mmBtu emission limitation established pursuant to OAC rule 3745-17-11 is less stringent than the lb/PE emission limitation established pursuant to OAC rule 3745-31-05(D).

- j. Pursuant to OAC rule 3745-110-01(B)(22), this emissions unit is a new mid-size boiler. The emissions limitation for NO_x in OAC rule 3745-110-03(B) are less stringent than the NO_x emission limitations established pursuant to OAC rule 3745-31-05(D).
 - k. This emissions unit is subject to the initial notification requirements of 40 CFR, Part 63, Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, or site-specific monitoring plan requirements of Subpart DDDDD or any other requirements in 40 CFR, Part 63, Subpart A).
 - l. It is assumed that all PE are equivalent to both PM₁₀ and PM_{2.5}.
- c) Operational Restrictions
- (1) The permittee shall burn only refinery fuel gas or natural gas in this emissions unit. The sulfur content of the refinery fuel gas or natural gas burned in this emissions unit shall comply with the allowable SO₂ emission limitation specified in section b)(1).

[OAC rule 3745-77-07(A)(1) and PTI No. P0124219]
 - (2) A process heater or boiler in the Gas 1 subcategory with heat input capacity of 10 MMBtu per hour or greater shall conduct an annual tune-up of the boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). This tune-up 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.

[40 CFR, Part 63, Subpart DDDDD; Table 3 #3; OAC rule 3745-77-07(A)(1) and PTI No. P0124219]
 - (3) A process heater or boiler in the Gas 1 subcategory that has a continuous oxygen trim system that maintains an optimum air to fuel ratio or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. You may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

[40 CFR, Part 63, Subpart DDDDD; Table 3 #3; OAC rule 3745-77-07(A)(1) and PTI No. P0124219]
 - (4) Pursuant to 40 CFR 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.

[40 CFR, Part 63, Subpart DDDDD; Table 3 #3; OAC rule 3745-77-07(A)(1) and PTI No. P0124219]

- (5) The permittee shall have a one-time energy assessment performed by a qualified energy assessor, pursuant to work practice standards 4.a through 4.h in Table 3 of 40 CFR, Part 63, Subpart DDDDD.

[40 CFR, Part 63, Subpart DDDDD; Table 3 #3; OAC rule 3745-77-07(A)(1) and PTI No. P0124219]

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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0124219]

- (2) In order to demonstrate compliance with the emission limitations of:

- a. 60 ppmv, (dry basis, corrected to 0-percent excess air) determined hourly on a 3-hour rolling average basis [and if applicable, combined fuel fired as noted in b)(2)b. above];
- b. 60 ppmv (dry basis, corrected to 0-percent excess air) determined hourly on a 365-day rolling average basis [and if applicable, combined fuel fired as noted in b)(2)b. above]; and
- c. 162 ppmv H₂S, as a 3-hour roiling average [and if applicable, combined fuel fired as noted in b)(2)g. above]

The permittee shall operate and maintain an instrument for continuously monitoring and recording H₂S from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements in 40 CFR 60.107a(a)(2) and 40 CFR 60.13, as follows:

- a. The span value for this instrument is 300 ppmv of H₂S.
- b. 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 H₂S in the fuel gas being burned.
- c. The performance evaluations for this H₂S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. The permittee shall conduct a relative accuracy test audit (RATA) for the H₂S continuous emission monitoring equipment in accordance with Method 15 of 40 CFR, Part 60, Appendix A-5, or other approved U.S. EPA methods shall be used for conducting the RATAs.

[40 CFR, Part 60, Subpart J; 40 CFR, Part 60, Subpart Ja OAC rule 3745-77-07(C)(1); and PTI No. P0124219]

- (3) A statement of certification of the existing H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA

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detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the Ohio EPA, Northwest District office upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

- (4) The permittee shall operate and maintain existing equipment to continuously monitor and record hydrogen sulfide from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the H₂S CEMS, including, but not limited to parts per million of H₂S for each cycle time of the analyzer, with no resolution less than one data point per minute required, emissions of H₂S in units of the applicable standard (grain/dscf and parts per million by volume) as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

- (5) The permittee shall maintain a written quality assurance/quality control (QA/QC) plan for the CEMS designed to ensure continuous valid and representative readings of H₂S. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. 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 (RATA) in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a relative accuracy test audit of the H₂S CEM at a minimum frequency of once every three years; and
- b. Conduct cylinder gas audits on the H₂S CEM during each quarter when a relative accuracy test audit is not conducted.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

- (6) In order to demonstrate compliance with the emission limitations of:
- a. 0.03 lb of NO_x/MMBtu of actual heat input based upon a rolling 365-day average;
 - b. 0.040 lb of NO_x/MMBtu of actual heat input, based upon a 30-day rolling average; and
 - c. 10.09 tons NO_x/rolling, 12-month period.

The permittee shall operate and maintain an instrument for continuously monitoring and recording NO_x from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements in 40 CFR, 60.13, as follows:

- i. The span value for this instrument is 45 parts per million of NO_x.
- ii. The performance evaluations for this NO_x monitor under 40 CFR 6.13 (c) shall use Performance Specification 2 of 40 CFR, Part 60, Appendix B. The permittee shall conduct an annual relative accuracy test audit (RATA) for the NO_x continuous emission monitoring equipment. Method 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

- (7) Each continuous NO_x monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 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.

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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

- (8) Prior to the installation 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 2. 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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

- (9) 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 NO_x 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 Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

- (10) The permittee shall maintain a written quality assurance/quality control (QA/QC) 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). 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:

- a. Conduct a relative test audit of the NO_x CEM annually; and
- b. Conduct cylinder gas audits on the NO_x CEM during each quarter when a relative accuracy test audit is not conducted.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

- (11) 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:

- a. emissions of NO_x in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of NO_x in all units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly cylinder gas audits;

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- 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 NOx 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 NOx 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 NOx monitoring system; as well as,
- i. the reason (if known) and the corrective actions taken (if any) for each such event in d)(11)g. and d)(11)h.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

- (12) The permittee shall install, operate and maintain equipment to continuously monitor and record oxygen (O₂) emitted from this emissions unit, in units of percent O₂. 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 O₂ monitoring system including, but not limited to:

- a. percent O₂ for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- 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);
- e. hours of operation of the emissions unit, continuous O₂ monitoring system;
- f. the date, time, and hours of operation of the emissions unit without the continuous O₂ monitoring system;
- g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous O₂ monitoring system; as well as,
- h. the reason (if known) and the corrective actions taken (if any) for each such event in d)(10)f. and d)(10)g.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

- (13) 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 O₂ monitoring system has been certified to meet the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 3. The letter/document of certification shall be made available to the Director (the Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0124219]

- (14) The permittee shall maintain a written quality assurance/quality control plan for the continuous O₂ monitoring system designed to ensure continuous valid and representative readings of O₂ 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 O₂ 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:

- a. Conduct a relative accuracy test audit of the O₂ CEM annually; and
- b. Conduct cylinder gas audits on the O₂ CEM during each quarter when a relative accuracy test audit is not conducted.

[OAC rule 3745-77-07(C)(1) and PTI No. P0124219]

- (15) 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 conditions specified in b)(2)i.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

- (16) The permittee shall implement the corrective action(s) identified in the corrective action analysis conducted pursuant to 40 CFR 60.103a(d) in accordance with the applicable requirements in 40 CFR 60.103a paragraphs (e)(1) through (3):

- a. 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 40 CFR 60.108a(c)(6)(ix);



- b. 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; and
- c. 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 40 CFR 60.108a(c)(6)(x).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

- (17) 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 O₂ monitoring system has been certified to meet the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 3. The letter/document of certification shall be made available to the Director (the Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0124219]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0124219]

- (2) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of:
 - a. All rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.105(a)(4) exceeds 162 ppmv, dry basis. The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages.
 - b. All rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS 60 ppmv, dry basis.
 - c. All rolling, 365-day periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.105(a)(4) exceeds 60 ppmv, dry basis. The rolling, 365-day average shall be determined as the arithmetic average of 365 contiguous daily averages.

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- d. All rolling, 365-day period during which the emission limitation of NO_x as measured by the CEMS exceeds 0.03 lb of NO_x/MMBtu of actual heat input.
- e. All rolling, 30-day period during which the emission limitation of NO_x as measured by the CEMS exceeds 0.040 lb of NO_x/MMBtu of actual heat input.
- f. All rolling, 365-day period during which the emission limitation of NO_x as measured by the CEMS exceeds 10.09 tons NO_x/rolling, 12-month period.

The notification shall include a copy of the record and shall be sent to the Director (the Ohio EPA, Northwest District Office) by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J; 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

- (3) This emissions unit is subject to the initial notification requirements of 40 CFR, Part 63, Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, or site-specific monitoring plan requirements of Subpart DDDDD or any other requirements in 40 CFR, Part 63, Subpart A.

The permittee shall submit the initial notification no later than 15 days after the actual date of startup of the affected source.

[40 CFR, Part 63, Subpart DDDDD; Table 3 #3; OAC rule 3745-77-07(A)(1) and PTI No. P0124219]

- (4) The permittee shall submit the one-time energy assessment report required in c)(5) above prior to the close of business on the 60th day following the completion of the assessment.

[40 CFR, Part 63, Subpart DDDDD; Table 3 #3; OAC rule 3745-77-07(A)(1) and PTI No. P0124219]

- (5) 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 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 January 31, April 30, July 31, and October 31 of each year and shall include the following:

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- 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. the date, time, and duration of any/each malfunction** of the continuous hydrogen sulfide monitoring system, emissions unit, and/or control equipment;
- xii. 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; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in (5)(b)(xi) and (5)(xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter and shall also include the information specified in 40 CFR 60.108a(d)(1) through d)(7).

* 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

** each downtime and malfunction event shall be reported regardless of whether there is an exceedance of any applicable limit

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

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

- (6) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NOx 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 NOx 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 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. The quarterly reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.
 - i. the facility name and address;
 - ii. the manufacturer and model number of the continuous NOx 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 NOx emissions for the calendar quarter (tons);
 - vi. the total operating time (hours) of the emissions unit;
 - vii. the total operating time of the continuous NOx 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));

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- x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NOx monitor out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction** of the continuous NOx monitoring system, emissions unit, and/or control equipment;
- xii. the date, time, and duration of any downtime** of the continuous NOx monitoring system and/or control equipment while the emissions unit was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in e)(6)(b)xi. and e)(6)(b)xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter and shall also include the information specified in 40 CFR 60.108a(d)(1) through d)(7).

* 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

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0124219]

- (7) If there are no concentrations of H₂S in the refinery fuel gas 60 ppmv, dry basis, as a 3-hour rolling average; or ppmv, dry basis, of H₂S, as a 365-day rolling average; or 0.040 lb of NO_x/MMBtu of actual heat input, as a 30-day rolling average, during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times.

[OAC rule 3745-77-07(C)(1) and PTI No. P0124219]

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 Limitations:

0.0075 lb of PE/PM₁₀/PM_{2.5}/million Btu of actual heat input and 2.51 tons of PE/PM₁₀/PM_{2.5}/rolling, 12-month period



Applicable Compliance Method:

The PE/PM₁₀/PM_{2.5} emission limitation above was developed by dividing the PM₁₀/PM_{2.5} emission factor from AP-42, Table 1.4-2 (dated 7/98) (7.6 lb/mm scf) by the average heating value for natural gas specified in AP-42, Table 1.4-2 (dated 7/98) (1,020 Btu/scf). Compliance is presumed by only using gaseous fuels as required in (c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Methods 1 through 4 of 40 CFR, Part 60, Appendix A and Methods 201, 201A and 202 of 40 CFR, Part 51, Appendix M. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the lb/million Btu emission limitation by the design heat input (76.8 million Btu/hr), then multiplying by the maximum operating schedule of 8,760 hrs/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/MMBtu emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0124219]

b. Emission Limitations:

0.0054 lb of VOC per MMBtu of actual heat input and 1.81 tons VOC/rolling, 12-month period

Applicable Compliance Method:

The VOC emission limitation above was developed by dividing the VOC emission factor from AP-42 Table 1.4-2 (dated 7/98) (5.5 lb/mm scf) by the average heating value for natural gas specified in AP-42, Table 1.4-2 (dated 7/98) (1020 Btu/scf). Compliance is presumed by only using gaseous fuels as required in c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Methods 1 through 4, 18, 25 or 25A, as appropriate, of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the lb per MMBtu of actual heat input emission limitation by the maximum heat input (76.8 MMBtu/hr), and then multiplying by the maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the lb per MMBtu emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0124219]

c. Emission Limitations:

0.03 lb of NO_x/mmBtu of actual heat input based upon a 365-day rolling average;
0.040 lb of NO_x/MMBtu of actual heat input based upon a 30-day rolling average;
and 10.09 tons NO_x/rolling, 12-month period

Applicable Compliance Method:

The permittee shall demonstrate compliance with the lbs of NO_x per MMBtu of actual heat input emission limitation by conducting emission testing in accordance with the requirements of section f)(2).

Compliance shall be based upon the record keeping requirements specified in sections d)(6) and d)(11) of this permit and the testing requirements of f)(2). If required, the permittee shall determine compliance with the NO_x emission limitation by using Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

The rolling, 12-month emission limitation was established by multiplying the 0.03 lb of NO_x per MMBtu of actual heat input emission limitation by the maximum heat input of 76.8 MMBtu/hr, then multiplying by the maximum annual hours of operation (8760 hrs/yr) and dividing by 2000 lbs/ton. Therefore, compliance is shown using the data collected as required in the monitoring and record keeping requirements section of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0124219]

d. Emission Limitations:

0.04 lb of CO/MMBtu of actual heat input based upon a 365-day rolling average
and 13.46 tons CO/rolling, 12-month period

Applicable Compliance Method:

Compliance with the lb of CO/MMBtu emission limitation shall be determined in accordance with the testing requirements in f)(2).

The rolling, 12-month emission limitation was established by multiplying the 0.04 lb CO/million Btu of actual heat input emission limitation by the maximum heat input of 76.8 million Btu/hr, then multiplying by the maximum annual hours of operation (8,760 hrs/yr) and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the lb/million Btu of actual heat input emission limitation, compliance with the rolling, 12-month period emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0124219]

e. Emission Limitation:

6.53 tons of SO₂/rolling, 12-month period



Applicable Compliance Method:

Compliance shall be based upon the fuel flow and the H₂S monitoring and record keeping requirements specified in sections d)(2) through d)(5) plus a 42 ppmv allowance for non-H₂S sulfur based on EPA published refinery test data, or more recent test value if future testing is performed.

If required, the permittee shall determine compliance with the SO₂ emission limitation by using Method 6 of 40 CFR, Part 60, Appendix A, or other U.S. EPA-approved methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0124219]

f. Emission Limitation:

60 ppmv, dry basis of H₂S in the refinery fuel gas, or combined fuel stream if applicable.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in sections d)(2) and d)(5) of this permit. If required, the permittee shall determine compliance with the H₂S emission limitation by using Method 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0124219]

g. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0124219]

- (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 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the lb of CO/MMBtu of actual heat input limitation and the lb of NO_x/MMBtu of actual heat input limitation.

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- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
- For CO – Methods 1 through 4 and 10 of 40 CFR, Part 60, Appendix A.
- For NO_x – Methods 1 through 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. During the emission testing, the emissions unit shall be operated under operational conditions approved in advance by the appropriate Ohio EPA District Office or local air agency. Operational conditions that may need to be approved include, but are not limited to, the production rate, the type of material processed, material make-up (solvent content, etc.), or control equipment operational limitations (burner temperature, precipitator voltage, etc.). In general, testing shall be done under “worst case” conditions expected during the life of the permit. As part of the information provided in the “Intent to Test” notification form described below, the permittee shall provide a description of the emissions unit operational conditions they will meet during the emissions testing and describe why they believe “worst case” operating conditions will be met. Prior to conducting the test(s), the permittee shall confirm with the appropriate Ohio EPA District Office or local air agency that the proposed operating conditions constitute “worst case”. Failure to test under the approved conditions may result in Ohio EPA 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 Ohio EPA, Northwest District Office. 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, Northwest District Office's refusal to accept the results of the emission test(s).
- f. Personnel from the Ohio EPA, Northwest District Office 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 Ohio EPA, Northwest District Office 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 Ohio EPA, Northwest District Office.

[OAC rule 3745-77-07(C)(1); and 40 CFR, Part 60, Subpart Ja and PTI No. P0124219]



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- (3) Within 60 days of achieving the maximum production rate at which the emissions unit(s) will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous NO_x monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR, Part 60, Appendix B, Performance Specifications 2; and ORC section 3704.03(I).

Personnel from the Ohio EPA Central Office and the Ohio EPA Northwest District Office 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 Northwest District Office 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 NO_x 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 Specifications 2; and ORC section 3704.03(I).

[OAC rule 3745-77-07(C)(1) and PTI No. P0124219]

g) Miscellaneous Requirements

- (1) None.



18. F001, Roadways

Operations, Property and/or Equipment Description:

Paved and Unpaved Roadways

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 operations(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. 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)	None [See b)(2)a.]
b.	OAC rule 3745-17-08(B)	None [See b)(2)b.]

(2) Additional Terms and Conditions

a. This emissions unit is exempt from the visible emissions limitations specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).

b. This facility is not located within the areas identified in "Appendix A" of OAC rule 3745-17-08 (it is located outside of the Lima, Ohio city limits). Therefore, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) None.

e) Reporting Requirements

(1) None.

f) Testing Requirements

(1) None.



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g) Miscellaneous Requirements

- (1) None.

19. F005, Coke Handling

Operations, Property and/or Equipment Description:

Coke Handling System- Coke from the drum drops onto a conveyor system where it is transferred to a crusher then is conveyed to the railcar loading. The conveyor is partially enclosed and the coke has an inherent moisture content. Residual coke that does not land onto the conveyor when dropping is collected from the ground around the conveyor and it is then transferred to a storage pile (insignificant emissions unit F003) via a front loader.

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 No. P0127258, issued 11/12/19)	<u>Emissions from coke product transfer points and front-end loader traffic at the coke pile, combined:</u> 7.34 tons fugitive particulate emissions (PE) per rolling, 12-month period 1.30 tons fugitive particulate matter less than or equal to 10 microns in diameter (PM10) per rolling, 12-month period 0.39 ton fugitive particulate matter less than or equal to 2.5 microns in diameter (PM2.5) per rolling, 12-month period Visible fugitive PE shall not exceed 20 percent opacity, as a 3-minute average See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) (PTI No. P0127258, issued 11/12/19)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM10 and PM2.5 emissions from this air contaminant source since the potential to emit is less than 10 tons/year.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-07(B)	See b)(2)c.
d.	OAC rule 3745-17-08(B)	See b)(2)d.

(2) Additional Terms and Conditions

- a. The federally-enforceable emissions limitations in b)(1)a. were established to represent the potential to emit of this emissions unit.
- b. The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust from coke product transfer points and front-end loader traffic at the coke pile.

The permittee shall employ best available control measures for the coke product processing/handling operations identified below, for the purpose of ensuring compliance with the applicable PE/PM10/PM2.5 requirements presented in b)(1)a.

In accordance with the permit application, the permittee has committed to perform the following control measure(s) when the unit is in operation to ensure compliance:

Coke Product Processing and Handling Operation	Control Measure(s)
Coke product drop - coker unit into coke pile	Inherently wet coke product from saturation during removal
Removal of coke product from coke pile with front-end loader	Inherently wet coke product from saturation (apply water if necessary)
Fugitive dust from front-end loader traffic on unpaved roadways	Apply dust suppressant as necessary

Nothing in the table above shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.

- c. This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
- d. This facility is not located within the areas identified in "Appendix A" of OAC rule 3745-17-08 (it is located in Allen County). Therefore, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) Except as otherwise provided in this section, for coke product handling operations that are not adequately enclosed, the permittee shall perform visible emission inspections of such operations during representative, normal operating conditions in accordance with the following minimum frequencies:

Coke Product Processing and Handling Operation	Minimum Inspection Frequency
Removal of coke product from coke pile with front-end loader	Weekly
Fugitive dust from front-end loader traffic on unpaved roadways	Weekly

[OAC rule 3745-77-07(C)(1) and PTI No. P0127258]

- (2) The permittee shall maintain daily 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 dates the control measure(s) was (were) implemented; and
 - d. on a calendar quarter basis, the total number of days the control measure(s) was (were) implemented.

The information in d)(2)d. shall be kept separately for each coke product processing/handling operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

[OAC rule 3745-77-07(C)(1) and PTI No. P0127258]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation reports 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.

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0127258]

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:

7.34 tons PE/yr from coke product transfer points and front-end loader traffic at the coke pile, combined

Applicable Compliance Method:

The emission limitation was established using the following emission factors:

- i. 0.00116 lb PE/ton of coke product for each of the two coke product transfer points - Equation (1) in AP-42, section 13.2.4.3 for drop operations (11/06) multiplied by the maximum amount of coke handled of 370,840 tons/yr*, then dividing by 2,000 lbs/ton;
- ii. 0.007 lb PE/ton of coke product** for each of the two conveying operations (Table 2.1.3-2 of Ohio EPA's RACM Document for Fugitive Dust Sources) multiplied by the maximum amount of coke handled of 370,840 tons/yr*, then dividing by 2,000 lbs/ton;
- iii. 0.020 lb PE/ton of coke product for one crushing operation (Table 2.19-2 of Ohio EPA's RACM Document for Fugitive Dust Sources) multiplied by the maximum amount of coke handled of 370,840 tons/yr*, then dividing by 2,000 lbs/ton; and
- iv. 9.28 lbs PE/vehicle mile traveled by front-end loader – Equation (1a) in AP-42, section 13.2.2 (11/06) and based on 182 vehicle trips per day***, 1,300 feet/trip, 5280 feet/mile, applying a control efficiency of 85% for inherent moisture in the coke product, and use of various constants in Tables 13.2.2-2 and 13.2.4-1 in AP-42 (11/06), then applying a 5% usage rate****.

*370,840 tons of coke handled/yr represent the potential to emit for this emissions unit

**Emission factor includes a 70% control efficiency for a partially enclosed conveying system

***182 vehicle trips per day represent the potential to emit for this emissions unit

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****The front-end loader will only be used in the event of a conveying system upset.

Therefore, provided compliance is shown with the requirements to employ the best available control measures, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0127258]

b. Emission Limitation:

1.30 tons PM10/yr from transfer points and front-end loader traffic at the coke pile, combined

Applicable Compliance Method:

The emission limitation was established using the following emission factors:

- i. 0.00055 lb PM10/ton of coke product for each of the two coke product transfer points - Equation (1) in AP-42, section 13.2.4.3 for drop operations (11/06) multiplied by the maximum amount of coke handled of 370,840 tons/yr*, then dividing by 2,000 lbs/ton;
- ii. 0.001 lb PM10/ton of coke product** for each of the two conveying operations (Table 2.4.8-1 of Ohio EPA's RACM Document for Fugitive Dust Sources) multiplied by the maximum amount of coke handled of 370,840 tons/yr*, then dividing by 2,000 lbs/ton;
- iii. 0.003 lb PM10/ton of coke product for one crushing operation (Table 2.4.8-1 Ohio EPA's RACM Document for Fugitive Dust Sources) multiplied by the maximum amount of coke handled of 370,840 tons/yr*, then dividing by 2,000 lbs/ton; and
- iv. 2.38 lbs PM10/vehicle mile traveled by front-end loader – Equation (1a) in AP-42, section 13.2.2 (11/06) and based on 182 vehicle trips per day***, 1,300 feet/trip, 5280 feet/mile, applying a control efficiency of 85% for inherent moisture in the coke product; and use of various constants in Tables 13.2.2-2 and 13.2.4-1 in AP-42 (11/06), then applying a 5% usage rate****.

*370,840 tons of coke handled/yr represents the potential to emit for this emissions unit

**Emission factor includes a 70% control efficiency for a partially enclosed conveying system

***182 vehicle trips per day represent the potential to emit for this emissions unit

****The front-end loader will only be used in the event of a conveying system upset.



Therefore, provided compliance is shown with the requirements to employ the best available control measures, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0127258]

c. Emission Limitation:

0.39 tons PM2.5/yr from transfer points and front-end loader traffic at the coke pile, combined

Applicable Compliance Method:

The emission limitation was established using the following emission factors:

- i. 0.00008 lb PM2.5/ton of coke product for each of the two coke product transfer points - Equation (1) in AP-42, section 13.2.4.3 for drop operations (11/06) multiplied by the maximum amount of coke handled of 370,840 tons/yr*, then dividing by 2,000 lbs/ton;
- ii. 0.0004 lb PM2.5/ton of coke product** for each of the two conveying operations (Table 2.4.8-1 Ohio EPA's RACM Document for Fugitive Dust Sources) multiplied by the maximum amount of coke handled of 370,840 tons/yr*, then dividing by 2,000 lbs/ton;
- iii. 0.001 lb PM2.5/ton of coke product for one crushing operation (Table 2.4.8-1 Ohio EPA's RACM Document for Fugitive Dust Sources) multiplied by the maximum amount of coke handled of 370,840 tons/yr*, then dividing by 2,000 lbs/ton; and
- iv. 0.24 lb PM2.5/vehicle mile traveled by front-end loader – Equation (1a) in AP-42, section 13.2.2 (11/06) and based on 182 vehicle trips per day*, 1,300 feet/trip, 5280 feet/mile, applying a control efficiency of 85% for inherent moisture in the coke product; and use of various constants in Tables 13.2.2-2 and 13.2.4-1 in AP-42 (11/06), then applying a 5% usage rate****.

*370,840 tons of coke handled/yr represents the potential to emit for this emissions unit

**Emission factor includes a 70% control efficiency for a partially enclosed conveying system

***182 vehicle trips per day represent the potential to emit for this emissions unit

****The front-end loader will only be used in the event of a conveying system upset.



Therefore, provided compliance is shown with the requirements to employ the best available control measures, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0127258]

d. Emission Limitation:

Visible PE shall not exceed 20 percent opacity as a 3-minute average from coke product transfer points and front-end loader traffic at the coke pile

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0127258]

g) Miscellaneous Requirements

- (1) None.



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20. J001, Propane and Propylene Truck Loading/Unloading Rack

Operations, Property and/or Equipment Description:

Propane and Propylene Truck Loading/Unloading Facilities. Emissions are controlled by routing vapors to a cavern.

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 operations(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. 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 3745-21-07(M)	Exempt [See b)(2)a.]

(2) Additional Terms and Conditions

a. This emissions unit is exempt from the requirements of OAC rule 3745-21-07(M) pursuant to the requirements of OAC rule 3745-21-07(M)(3)(a)(i). This facility is not located in one of the Priority 1 counties identified in OAC rule 3745-21-06(A).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) None.

e) Reporting Requirements

(1) None.

f) Testing Requirements

(1) None.

g) Miscellaneous Requirements

(1) None.

21. Emissions Unit Group - Railcar Loading/Unloading Facilities Controlled by Flare Gas Recovery System: J002, J004

EU ID	Operations, Property and/or Equipment Description
J002	Propane and Propylene Railcar Loading/Unloading Facilities. Emissions are controlled with flare gas recovery and a vapor balance system. Secondary control includes direct flaring.
J004	Iso/Alky/Normal Butane Railcar Loading/Unloading Facilities, which includes: six butane loading/unloading railcar stations. Emissions are primarily controlled by use of a flare gas recovery system. Secondary control includes direct flaring.

- 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 3745-21-07(M)	Exempt [See b)(2)a.]
b.	OAC rule 3745-31-05(A)(3) (PTI No. P0117365, issued 8/12/14)	The BAT requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the emissions of volatile organic compounds (VOC) since the potential to emit is less than 10 tons per year.
c.	OAC rule 3745-21-09(T)(4)(a)	See b)(2)b. and Facility-Wide Term and Condition B.2
d.	40 CFR, Part 60, Subpart GGGa [40 CFR 60.590a – 60.593a]	See b)(2)c.
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source since the loading rack is considered a Group 1 process vent which is controlled by the LIU flare - emissions unit P007 and FCC/Coker Flare – emissions unit P006]	See b)(2)d. and e)(1)
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. This emissions unit is exempt from the requirements of OAC rule 3745-21-07(M) pursuant to the requirements of OAC rule 3745-21-07(M)(3)(a)(i). This facility is not located in one of the Priority 1 counties identified in OAC rule 3745-21-06(A).
- b. The permittee has an approved [as indicated in OAC rule 3745-21-09(T)(4)(a)] alternative leak detection and repair (LDAR) monitoring, recordkeeping and reporting program entitled "Premcor Lima Refinery, LDAR Plan" dated November 19, 2002. The permittee's alternative LDAR monitoring plan includes regulations in 40 CFR, Part 60, Subparts VV and GGG; 40 CFR, Part 61, Subpart V; and 40 CFR, Part 63, Subpart CC.

Any components associated with this emissions unit that are applicable to state and federal LDAR requirements shall be included in the alternative LDAR monitoring, recordkeeping and reporting program.

- c. Pursuant to 40 CFR 63.640(p)(2) [MACT, Subpart CC], 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.

The permittee has submitted an alternative leak detection and repair (LDAR) monitoring plan pursuant to OAC rule 3745-21-09(T)(4) and 40 CFR, Part 63, Subpart CC. The permittee shall include the fugitive VOC emission sources for the DHT into the alternative LDAR plan, which has been incorporated into Section B.2 - Facility-Wide Terms and Conditions.

- d. MACT requirements in 40 CFR, Part 63, Subpart CC are applicable for each Group 1 process vent that is part of this emissions unit, and is routed to emissions unit P006 and P007, the FCC/Coker flare and LIU flare, respectively.

All operational restrictions, monitoring, record keeping, reporting and testing requirements for the flare are established in the terms and conditions for emissions unit P007 and P006 and are also applicable to emissions unit J002 and J004. Therefore, no additional monitoring, record keeping, reporting and testing requirements are necessary for the flare in this emissions unit.

The permittee shall comply with the applicable control requirements, emission limit and compliance demonstration methods under 40 CFR, Part 63, Subpart CC, including the following sections:

63.643(a)(1)	Required Use of Flare to Reduce Organic Hazardous Air Pollutants
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c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) None.

e) Reporting Requirements

(1) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.655(g)	Semi-annual Deviation Report for Group 1 Miscellaneous Process Vents
63.655(g)(6)	Semi-annual Deviation Report for Group 1 Miscellaneous Process Vents – Excess Emissions Reporting

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 63, Subpart CC and PTI No. P0117365]

f) Testing Requirements

(1) None.

g) Miscellaneous Requirements

(1) None.

22. J007, Decanted Oil Loading Rack

Operations, Property and/or Equipment Description:

Decanted oil loading rack

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 operations(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. 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 No. P0127043, issued 8/20/19)	See b)(2)a.
b.	OAC rule 3745-21-09(T)(4)(a)	See b)(2)b. and Facility-Wide Term and Condition B.2
c.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671]	See b)(2)b.
d.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) for this emissions unit has been determined to be compliance with 40 CFR, Part 63, Subpart CC.

The potential to emit for this emissions unit is 20.74 tons of VOC per year and is based on an annual throughput of 166,440,000 gallons of decanted oil and a loading loss emission factor of 0.2492 lb VOC per 1,000 gallons loaded. The emission factor was determined in accordance with equation (1) from AP-42 Section 5.2.2.11(6/08).

b. The permittee has an approved [as indicated in OAC rule 3745-21-09(T)(4)(a)] alternative leak detection and repair (LDAR) monitoring, recordkeeping and reporting program entitled “Premcor Lima Refinery, LDAR Plan” dated November 19, 2002. The permittee’s alternative LDAR monitoring plan includes regulations



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in 40 CFR, Part 60, Subparts VV and GGG; 40 CFR, Part 61, Subpart V; and 40 CFR, Part 63, Subpart CC.

Any components associated with the emission units contained in PTI No. P0105198 and P0127043 that are applicable to state and federal LDAR requirements shall be included in the alternative LDAR monitoring, recordkeeping and reporting program.

- c) Operational Restrictions
 - (1) None.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) None.
- e) Reporting Requirements
 - (1) None.
- f) Testing Requirements
 - (1) None.
- g) Miscellaneous Requirements
 - (1) None.

23. J010, Distillate Loading Rack

Operations, Property and/or Equipment Description:

Railcar distillate loading rack (6-arm)(Displaced vapors are collected off the top of railcars and are first routed to the slop tank (2,203 gallons), then vapors from the slop tank are routed to the carbon beds (vapor collection 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) b)(1)e., d)(2), d)(3), d)(4), d)(5), and e)(2).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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 No. P0106825, modification issued 9/9/10)	Volatile organic compound (VOC) emissions shall not exceed 24.10 tons per rolling, 12-month period Fugitive VOC emissions shall not exceed 7.0 tons per rolling, 12-month period See b)(2)a.
b.	OAC rule 3745-21-09(T)(4)(a)	See Facility-Wide Term and Condition B.2.
c.	40 CFR, Part 60, Subpart GGGa [40 CFR 60.640a – 60.679a]	Pursuant to 40 CFR 63.640(p), equipment leaks that are also subject to the provisions of 40 CFR, Parts 60 and 61 are required to comply only with the provisions specified in 40 CFR, Part 63, Subpart CC.
d.	ORC 3704.03(F) OAC rule 3745-114-01	See d)(2) through d)(5) and e)(2).
e.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.359] [In accordance with 40 CFR 61.349, this emissions unit is an affected source since the loading rack contains a closed vent system and a control device for the control of benzene emissions]	See c)(2), d)(6) and e)(3).



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(2) Additional Terms and Conditions

- a. The emission limitation of 24.10 tons VOC per rolling, 12-month period represents VOC emissions displaced during loading operations which are collected with a vapor collection system and routed to a slop tank. The slop tank collects material from loading hoses during product changeover and loading hoses are hard piped to the slop tank.

The emission limitation of 7.0 tons fugitive VOC per rolling, 12-month period represents VOC emissions from equipment leaks associated with piping components, pumps, pressure relief valves, etc.

c) Operational Restrictions

- (1) The maximum throughput of petroleum distillates shall not exceed 240,900,000 gallons per rolling 12-month period.

The operational restriction reflects the actual maximum operational capacity of all the loading arms. The 6 loading arms can fill a maximum of 22 railcars per day with a maximum capacity of 30,000 gallons per car.

[OAC rule 3745-77-07(A)(1) and PTI No. P0106825]

- (2) The permittee shall comply with the applicable closed-vent systems and control devices provisions under 40 CFR, Part 61, Subpart FF, including the following sections:

61.343(a)(1)	Tank Requirements: Install a Fixed-Roof and Closed-Vent System to Route All Organic Vapors from Tank Waste Stream (Including Dewatering) to Compressor System
61.343(a)(1)(i)(A)	Fixed Roof Tank Requirements: Design Cover and All Openings to Operate with No Detectable Emissions (Less Than 500 ppmv)
61.343(a)(1)(i)(B)	Fixed Roof Tank Requirements: Openings Closed at All Times Except for Sampling, Inspections, Maintenance or Repair and Exemptions Listed in 61.343(a)(1)(i)(C)
61.343(d)	Tank Requirements: First Attempt at Repair within 45 Days
61.349(a)(1)(i), 61.349(a)(2)(ii), 61.349(b), 61.349(c)(1), 61.349(e), 61.349(f) and 61.349(g)	Standards: Closed-Vent Systems and Control Devices – No Detectable Emissions, Control Device Design Requirements, Operate Closed Vent System and Control Device During



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	Operation, Control Device Compliance Demonstration via Engineering Calculations, Testing of Control Device at Request of Administrator, Visual Inspection of Closed-Vent System and Control Device, and Repair Defects Within 15 Calendar Days
61.350	Delay of Repairs

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 61, Subpart FF]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following each month for this emissions unit:
 - a. the total amount of product throughput for all 6 loading arms, in gallons per month;
 - b. the rolling 12-month product throughput for all 6 loading arms, in gallons.

[OAC rule 3745-77-07(C)(1) and PTI No. P0106825]

- (2) The permit-to-install (PTI) application for this emissions unit, J010, was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this emissions unit 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 approved Ohio EPA air modeling program. 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.

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- 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):

$$\text{TLV}/10 \times 8/\text{X} \times 5/\text{Y} = 4 \text{ TLV}/\text{XY} = \text{MAGLC}$$

- 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): 176

Maximum Hourly Emission Rate (lbs/hr): 0.78

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 413.39

MAGLC (ug/m³): 4,195

The permittee, has demonstrated that emissions of hexane, from emissions unit J010, 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).

[OAC rule 3745-77-07(C)(1) and PTI No. P0106825]

- (3) 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^o, 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0106825]

- (4) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0106825]

- (5) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0106825]

- (6) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

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61.343(c)	Tank Requirements: Quarterly Visual Inspections of Fixed Roof, Seal, Access Door and Other Openings
61.354	Monitoring of Operations: Continuously Monitor Control Device and Inspect Data Daily
61.356(a)	Maintain Records for On-Site for Two Years
61.356(f)(1) through 61.356(f)(3)	Recordkeeping: Maintain Records of Control Device Specifications
61.356(g)	Recordkeeping: Maintain Records of Visual Inspections That Detected a Problem
61.356(h)	Recordkeeping: Test Results of No Detectable Emissions

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month throughput restriction contained in c)(1).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the Northwest District Office).

[OAC rule 3745-77-07(C)(1) and PTI No. P0106825]

- (2) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0106825]

- (3) The permittee shall comply with the applicable closed-vent systems and control devices provisions under 40 CFR, Part 61, Subpart FF, including the following sections:



Effective Date: To be entered upon final issuance

61.357(d)(6)	Quarterly Reports – Include Statement Certifying Required Inspection were Performed
61.357(d)(8)	Annual Report Summarizing Inspections with Detectable Emissions

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]

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 24.10 tons per rolling, 12-month period

Applicable Compliance Method:

The limitation above represents the potential to emit based on the actual maximum operational capacity of all the loading arms. The 6 loading arms can fill a maximum of 22 railcars per day with a maximum capacity of 30,000 gallons per car (240,900,000 gallons annually).

The actual maximum operational capacity of all the loading arms is reflected in an operational restriction contained in c)(1). The limitations above were established based on the maximum annual throughput of 240,900,000 gallons of distillate oil, a loading loss emission factor of 0.20 pound VOC per 1,000 gallons loaded and applying the conversion factor of 2,000 pounds per ton (The emission factor was determined in accordance equation (1) from AP-42 Section 5.2.2.11(6/08). Therefore, provided compliance is shown with the maximum annual throughput of distillate oil, compliance with the rolling, 12-month emissions limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0106825]

b. Emission Limitation:

Fugitive VOC emissions shall not exceed 7.0 tons per rolling, 12-month period

Applicable Compliance Method:

The rolling, 12-month emission limitation was developed by applying the new component count and U.S. EPA emission factors for leaking and non-leaking components. Emission factors used are from the U.S. EPA Protocol document for Equipment Leaks (EPA-453/R-95-017, November 1995). Emissions from vapor and light liquid components are based on conservative assumptions as to the



percentage of these components that are leaking at any given time, based on Lima Refining Company leak detection and repair (LDAR) experience. The percent of components assumed to be leaking are conservatively assumed to be monitored as leaking at 10,000 ppmv, which is higher than the leak rate definition, and emissions are calculated based on the EPA correlation equations. Non-leakers are assumed to emit at the EPA default-zero leak rate. Compressors and other components besides valves are estimated using the EPA Refinery Average Emission factor and any control method efficiency, where applicable. Leaks from un-seated PRVs are estimated using the refinery average emission factors. Therefore, provided compliance is shown with the LDAR requirements contained in Facility-Wide Term and Condition B.2, compliance with the rolling, 12-month emissions limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0106825]

- g) Miscellaneous Requirements
 - (1) None.

24. J011, Decanted Oil/Sulfur/Caustic Rail Rack

Operations, Property and/or Equipment Description:

Decant Oil Loading Rack to load out decant oil by railcar

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 No. P0123731, issued 11/29/18)	1.74 tons volatile organic compounds (VOC) per rolling, 12-month period from DO Rail Loading only See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the potential to emit is less than 10 tons/year taking into account the federally enforceable restrictions in c)(1).
c.	OAC rule 3745-21-09(T)(4)(a)	See b)(2)b.
d.	40 CFR, Part 63, Subpart CC	See b)(2)b.
e.	40 CFR, Part 63, Subpart A (40 CFR 63.1 through 63.15)	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. The federally-enforceable emissions limitation in b)(1)a. was established for the purpose of representing the potential to emit (PTE). The federally enforceable emission limitation is a voluntary restriction established under OAC rule 3745-31-05(D) and is based on the operational restriction contained in c)(1).



- b. The permittee has an approved [as indicated in OAC rule 3745-21-09(T)(4)(a)] alternative leak detection and repair (LDAR) monitoring, recordkeeping and reporting program entitled "Premcor Lima Refinery, LDAR Plan" dated November 19, 2002. The permittee's alternative LDAR monitoring plan includes regulations in 40 CFR, Part 60, Subparts VV and GGG; 40 CFR, Part 61, Subpart V; and 40 CFR, Part 63, Subpart CC.

Any components associated with this emissions unit that are applicable to state and federal LDAR requirements shall be included in the alternative LDAR monitoring, recordkeeping and reporting program.

c) Operational Restrictions

- (1) The following operational restriction has been included in this permit for the purpose of establishing the following federally enforceable requirements to represent PTE [See b)(2)a.):

- a. The maximum rolling, 12-month throughput of decanted oil for this emissions unit shall not exceed 76,650,000 gallons, based upon a rolling, 12-month summation of the monthly decanted oil throughput rates.

[OAC rule 3745-77-07(A)(1) and PTI No. P0123731]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information:
 - a. the throughput rate, in gallons of decanted oil loaded, for each month;
 - b. the rolling, 12-month summation of the throughput rates; and
 - c. the cumulative throughput rate for each calendar month.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

e) Reporting Requirements

- (1) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of:
 - a. All exceedances of the rolling, 12-month limitation on the throughput for this emissions unit.

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

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:

1.74 tons VOC per rolling, 12-month period from DO Rail Loading only

Applicable Compliance Method:

The rolling, 12-month limitation represents the potential to emit [See b)(2)a.] based on a rolling, 12-month throughput restriction of 76,650,000 gallons of decanted oil and a loading loss emission factor of 0.045 lb VOC per 1,000 gallons loaded. The emission factor was determined in accordance with equation (1) from AP-42 Section 5.2.2.1.1(6/08). Therefore, provided compliance is shown with the rolling, 12-month throughput restriction, compliance with the rolling, 12-month period emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

g) Miscellaneous Requirements

- (1) None.

25. P005, Delayed Coking Process

Operations, Property and/or Equipment Description:

Delayed Coking process unit including two Coker Drums (PR164237/164238) and Distillation Column (PR164903)

- 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 operations(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. 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 3745-21-07(M)	See b)(2)a.
b.	OAC rule 3745-18-06(E)(2)	1,143 lbs of sulfur dioxide (SO ₂)/hr [See b)(2)e.]
c.	OAC rule 3745-17-11(B)(1)	None [See b)(2)f.]
d.	OAC rule 3745-17-07(A)	None [See b)(2)g.]
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 63.657, this emissions unit is an existing delayed coking unit and shall meet all applicable requirements.]	See b)(2)i., b)(2)h., b)(2)j., d)(2) and e)(2)
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
g.	OAC rule 3745-31-05(D) (PTI No. P0123731, issued 11/29/18)	The combined volatile organic compound (VOC) emissions from coke drum venting, coke cutting and coke drum draining shall not exceed 20.81 tons per rolling, 12-month period 18.20 tons VOC per rolling, 12-month period from fugitive equipment leaks subject to leak detection and repair (LDAR) requirements

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)b.
h.	ORC 3704.03(T) (PTI No. P0123731, issued 11/29/18)	See b)(2)c.
i.	OAC rule 3745-31-10 through 3745-31-20 (PTI No. P0123731, issued 11/29/18)	Carbon dioxide equivalents (CO _{2e}) emissions shall not exceed 1,533 tons per rolling, 12-month period See b)(2)d.
j.	40 CFR, Part 60, Subpart A (40 CFR 60.1 – 60.19)	See 40 CFR 60.1 through 60.19
k.	OAC rule 3745-21-09(T)	See b)(2)b.
l.	40 CFR, Part 60, Subpart Ja (40 CFR 60.100a – 60.109a)	See b)(2)h.
m.	40 CFR, Part 60, Subpart GGGa	See b)(2)b.

(2) Additional Terms and Conditions

- a. This emissions unit is not subject to the requirements of the rule because it does not meet all the conditions outlined in OAC rule 3745-21-07(M)(3)(a).
- b. The requirements of these rules are equivalent to or less stringent than the alternative LDAR monitoring plan submitted by the permittee, pursuant to OAC rule 3745-21-09(T)(4) and 40 CFR, Part 63, Subpart CC. Terms and conditions for the alternative LDAR plan are listed in Facility-Wide Terms and Conditions B.2.

The Coker process unit is not subject to leak detection and repair (LDAR) requirements in 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), since it does not meet the definition of “modification” in 40 CFR 60.590a.

New and modified piping components associated with this emissions unit are subject to the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of OAC rule 3745-21-09(T) – Leaks from petroleum refinery equipment.

- c. The Best Available Technology (BAT) requirements for VOC emissions under ORC 3704.03(T) have been determined to be compliance with the emission limitation and requirements established pursuant to OAC rule 3745-31-05(D):
 - i. 20.81 tons VOC per rolling, 12-month period from coke drum venting, coke cutting and coke drum draining, combined.
- d. The permittee shall employ Best Available Control Technology (BACT) for this emissions unit. BACT has been determined to be the following:

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Pollutant	BACT Requirements
GHG	The permittee shall depressurize each coke drum to 2 pounds per square inch gage (psig) or less prior to venting the coke drum steam exhaust to the atmosphere. When the pressure exceeds 2 psig, vent gases must be routed to the refinery fuel gas system, the FCC/coker flare (emissions unit P006), or other control device prior to opening the vent to the atmosphere.

- e. The allowable SO₂ emission limitation is based on the equation in OAC rule 3745-18-06(E)(2) and a maximum process weight rate of 228.8 tons per hour.
- f. The uncontrolled mass rate of PE* from this emissions unit is less than 10 lbs/hr. 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)(14).

* The burning of refinery fuel gas in the flare is the only source of PE from this emissions unit.

- g. 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 the requirements of OAC rule 3745-17-11.
- h. Compliance with condition b)(2)d. above demonstrates compliance with the requirements of 40 CFR, Part 60, Subpart Ja.
- i. The permittee shall comply with the applicable control requirements, emission limit and compliance demonstration methods under 40 CFR, Part 63, Subpart CC, including the following sections:

63.657(a)(1)	Depressure Each Coke Drum to a Closed Blowdown System
63.657(a)(1)(i) or (ii)	Coke Drum Vessel Depressuring Must Meet Either a 2 psig Average Vessel Pressure or a 220°F Temperature Each Determined on a Rolling 60-Event Average
63.657(f) and 63.657(f)(2)	Partially Drained Coke Drum to Double-Quench Allowance if Water Temperature is Below 210°F

- j. This emissions unit is vented to a flare. All operational restrictions, monitoring, recordkeeping, reporting, and testing requirements for the flare are established in

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the terms and conditions for emissions unit P006 and P007 and are also applicable to emissions unit P005. Therefore, no additional monitoring, record keeping, reporting, and testing requirements are necessary for the flare in this emissions unit.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall record the pressure inside the coke drum prior to discharging the coke drum to the atmosphere.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) The permittee shall comply with the applicable monitoring and recording requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.657(b)(1) through (5)	Pressure Limit Compliance Option: Install, and Operate a Monitoring System to Determine Coke Drum Vessel Pressure
63.657(c) and Table 13	Temperature Limit Compliance Option: Install, and Operate a Continuous Parameter Monitoring System Per Table 13
63.657(d)	Determine Coke Drum Vessel Pressure or Temperature on a 5-Minute Rolling Average Basis While Venting to the Closed Blowdown System
63.657(d)	Use the Last Complete 5-Minute Rolling Average Before Isolation to Determine Compliance
63.657(f)(1) and Table 13	Partially Drained Drum Requirements: Install and Operate a Continuous Monitoring System Per Table 13
63.655(i)(7)(i) through (iii)	Delayed Coking Provisions – Records Retention

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

e) Reporting Requirements

- (1) The permittee shall submit deviation reports that identify any of the following occurrences:



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- a. all periods when the blow down vent vapors were vented to the atmosphere without first depressuring the coke drum to less than 2.0 psig; and the actual coke drum pressure prior to venting, for each such event.

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.655(e)(1), 63.655(f), 63.655(f)(1)(viii), 63.655(f)(4)	Delayed Coking Provisions – Notification of Compliance Status
63.655(e)(2), 63.655(g), 63.655(g)(12)(i), 63.655(g)(12)(iii), and 63.655(g)(12)(iv)	Delayed Coking Provisions – Periodic Reporting Requirements

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

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:

1,143 lbs of SO₂/hr

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation based on the results of the most recent emission test. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 6 of 40 CFR, Part 60, Appendix A.

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

- b. Emission Limitation:

The combined VOC emissions from coke drum venting, coke cutting and coke drum draining shall not exceed 20.81 tons per rolling, 12-month period

Applicable Compliance Method:

The emission limitation was established by multiplying the maximum number of 730 coke producing cycles/yr* by an emission factor of 57 lbs VOC/cycle, then dividing by 2,000 lbs/ton. The emission factor was determined in accordance with



Table 5-5, "Average Vent Concentrations and Emission Factors for Delayed Coking Unit Vents – Emission Estimation Protocol for Petroleum Refineries, U.S. EPA, Version 2.1.1 (5/11).

* 730 coke producing cycles/yr represents the potential to emit for this emissions unit

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

c. Emission Limitation:

18.20 tons VOC per rolling, 12-month period from fugitive equipment leaks subject to LDAR requirements

Applicable Compliance Method:

Compliance with the fugitive VOC emissions limitation is demonstrated by compliance with the applicable leak monitoring and repair requirements of 40 CFR, Part 60, Subpart GGGa and 40 CFR, Part 63, Subpart CC. The annual fugitive VOC emission limitation was established for PTI purposes to reflect the maximum potential to emit (PTE) for this emissions unit. Therefore, it is not necessary to develop any further monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

d. Emission Limitation:

CO₂e emissions shall not exceed 1,533 tons per rolling, 12-month period

Applicable Compliance Method:

The allowable CO₂e emissions limitation was established to reflect the potential to emit for this emissions unit based on an emission factor (200 lbs methane/coke producing cycle) derived from Table 5-5, "Average Vent Concentrations and Emission Factors for Delayed Coking Unit Vents – Emission Estimation Protocol for Petroleum Refineries, U.S. EPA, Version 2.1.1 (5/11) multiplied by the global warming potential of methane (21 CO₂e/methane), and by the maximum number of coke producing cycles of 730 per year, and then dividing by 2,000 lbs/ton.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

g) Miscellaneous Requirements

(1) None.

26. P006, Refinery FCC/Coker Flare (PR 196128), treated as control equipment

Operations, Property and/or Equipment Description:

FCC/Coker Flare (PR 196128), steam-assisted

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 operations(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. 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(F) (PTI No. P0121859, modification issued 9/15/17)	10.00 tons of nitrogen oxides (NOx)/calendar-yr during periods of process unit start-up and shutdown [See b)(2)b.] 90.00 tons of sulfur dioxide (SO ₂)/calendar-yr during periods of process unit start-up and shutdown [See b)(2)b.]
b.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 63.670, this emissions unit is a flare ‘used as a control device for an emission point subject to this subpart’ and shall meet all applicable requirements.]	No visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, when regulated material is routed to the flare and the flare vent gas flow rate is less than the smokeless design capacity of the flare. See b)(2)a.
c.	40 CFR Part 60.18(b)	See b)(2)g.
d.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
e.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
f.	40 CFR, Part 60, Subpart J & Ja [40 CFR 60.100 – 60.109 and 40 CFR 60.100a – 60.109a]	See b)(2)c. through b)(2)f.

(2) Additional Terms and Conditions

- a. In accordance with 40 CFR, Part 63, Subpart CC, the permittee shall employ a flare that meets the requirements of 40 CFR 63.670 to control emissions of organic hazardous air pollutants resulting from malfunctions and pressure relief episodes.

The permittee shall comply with the applicable control requirements and operating limits under 40 CFR, Part 63, Subpart CC, including the following sections:

63.670(b)	Pilot Flame Presence
63.670(c)	Visible Emissions
63.670(d)	Flare Tip Velocity
63.670(e)	Combustion Zone Operating Limits
63.670(g)	Pilot Flame Monitoring
63.670(h)(2)	Visible Emissions Monitoring
63.670(i)	Flare Vent Gas, Steam Assist and Air Assist Flow Rate Monitoring
63.670(j)(1)	Flare Vent Gas Composition Monitoring
63.670(k)(2)(i)	Calculation Methods for Cumulative Flow Rates and Determining Compliance with V_{tip} Operating Limits
63.670(l)(1), 63.670(l)(4), and 63.670(l)(5)	Calculation Methods for Determining Flare Vent Gas Net Heating Value
63.670(m)(1)	Calculation Methods for Determining Combustion Zone Net Heating Value
63.670(p)	Flare Monitoring Records
63.670(q)	Reporting
63.671(a)	Operation of CPMS
63.671(b)	CPMS Monitoring Plan
63.671(c)	Out-of-Control Periods
63.671(e)(2)(ii) and 63.671(e)(3)	Additional Requirements for Gas Chromatographs

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- b. The permittee has requested to voluntarily limit allowable emissions of NO_x and SO₂ to the following:
 - i. 10.00 tons NO_x/calendar-yr during periods of process unit start-up and shutdown
 - ii. 90.00 tons SO₂/calendar-yr during periods of process unit start-up and shutdown

The emission limitations are being established to alleviate reporting requirements associated with reportable quantities (RQ) under the Superfund Amendments and Reauthorization Act (SARA). The allowable limitations above do not apply to emissions associated with malfunctions and/or process upsets of the process unit. Any SO₂ emissions associated with the start-up and shutdown of the sulfur recovery unit at the facility (emissions unit P040) that are routed to this flare must still be applied to the emissions limitation of 100 lbs SO₂/1,000 lbs of sulfur processed contained in OAC rule 3745-18-08(C)(3).

- c. The permittee has accepted 40 CFR, Part 60, Subpart J applicability for this emissions source by December 31, 2010, by the operation and maintenance of a flare gas recovery system to control continuous and routine combustion for this flare.

The combustion of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunction is exempt from the requirement to comply with 40 CFR 60.104(a)(1), as per 40 CFR 60.104(a)(1).

The installation of a flare gas recovery system eliminates the need for continuous monitoring and recordkeeping for the hydrogen sulfide in the gas as otherwise required by 40 CFR 60.105(a)(4) and 40 CFR 60.7.

- d. The requirements of 40 CFR, Part 60 - Subpart Ja are equivalent to and/or more stringent than the requirements of 40 CFR, Part 60 - Subpart J. Therefore, the requirements of 40 CFR, Part 60, Subpart J will not be listed in this permit modification.

The permittee shall not burn any fuel gas that contains H₂S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis.

Note: This limit does not apply to process upset gases, fuel gas that is released to the flare as a result of relief valve leakage, or other emergency malfunctions.

- e. The permittee shall comply with the following requirements in 40 CFR, Part 60, Subpart Ja for modified flares:
 - i. Conduct a root cause analysis and corrective action plan whenever the discharge to the flare exceeds:
 - (a) 500 lbs SO₂ in any 24-hour period; or

- (b) 500,000 standard cubic feet above the baseline in any 24-hour period.
 - f. The permittee submitted an alternative monitoring plan to U.S. EPA on August 10, 2015. On November 2, 2015, U.S. EPA approved alternative methods for monitoring, recordkeeping, operation, calibration, maintenance and testing requirements to demonstrate compliance with the SO₂ and H₂S emission limitations. The approval required the permittee to identify which compliance method is being followed.
 - g. The emission limitation specified by this rule is less stringent than or equivalent to the emission limitation established pursuant to 40 CFR 63.670(c).
- c) Operational Restrictions
- (1) The flare shall be operated with a pilot flame present at all times when emissions are being vented to it.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0121859]
 - (2) The flare shall be operated with a pilot flame present at all times. The presence of a pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

[OAC rule 3745-77-07(A)(1) ; 40 CFR, Part 63, Subpart CC; and PTI No. P0121859]
 - (3) Only flare combustion zone gases with a net heating value of 10.1 MJ/scm (270 Btu/scf) or greater shall be combusted in this emissions unit. Net heating value shall be determined on a 15-minute block period basis and calculated as specified in 40 CFR Part 63.670(m)(1).

The flare shall be operated with a tip velocity less than 60 ft/sec except as specified in sections c)(4) and c)(5).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart CC and PTI No. P0121859]
 - (4) If the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1000 Btu/scf), the permittee may operate the flare at an exit velocity equal to or greater than 18.3 m/sec (60 ft/sec), but less than 122 m/sec (400 ft/sec) and also less than the maximum allowed flare tip velocity as determined in accordance with 40 CFR Part 63.670(d)(2).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart CC and PTI No. P0121859]
 - (5) Steam-assisted flares may be operated with an exit velocity less than the maximum permitted velocity, but not greater than 122 m/sec (400 ft/sec). The maximum permitted velocity shall be determined in accordance with 40 CFR Part 63.670(d)(2).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0121859]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information during periods of start-up and shut-down:

- a. the flare flow rate, in scf per hour;
- b. the high heating value, in Btu/scf, as determined from the flare gas molecular weight and source of the gas, laboratory analysis or Btu analyzer;
- c. the concentration of hydrogen sulfide in the flare gas, in volume fraction;
- d. an indication of which process is undergoing start-up/shut-down mode;
- e. the number of hours the process operated in start-up/shut-down mode;
- f. the calculated NO_x emissions using the following equation:

$$E = (FR) \times (HV) \times (T) \times (EF)/1,000,000$$

where:

E = NO_x emissions in tons for each individual start-up and shut-down event;

FR = flare flow rate in scf per hour;

HV = high heating value, in Btu/scf;

T = time duration for each start-up/shut down event, in hours; and

EF = NO_x emission factor of 0.068 lb of NO_x/MMBtu (AP-42 Section 13.5, Industrial Flares [12/16])

g. the annual NO_x emission rate calculated as follows:

$$ET = E1 + E2 + E3 + \dots + En$$

Where:

ET = Annual NO_x emissions, in tons, as summed for the calendar year from January to December; and

En = NO_x emissions, in tons, for each individual start-up/shut-down event during the calendar year

h. the calculated SO₂ emissions using the following equation:

$$E = \{(FR) \times (H_2S)\}/379.7\} \times (0.98) \times (64) \times (T)$$

where:



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E = SO2 emissions in tons for each individual start-up and shut-down event;

FR = flare flow rate in scf per hour;

H2S = volume fraction of hydrogen sulfide in flare gas;

379.7 = the volume, in ft³, of one lb mole of gas at standard conditions (60 degrees F & 1 atm) from the ideal gas law;

0.98 = efficiency of the flare for converting a lb mole of H2S into a lb mole of SO2;

64 = molecular weight of SO2 in lb/lb mole; and

T = time duration for each start-up/shut down event, in hours

- i. the annual SO2 emission rate calculated as follows:

$$ET = E1 + E2 + E3 + \dots + En$$

Where:

ET = Annual SO2 emissions, in tons, as summed for the calendar year from January to December; and

En = SO2 emissions, in tons, for each individual start-up/shut-down event during the calendar year

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (2) The permittee shall operate and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The monitoring device must complete a minimum of one cycle of operation for each successive 15-minute period.

The permittee shall record the following information each day:

- a. all periods during which there was no pilot flame; and
- b. the downtime for the flare and monitoring equipment.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (3) The permittee shall continuously monitor either visually and/or by camera whether or not there are visible emissions from the flare. Whenever the permittee observes visible emissions from the flare, the permittee shall record the start-time and end-time of visible emissions in an operations log.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (4) Once per shift, the permittee shall verify that the flare gas recovery system is in operation. The permittee shall keep records of any instance when the flare gas recovery system was not operating.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (5) The permittee shall develop, implement and maintain a copy of the written flare management plan pursuant to 40 CFR 60.103a(a)(1) through (a)(7) and shall be updated periodically to account for the changes described in 40 CFR 60.103a(b)(2). The permittee shall comply with the plan as submitted.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (6) 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 b)(2)f.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (7) The permittee shall implement the corrective action(s) identified in the corrective action analysis conducted pursuant to 40 CFR 60.103a(d) in accordance with the applicable requirements in 40 CFR 60.103a paragraphs (e)(1) through (3):

- a. 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 40 CFR 60.108a(c)(6)(ix);
- b. 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; and
- c. 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 40 CFR 60.108a(c)(6)(x).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (8) The permittee shall properly install, operate, calibrate, and maintain a device to continuously measure and record the flow rate of gas discharged to the flare. The flow monitor shall comply with the following requirements:

- a. Locate the monitor in a position that provides a representative measurement of total gas flow rate;

- b. Use a flow sensor meeting the accuracy requirements specified in 40 CFR 60.107a(f)(1)(ii);
- c. The monitor must be maintainable online and is able to continuously correct for temperature and pressure;
- d. The monitor must record flow in standard conditions over one-minute averages;
- e. If the flow monitor is not equipped with a redundant sensor, quarterly visual inspections must be conducted; and
- f. The flow monitor shall be recalibrated in accordance with manufacturer's procedures and specifications on a biannual basis or at the frequency specified by the manufacturer.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (9) The permittee shall maintain a written quality assurance/quality control plan for the continuous monitoring system, designed to ensure continuous valid and representative readings of total reduced sulfur. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F. The quality assurance/quality control plan and logbook dedicated to the total reduced 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 (CGAs) or relative accuracy audits (RATAs) as required in 40 CFR Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

In accordance with U.S. EPA's alternative monitoring plan approval letter, the permittee shall revise the current written QC program or modify or replace the monitoring system whenever excessive inaccuracies occur for two consecutive quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (10) 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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (11) The permittee shall operate and maintain equipment to continuously monitor and record total reduced 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.

Pursuant to the Flare Management Plan submitted by the permittee on November 12, 2015, the permittee has chosen to demonstrate compliance with the monitoring requirements for the flare through Option 2 (TRS monitor calibration using low H2S

concentrations) of U.S. EPA's November 2, 2015 approval letter (LRC file number A7-15-03).

If the permittee elects to demonstrate compliance using a different approved method, the permittee shall identify the option used in the next quarterly deviation report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (12) The sulfur monitoring system including, but not limited to:
- a. emissions of total reduced sulfur in ppm for each cycle time of the analyzer, with no resolution less than one data point per minute required;
 - b. emissions of total reduced sulfur, in units of the applicable standard(s) and in the appropriate averaging period;
 - c. results of quarterly CGAs;
 - d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
 - e. results of required RATA(s), including results in units of the applicable standard(s);
 - f. hours of operation of the emissions unit, continuous total reduced sulfur CEMS, and control equipment;
 - g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous total reduced sulfur monitoring system CEMS;
 - h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous total reduced sulfur CEMS; as well as,
 - i. the reason (if known) and the corrective actions taken (if any) for each such event in d)(12)g. and d)(12)h.

All valid data points generated and recorded by the continuous emission monitoring (CEMS) 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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify all periods during which the flare pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (2) The permittee shall submit quarterly deviation reports that identify all periods during which the flare gas recovery system was not controlling continuous or routine combustion in the flare when process units are operating and generating hydrocarbon process gas. These reports shall include the date, time, and duration of each such period. The quarterly deviation reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (3) The permittee shall submit quarterly deviation reports that include the start-time and end-time of visible emissions observed from the flare that exceed a total time of five minutes during any consecutive two hour period.

The quarterly deviation reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (4) The permittee shall submit annual reports that summarize the total annual actual emissions of NO_x and SO₂ during periods of process unit start-up and shutdown. The report shall be submitted by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1); PTI No. P0121859 and PTI No. P0107883]

- (5) The permittee shall submit the flare management plan (and any updates) in accordance with 40 CFR 60.103(b)(1) through (b)(3).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (6) The permittee shall submit an excess emissions report for all periods of excess emissions according to the requirements of 40 CFR 60.7(c) except that the report shall contain the information specified in paragraphs (e)(6)(a) through (e)(6)(g) below.

- a. The date that the exceedance occurred;
- b. An explanation of the exceedance;
- c. Whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system; and
- d. A description of the action taken, if any.
- e. The information described in 40 CFR 60.108a(c)(6)(i) through (xi) for all discharges listed in 40 CFR 60.108a(c)(6).
- f. 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.

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

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (7) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous total reduced 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 reduced 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 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 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 reduced sulfur 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 total reduced sulfur monitoring system total reduced sulfur CEMS while the emissions unit was in operation;
 - vii. results and dates of quarterly CGAs;
 - viii. unless previously submitted, results and dates of the RATA(s), including results in units of the applicable standard(s), (during appropriate quarter(s));



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- ix. unless previously submitted, the results of any RATA showing the continuous total reduced sulfur CEMS out-of-control and the compliant results following any corrective actions;
- x. the date, time, and duration of any/each malfunction** of the continuous total reduced sulfur CEMS, emissions unit, and/or control equipment;
- xi. the date, time, and duration of any downtime** of the continuous total reduced sulfur CEMS and/or control equipment while the emissions unit was in operation; and
- xii. the reason (if known) and the corrective actions taken (if any) for each event in e)(7)b.x. and e)(7)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

** each downtime and malfunction event shall be reported regardless of whether there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

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:

10.00 tons of NO_x/calendar-yr during periods of process unit start-up and shutdown

Applicable Compliance Method:

Compliance with the annual NO_x emission limitation shall be demonstrated through record keeping requirements in section d)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

b. Emission Limitation:

90.00 tons of SO₂/calendar-yr during periods of process unit start-up and shutdown



Applicable Compliance Method:

Compliance with the annual SO₂ emission limitation shall be demonstrated through record keeping requirements in section d)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

c. Emission Limitation:

No visible emissions except for periods not to exceed a total of five minutes during any two consecutive hours

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR, Part 60, Appendix A, Method 22.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

g) Miscellaneous Requirements

(1) None.

27. P007, Refinery LIU Flare (PR 196510), treated as control equipment

Operations, Property and/or Equipment Description:

LIU Flare, steam-assisted (PR 196510). This flare also provides control for the hydrogen plants associated with facility ID 0302020242.

- 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 operations(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. 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(F) (PTI No. P0121859, modification issued 9/15/17)	10.00 tons of nitrogen oxides (NOx)/calendar-yr during periods of process unit start-up and shutdown [See b)(2)b.] 100.00 tons of sulfur dioxide (SO2)/calendar-yr during periods of process unit start-up and shutdown [See b)(2)b.]
b.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 63.670, this emissions unit is a flare ‘used as a control device for an emission point subject to this subpart’ and shall meet all applicable requirements.]	No visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, when regulated material is routed to the flare and the flare vent gas flow rate is less than the smokeless design capacity of the flare. See b)(2)a.
c.	40 CFR, Part 63, Subpart UUU [40 CFR 63.1560 – 63.1579] [In accordance with 40 CFR 63.1562, this emissions unit is an affected source due to its use for control of reformer depressurization and purging emissions for the catalytic reformer unit (emissions unit P030), subject to the emission	See b)(2)c., b)(2)d., d)(4), e)(9) and f)(2)



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	limitations/control measures specified in this section.]	
d.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 – 63.15 apply. Table 44 to 40 CFR, Part 63, Subpart UUU - Applicability of General Provisions to Subpart UUU shows which parts of the General Provisions in 40 CFR 63.1 – 63.15 apply.
e.	40 CFR Part 60.18(b)	The emission limitation specified by this rule is less stringent than or equivalent to the emission limitation established pursuant to 40 CFR 63.670(c)
f.	40 CFR, Part 60, Subpart Ja [40 CFR 60.100a – 60.109a]	See b)(2)e. through d)(2)i.
g.	OAC rule 3745-31-05(D) (PTI No. P0121859, modification issued 9/15/17)	Less than or equal to 500 lbs of SO ₂ per day under normal operating conditions. See b)(2)j.

(2) Additional Terms and Conditions

- a. In accordance with 40 CFR, Part 63, Subpart CC, the permittee shall employ a flare to control emissions of organic hazardous air pollutants resulting from malfunctions and pressure relief episodes. In addition, all vapors from the new non-condensable process vent from the ISO recycle splitter tower shall be routed to this flare (or to emissions unit P006, FCC/Coker flare).

The permittee shall comply with the applicable control requirements and operating limits under 40 CFR, Part 63, Subpart CC, including the following sections:

63.670(b)	Pilot Flame Presence
63.670(c)	Visible Emissions
63.670(d)	Flare Tip Velocity
63.670(e)	Combustion Zone Operating Limits
63.670(g)	Pilot Flame Monitoring
63.670(h)(2)	Visible Emissions Monitoring



63.670(i)	Flare Vent Gas, Steam Assist and Air Assist Flow Rate Monitoring
63.670(j)(1)	Flare Vent Gas Composition Monitoring
63.670(k)(2)(i)	Calculation Methods for Cumulative Flow Rates and Determining Compliance with V_{tip} Operating Limits
63.670(l)(1), 63.670(l)(4), and 63.670(l)(5)	Calculation Methods for Determining Flare Vent Gas Net Heating Value
63.670(m)(1)	Calculation Methods for Determining Combustion Zone Net Heating Value
63.670(p)	Flare Monitoring Records
63.670(q)	Reporting
63.671(a)	Operation of CPMS
63.671(b)	CPMS Monitoring Plan
63.671(c)	Out-of-Control Periods
63.671(e)(2)(ii) and 63.671(e)(3)	Additional Requirements for Gas Chromatographs

b. The permittee has requested to voluntarily limit allowable emissions of NO_x and SO₂ to the following:

- i. 10.00 tons of NO_x/yr during periods of process unit start-up and shutdown
- ii. 100.00 tons of SO₂/yr during periods of process unit start-up and shutdown

The emission limitations are being established to alleviate reporting requirements associated with reportable quantities (RQ) under the Superfund Amendments and Reauthorization Act (SARA). The allowable limitations above do not apply to emissions associated with malfunctions and/or process upsets of the process unit. Any SO₂ emissions associated with the start-up and shutdown of the sulfur recovery unit at the facility (emissions unit P040) that are routed to this flare must still be applied to the emissions limitation of 100 lbs SO₂/1,000 lbs of sulfur processed contained in OAC rule 3745-18-08(C)(3).

c. Requirements in 40 CFR, Part 63, Subpart UUU are applicable due to using this flare for control of reformer depressurization and purging of emissions.

d. The permittee shall comply with the applicable control requirements and operating limits under 40 CFR, Part 63, Subpart UUU, including the following sections:



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63.1566(a)(1) and Table 15	Vent TOC to a Flare that meets Subpart A Requirements
63.1566(a)(2) and Table 16	Maintain Flare Pilot during Depressuring and Purging
63.1566(a)(5)	Operate according to OMMP
63.1566(b)(3), Table 16 and Table 18	Flare Operating Limits
63.1566(b)(6) and Table 19	Initial Compliance Demonstration for Flare – Visible Emissions

- e. Lima Refining Company accepts that emissions unit P007 is subject to New Source Performance Standards (NSPS) in 40 CFR, Part 60, Subpart J.
- f. PTI No. P0108318 was an initial installation of the Kero-hydrotreater boiler and reboiler (KHT)(emissions units B033 and B034). The KHT project modified the LIU flare header. When the KHT commenced operation on April 16, 2013, Lima Refining Company accepted New Source Performance Standards (NSPS), Subpart Ja applicability because of the modified flare header.
- g. The requirements of 40 CFR, Part 60 - Subpart Ja are equivalent to and/or more stringent than the requirements of 40 CFR, Part 60 - Subpart J. Therefore, the requirements of 40 CFR, Part 60, Subpart J are not listed in this permit modification (PTI P0121895).

This emissions unit is an affected flare, pursuant to the definition in 40 CFR 60.101a and; therefore, the permittee shall not burn in this emissions unit any refinery fuel gas that contains H₂S in excess of 162 parts per million by volume (ppmv) determined hourly on a 3-hour rolling average basis.

This limit does not apply to process upset gases, fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions.

- h. The permittee shall comply with the following requirements in 40 CFR, Part 60, Subpart Ja for modified flares:
 - i. Conduct a root cause analysis and corrective action plan whenever the discharge to the flare exceeds:
 - (a) 500 lbs SO₂ in any 24-hour period; or
 - (b) 500,000 standard cubic feet (scf) above the baseline in any 24-hour period; or
 - (c) If the permittee elects to comply with the alternative monitoring in 40 CFR 60.107a(g), 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 40 CFR 60.103a(a)(3)(vii)(C).

- i. The permittee submitted an alternative monitoring plan to U.S. EPA on August 10, 2015. On November 2, 2015, U.S. EPA approved alternative methods for monitoring, recordkeeping, operation, calibration, maintenance and testing requirements to demonstrate compliance with the SO₂ and H₂S emission limitations. The approval required the permittee to identify which compliance method is being followed.
- j. The following federally enforceable emission limitation was established for the purpose of limiting potential to emit (PTE):
 - i. limit the SO₂ emissions to less than or equal to 500 lbs per day under normal operating conditions.

c) Operational Restrictions

- (1) The flare shall be operated at all times when emissions are being vented to it.

[OAC rule 3745-77-07(A)(1) and PTI No. P0116562]

- (2) The flare shall be operated with a pilot flame present at all times. The presence of a pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

[OAC rule 3745-77-07(A)(1) and PTI No. P0121859]

- (3) Only flare combustion zone gases with a net heating value of 10.1 MJ/scm (270 Btu/scf) or greater shall be combusted in this emissions unit. Net heating value shall be determined on a 15-minute block period basis and calculated as specified in 40 CFR Part 63.670(m)(1).

The flare shall be operated with an exit velocity less than 18.3 m/sec (60 ft/sec) except as specified in sections c)(4) and c)(5).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0121859]

- (4) If the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1000 Btu/scf), the permittee may operate the flare at an exit velocity equal to or greater than 18.3 m/sec (60 ft/sec), but less than 122 m/sec (400 ft/sec) and also less than the maximum allowed flare tip velocity as determined in accordance with 40 CFR Part 63.670(d)(2).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0116562]

- (5) Steam-assisted flares may be operated with an exit velocity less than the maximum permitted velocity, but not greater than 122 m/sec (400 ft/sec). The maximum permitted velocity shall be determined in accordance with 40 CFR Part 63.670(d)(2).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0121859]

- (6) The permittee shall not burn any continuous or intermittent, routinely-generated hydrocarbons in this flaring device that contain H₂S in excess of 85 mg/dscm (0.037 grain/dscf)(the equivalent concentration is 162 ppmv). This H₂S standard in 40 CFR 60.102a(g)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d).

[OAC rule 3745-77-07(A)(1) and PTI No. P0121859]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information during periods of start-up and shut-down:
 - a. the flare flow rate, in scf per hour;
 - b. the high heating value, in Btu/scf, as determined from the flare gas molecular weight and source of the gas, laboratory analysis or Btu analyzer;
 - c. the concentration of hydrogen sulfide in the flare gas, in weight fraction;
 - d. an indication of which process is undergoing start-up/shut-down mode;
 - e. the number of hours the process operated in start-up/shut-down mode;
 - f. the calculated NO_x emissions using the following equation:

$$E = (FR) \times (HV) \times (T) \times (EF)/1,000,000$$

where:

E = NO_x emissions in tons for each individual start-up and shut-down event;

FR = flare flow rate in scf/hr;

HV = high heating value, in Btu/scf;

T = time duration for each start-up/shut down event, in hours; and

EF = NO_x emission factor of 0.068 lb of NO_x/MMBtu (AP-42 Section 13.5, Industrial Flares [12/16])

- g. the annual NO_x emission rate calculated as follows:

$$E_T = E_1 + E_2 + E_3 + \dots + E_n$$

where:

E_T = Annual NO_x emissions, in tons, as summed for the calendar year from January to December; and



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E_n = NOx emissions, in tons, for each individual start-up/shut-down event during the calendar year

- h. the calculated SO2 emissions using the following equation:

$$E = \{(FR) \times (H_2S)\} / 379.7 \times (0.98) \times (64) \times (T)$$

where:

E = SO2 emissions in tons for each individual start-up and shut-down event;

FR = flare flow rate in scf per hour;

H2S = volume fraction of hydrogen sulfide in flare gas;

379.7 = the volume, in ft³, of one lb mole of gas at standard conditions (60 degrees F & 1 atm) from the ideal gas law;

0.98 = efficiency of the flare for converting a lb mole of H2S into a lb mole of SO2;

64 = molecular weight of SO2 in lb/lb mole; and

T = time duration for each start-up/shut down event, in hours

- i. the annual SO2 emission rate calculated as follows:

$$E_T = E_1 + E_2 + E_3 + \dots + E_n$$

where:

E_T = Annual SO2 emissions, in tons, as summed for the calendar year from January to December; and

E_n = SO2 emissions, in tons, for each individual start-up/shut-down event during the calendar year

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (2) The permittee shall operate and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The monitoring device must complete a minimum of one cycle of operation for each successive 15-minute period.

The permittee shall record the following information each day:

- a. all periods during which there was no pilot flame; and

b. the downtime for the flare and monitoring equipment.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

(3) The permittee shall continuously monitor either visually and/or by camera whether or not there are visible emissions from the flare. Whenever the permittee observes visible emissions from the flare, the permittee shall record the start-time and end-time of visible emissions in an operations log.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

(4) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1566(b)(1) and Table 17	Initial Compliance Demonstration for Flare – Install Flame Monitor
63.1566(c)(1), Table 15, Table 16, Table 20 and Table 21	Continuous Compliance Demonstration for Flare – Visible Emissions and Pilot Monitoring
63.1576(d), Table 20 and Table 21	Flare Recordkeeping Requirements

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU and PTI No. P0121859]

(5) Under normal conditions in order to demonstrate compliance with the emission limitations of 500 lbs of SO₂ per day and 162 ppm H₂S on a 3-hour rolling average basis, the permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the LIU (sour) flare gas stream before being combusted.

Pursuant to the Flare Management Plan submitted by the permittee on November 12, 2015, the permittee has chosen to demonstrate compliance with the monitoring requirements for the aromatics (sweet) header through Option 2 (TRS monitor calibration using low H₂S concentrations) of U.S. EPA’s November 2, 2015 approval letter (LRC file number A7-15-03).

If the permittee elects to demonstrate compliance using a different approved method, the permittee shall identify the option used in the next quarterly deviation report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

(6) A statement of certification of the existing LIU (sour) H₂S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 7.

Proof of certification shall be made available to representatives of the Ohio EPA, Northwest District Office upon request.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (7) The permittee shall operate and maintain existing equipment to continuously monitor and record H₂S from the LIU (sour) header in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the H₂S CEMS including, but not limited to, ppm of H₂S for each cycle time of the analyzer, with no resolution less than one data point per minute required, emissions of H₂S in units of the applicable standard (grain/dscf and ppmv) as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (8) The permittee shall maintain a written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of H₂S at the LIU (sour) header. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F.

A logbook dedicated to the monitoring systems 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 (CGAs) or relative accuracy audits (RATAs) as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

In accordance with U.S. EPA's alternative monitoring plan approval letter, the permittee shall revise the current written QC program or modify or replace the monitoring system whenever excessive inaccuracies occur for two consecutive quarters.

The permittee shall maintain a written quality assurance/quality control plan for the continuous monitoring system, designed to ensure continuous valid and representative readings of total reduced sulfur from the aromatics (sweet) header. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F. The quality assurance/quality control plan and logbook dedicated to the total reduced sulfur CEMS must be kept on site and available for inspection during regular office hours.

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

In accordance with U.S. EPA's alternative monitoring plan approval letter, the permittee shall revise the current written QC program or modify or replace the monitoring system whenever excessive inaccuracies occur for two consecutive quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (9) The continuous emission monitoring system (CEMS) 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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (10) The permittee shall operate and maintain equipment to continuously monitor and record total reduced sulfur from the aromatics (sweet) header in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

Pursuant to the Flare Management Plan submitted by the permittee on November 12, 2015, the permittee has chosen to demonstrate compliance with the monitoring requirements for the aromatics (sweet) header through Option 5 (reduced instrument span) of U.S. EPA's November 2, 2015 approval letter (Husky file number A7-15-03).

If the permittee elects to demonstrate compliance using a different approved method, the permittee shall identify the option used in the next quarterly deviation report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (11) The permittee shall maintain records of all data obtained by the continuous total reduced sulfur monitoring system total reduced sulfur CEMS including, but not limited to:
- a. emissions of total reduced sulfur in ppm for each cycle time of the analyzer, with no resolution less than one data point per minute required;
 - b. emissions of total reduced sulfur, in units of the applicable standard(s) and in the appropriate averaging period;
 - c. results of quarterly CGAs;
 - d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
 - e. results of required RATA(s), including results in units of the applicable standard(s);
 - f. hours of operation of the emissions unit, continuous total reduced sulfur CEMS, and control equipment;
 - g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous total reduced sulfur CEMS;
 - h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous total reduced sulfur CEMS; as well as,
 - i. the reason (if known) and the corrective actions taken (if any) for each such event in d)(11)g. and d)(11)h.

All valid data points generated and recorded by the continuous emission monitoring (CEMS) 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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (12) The permittee shall develop, implement and maintain a copy of the written flare management plan pursuant to 40 CFR 60.103a(a)(1) through (a)(7) and shall be updated periodically to account for the changes described in 40 CFR 60.103a(b)(2). The permittee shall comply with the plan as submitted.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (13) 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 b)(2)i.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (14) The permittee shall implement the corrective action(s) identified in the corrective action analysis conducted pursuant to 40 CFR 60.103a(d) in accordance with the applicable requirements in 40 CFR 60.103a paragraphs (e)(1) through (3):

- a. 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 40 CFR 60.108a(c)(6)(ix);
- b. 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; and
- c. 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 40 CFR 60.108a(c)(6)(x).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (15) The permittee shall properly install, operate, calibrate, and maintain a device to continuously measure and record the flow rate of gas discharged to the flare. The flow monitor shall comply with the following requirements:

- a. Locate the monitor in a position that provides a representative measurement of total gas flow rate;

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- b. Use a flow sensor meeting the accuracy requirements specified in 40 CFR 60.107a(f)(1)(ii);
- c. The monitor must be maintainable online and is able to continuously correct for temperature and pressure;
- d. The monitor must record flow in standard conditions over one-minute averages;
- e. If the flow monitor is not equipped with a redundant sensor, quarterly visual inspections must be conducted; and
- f. The flow monitor shall be recalibrated in accordance with manufacturer's procedures and specifications on a biannual basis or at the frequency specified by the manufacturer.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify all periods during which the flare pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (2) The permittee shall submit quarterly deviation reports that include the start-time and end-time of visible emissions observed from the flare that exceed a total time of five minutes during any consecutive two hour period. The quarterly deviation reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (3) The permittee shall submit annual reports that summarize the total annual actual emissions of NO_x and SO₂ during periods of process unit start-up and shutdown. The report shall be submitted by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (4) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of all rolling, 3-hour periods during which the average concentration of H₂S as measured by the H₂S CEMS under 40 CFR 60.105(a)(4) exceeds 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv). The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages.

- a. The notification shall include a copy of the record and shall be sent to the Director (the Ohio EPA, Northwest District Office) by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (5) If there are no concentrations of H₂S in the flare gas (or combined fuel stream, if applicable) greater than 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv) during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times.

These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (6) The permittee shall submit an excess emissions report for all periods of excess emissions according to the requirements of 40 CFR 60.7(c) except that the report shall contain the information specified in paragraphs (e)(6)(a) through (e)(6)(g) below.
- a. The date that the exceedance occurred;
 - b. An explanation of the exceedance;
 - c. Whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system; and
 - d. A description of the action taken, if any.
 - e. The information described in 40 CFR 60.108a(c)(6)(i) through (xi) for all discharges listed in 40 CFR 60.108a(c)(6).
 - f. 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.
 - g. A written statement, signed by a responsible official, certifying the accuracy and completeness of the information contained in the report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (7) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous total reduced 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 Ohio EPA Northwest District Office, documenting all instances of total reduced 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

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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 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 reduced sulfur 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 total reduced sulfur monitoring system total reduced sulfur CEMS while the emissions unit was in operation;
 - vii. results and dates of quarterly CGAs;
 - viii. unless previously submitted, results and dates of the RATA(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
 - ix. unless previously submitted, the results of any RATA showing the continuous total reduced sulfur monitoring system total reduced sulfur CEMS out-of-control and the compliant results following any corrective actions;
 - x. the date, time, and duration of any/each malfunction** of the continuous total reduced sulfur monitoring system total reduced sulfur CEMS, emissions unit, and/or control equipment;
 - xi. the date, time, and duration of any downtime** of the continuous total reduced sulfur CEMS and/or control equipment while the emissions unit was in operation; and
 - xii. the reason (if known) and the corrective actions taken (if any) for each event in e)(7)b.x. and e)(7)b.xi.

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



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* 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

** each downtime and malfunction event shall be reported regardless of whether there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (8) The permittee shall submit the flare management plan (and any updates) in accordance with 40 CFR 60.103(b)(1) through (b)(3).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0121859]

- (9) The permittee shall comply with the applicable testing requirements under 40 CFR, Part 63, Subpart UUU, including the following section:

63.1575(a) and Table 43	Semiannual Reporting Requirements
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0121859]

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:

10.00 tons of NOx/calendar-yr during periods of process unit start-up and shutdown

Applicable Compliance Method:

Compliance with the annual NOx emission limitation shall be demonstrated through record keeping requirements in section d)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

b. Emission Limitation:

100.00 tons of SO2/calendar-yr during periods of process unit start-up and shutdown

Applicable Compliance Method:

Compliance with the annual SO2 emission limitation shall be demonstrated through record keeping requirements in section d)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]



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c. Emission Limitation:

No visible emissions except for periods not to exceed a total of five minutes during any two consecutive hours

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR, Part 60, Appendix A, Method 22.

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

d. Emission Limitation:

Less than or equal to 500 lbs of SO2 per day under normal operating conditions

Applicable Compliance Method:

Compliance with the daily SO2 emission limitation shall be demonstrated through record keeping requirements in section d)(5) through d)(8).

[OAC rule 3745-77-07(C)(1) and PTI No. P0121859]

- (2) The permittee shall comply with the applicable testing requirements under 40 CFR, Part 63, Subpart UUU, including the following section:

63.1566(b)(2), Table 18, Option 1	Flare Performance Test Requirements
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0121859]

g) Miscellaneous Requirements

- (1) None.

28. P010, FCC Process

Operations, Property and/or Equipment Description:

Fluid Catalytic Cracker (FCC). FCC flue gas exits the FCC regenerator through an overhead line and flows to the waste heat boiler. The waste heat boiler generates approximately 650 psig super-heated steam. Emissions are controlled by an SCR and wet gas scrubber, in series.

- 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) d)(21) through d)(23).
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operations(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. 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 No. P0129038, modification issued 9/2/20)	70 parts per million by volume (dry basis) (ppmvd) of nitrogen oxides (NOx) at 0 percent (%) excess air as a 365 day rolling block average 140 ppmvd of NOx at 0% excess air as a 7 day rolling block average [See b)(2)c.] 1 lb of particulate matter (PM) per 1,000 lbs of coke burn-off 25 (ppmvd) of sulfur dioxide (SO2) at 0% excess air as a 365 day rolling block average 50 ppmvd of SO2 at 0% excess air as a 7 day rolling block average [see b)(2)c.] 500 ppmvd of CO corrected to 0% excess air, as a 1 hour rolling block average See b)(2)a. through b)(2)d.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a six-minute average, except as provided by rule
c.	OAC rule 3745-17-11(B)(1)	See b)(2)i.
d.	OAC rule 3745-18-08(C)(5)	0.92 lb SO2/1,000 lbs of fresh feed

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)e.
e.	<p>40 CFR, Part 63, Subpart UUU [40 CFR 63.1560 – 63.1579]</p> <p>[In accordance with 40 CFR 63.1562, this emissions unit is an affected source consisting of process vents, including bypass line(s) on the fluidized catalytic cracking unit that are associated with the regeneration of the catalyst used in the unit (i.e., the catalyst regeneration vent), subject to the emission limitations/control measures specified in this section.]</p>	<p>500 ppmvd carbon monoxide (CO) at 0% oxygen, as a 1-hour block average</p> <p>See b)(2)f. through b)(2)h., d)(20), e)(7), f)(2)f. and f)(3)</p>
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 44 to 40 CFR, Part 63, Subpart UUU – Applicability of General Provisions to Subpart UUU shows which parts of the General Provisions in 40 CFR 63.1 – 63.15 apply
g.	40 CFR, Part 60, Subpart Ja [40 CFR 60.100a – 60.109a]	<p>1.0 gram per kilogram (g/kg) (1 lb of PM per 1,000 lb) coke burn-off</p> <p>80 ppmvd of NOx corrected to 0% excess air, on a 7-day rolling average</p> <p>25 ppmvd of SO2 corrected to 0% excess air, on a 365-day rolling average</p> <p>50 ppmvd of SO2 corrected to 0% excess air, on a 7-day rolling average</p> <p>500 ppmv of CO corrected to 0% excess air, on an hourly average basis</p> <p>See b)(2)b., b)(2)f., b)(2)j. and c)(1)</p>
h.	40 CFR, Part 60, Subpart J [40 CFR 60.100 – 60.109]	<p>40 CFR, 60.102, 60.103, and 60.104</p> <p>See b)(2)b., b)(2)f. and b)(2)j.</p>
i.	40 CFR, Part 60, Subpart A	General Provisions 40 CFR, 60.11, 60.13 and Part 60, Appendix A

(2) Additional Terms and Conditions

- a. The following term is shown for informational purposes only: PTI P0122775 established federally enforceable emission limitations and associated terms and conditions, as requested by the permittee, in order to fulfill requirements listed in the federal consent decree, civil action No. 3:17-cv-1320, dated 11/07/17.

The NO_x and SO₂ emission limitations initially established in PTI P0122775 and reiterated in P0129038 are considered Interim Short-Term and Interim Long-Term Emission Limitations.

Once the final NO_x and SO₂ emission limitations are established in accordance with federal consent decree, civil action No. 3:17-cv-1320, Appendix C, dated 11/07/17, the permittee shall submit an administrative modification to include all applicable NO_x and SO₂ emission limitations.

- b. In order to demonstrate compliance with the NO_x emission limitation established pursuant to OAC rule 3745-31-05(D), this emissions unit is considered an “affected facility” and shall comply with monitoring, record keeping, reporting and emissions testing requirements under 40 CFR, Part 60, Subpart J through December 31, 2018.

In order to demonstrate compliance with the NO_x emission limitation established pursuant to OAC rule 3745-31-05(D), this emissions unit is considered an “affected facility” and shall comply with monitoring, record keeping, reporting and emissions testing requirements under 40 CFR, Part 60, Subpart Ja beginning January 1, 2019.

In order to demonstrate compliance with the SO₂, PM and CO emission limitations established pursuant to OAC rule 3745-31-05(D), this emissions unit is considered an “affected facility” shall demonstrate compliance with the monitoring, record keeping, reporting and emissions testing requirements under 40 CFR, Part 60, Subpart Ja.

The permittee has satisfied the notice requirements of 40 CFR 60.7(a) and the initial performance test requirement of 40 CFR 60.8(a).

- c. The emissions resulting from periods of startup, shutdown or malfunctions shall not be used to determine compliance with the following emissions limitations:
- i. 140 ppmvd of NO_x at 0% excess air as a 7 day rolling block average; and
 - ii. 50 ppmvd of SO₂ at 0% excess air as a 7 day rolling block average.
- d. LRC shall operate the Fluid Catalytic Cracking Unit (FCCU) SCR and alkaline WGS in accordance with the manufacturer’s specifications and good engineering practices to meet the emissions limitations described herein, until alternative operating parameters are determined through performance testing.

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- e. The SO₂ emissions limitation established in OAC 3745-18-08(C)(5) is less stringent than the regenerator flue gas exhaust SO₂ limits established pursuant to OAC rule 3745-31-05(D).
- f. Pursuant to 40 CFR, Part 60, Subparts J and Ja and Table 8 in 40 CFR, Part 63, Subpart UUU, the permittee shall meet an emission limitation of 500 ppmvd CO, at 0% oxygen, as a 1-hour block average.
- g. The CO emission limitation is not applicable during periods of startup, shutdown or malfunction of this emissions unit, provided that during the startup, shutdown or malfunction, the permittee shall, maintain the oxygen (O₂) concentration in the exhaust gas from the catalyst regenerator at or above 1 volume percent (dry basis) and to the extent practicable, maintain and operate the relevant affected facility, including associated air pollution control equipment, in a matter consistent with good air pollution control practices for minimizing emissions.
- h. This emissions unit is subject to Maximum Achievable Control Technology (MACT) standards in 40 CFR, Part 63, Subpart UUU. The permittee shall comply with the applicable control requirements, operating limits and emission limits under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1564(a)(1), Table 1	Meet the applicable emission limitation in Table 1 of subpart UUU that applies
63.1564(a)(2), Table 2	Comply with the applicable operating limit in Table 2 of this subpart
63.1564(a)(4)	Emission Limits for metal HAP are not applicable during preapproved planned maintenance
63.1564(a)(5)	Startup, shutdown and hot standby requirements
63.1564(b)(3), Table 2 and Table 4	Establish each site-specific operating limit in Table 2 of this subpart that applies to this EU according to the procedures in Table 4
63.1565(b)(4)	Use procedures specified to determine initial compliance with the emission limitations
63.1565(a)(1) and Table 8	Meet the 500 ppmv (dry basis) CO emission limitation in Table 8 of subpart UUU
63.1565(a)(4)	Emission Limits for organic HAP are not applicable during preapproved planned maintenance



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63.1570(a)	Maintain Compliance with non-opacity Standards, except during periods of Startup, Shutdown and Malfunctions
63.1571(d) and 63.1571(e)(3)	Adjustment of operating values and operating limit based on new performance tests demonstrating compliance

- i. The permittee shall comply with the emissions limitation of 1 lbs of PE per 1,000 lbs of coke burned, as a 1-hour block average, which is more stringent than the emissions limitation that had been previously established under OAC rule 3745-17-11(B)(1).
- j. The permittee may choose to comply with the applicable provisions of 40 CFR, Part 60, Subpart Ja to satisfy the requirements of NSPS Subpart J. LRC will comply with Subpart Ja requirements upon startup of the SCR and WGS in lieu of Subpart J.

c) Operational Restrictions

- (1) The permittee shall comply with the following operating parameters for the wet gas scrubber:
 - a. The 3-hour rolling average pressure drop must not fall below the level established during the most recent performance test; and
 - b. The 3-hour rolling average liquid-to-gas ratio must not fall below the level established during the most recent performance test.

[OAC rule 3745-77-07(A)(1) and PTI No. P0129038]

- (2) The emissions from this emissions unit shall be vented to the SCR and wet gas scrubber at all times the emissions unit is in operation.

[OAC rule 3745-77-07(A)(1) and PTI No. P0129038]

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable range or limit for the pressure drop across the scrubber and the scrubber liquid flow rate shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber (in inches of water) and the scrubber liquid flow rate (in gallons per minute) during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the pressure drop across the

scrubber, and the scrubber liquid's pH and the scrubber liquid's flow rate on a continuous basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable range or limit for the pressure drop across the scrubber and the scrubber liquid flow rate shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.

Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. The date and time the deviation began;
- b. The magnitude of the deviation at that time;
- c. The date the investigation was conducted;
- d. The name(s) of the personnel who conducted the investigation; and
- e. The findings and recommendations.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (3) In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- a. A description of the corrective action;
- b. The date the corrective action was completed;
- c. The date and time the deviation ended;
- d. The total period of time (in minutes) during which there was a deviation;
- e. The pressure drop and flow rate readings immediately after the corrective action was implemented; and
- f. The name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.



[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (4) These range(s) and/or limit(s) for the pressure drop and liquid flow rate are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northwest District Office. The permittee may request revisions to the permitted range or limit for the pressure drop and liquid flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable particulate emission and sulfur dioxide emission rates for this emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (5) In order to demonstrate compliance with the PM per coke burn-off emissions limit, the permittee shall install, operate and maintain continuous parameter monitor systems (CPMS) to measure and record operating parameters for each control device according to the applicable requirements below:

- a. The permittee shall install, operate, and maintain each CPMS according to the manufacturer's specifications and requirements;
- b. The permittee shall use CPMS to measure and record the hourly average pressure drop, liquid feed rate, and exhaust gas flow rate; and
- c. The permittee shall determine and record the average coke burn-off rate and hours of operation for each FCCU or FCU using the following equation:

$$R_c = K_1 Q_r(\%CO_2 + \%CO) + K_2 Q_a - K_3 Q_r(\%CO/2 + \%CO_2 + \%O_2) + K_3(Q_{oxy})(\%O_{oxy})$$

Where:

R_c = Coke burn-off rate, kg/hr (lb/hr);

Q_r = Volumetric flow rate of exhaust gas from FCCU regenerator or fluid coking burner before any emissions control or energy recovery system that burns auxiliary fuel, dry standard cubic meters per minute (dscm/min) [dry standard cubic feet per minute (dscf/min)];

Q_a = Volumetric flow rate of air to FCCU regenerator or fluid coking burner, as determined from the unit's control room instrumentation, dscm/min (dscf/min);

Q_{oxy} = Volumetric flow rate of O₂ enriched air to FCCU regenerator or fluid coking unit, as determined from the unit's control room instrumentation, dscm/min (dscf/min);

$\%CO_2$ = Carbon dioxide (CO₂) concentration in FCCU regenerator or fluid coking burner exhaust, percent by volume (dry basis);

$\%CO$ = CO concentration in FCCU regenerator or fluid coking burner exhaust, percent by volume (dry basis);

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$\%O_2$ = O_2 concentration in FCCU regenerator or fluid coking burner exhaust, percent by volume (dry basis);

$\%O_{oxy}$ = O_2 concentration in O_2 enriched air stream inlet to the FCCU regenerator or fluid coking burner, percent by volume (dry basis);

K_1 = Material balance and conversion factor, $0.2982 \text{ (kg-min)/(hr-dscm-%)}$ [$0.0186 \text{ (lb-min)/(hr-dscf-%)}$];

K_2 = Material balance and conversion factor, $2.088 \text{ (kg-min)/(hr-dscm)}$ [$0.1303 \text{ (lb-min)/(hr-dscf)}$]; and

K_3 = Material balance and conversion factor, $0.0994 \text{ (kg-min)/(hr-dscm-%)}$ [$0.00624 \text{ (lb-min)/(hr-dscf-%)}$].

[OAC rule 3745-77-07(C)(1);40 CFR, Part 63, Subpart UUU; and PTI No. P0129038]

- (6) For use in determining the coke burn-off rate for an FCCU, the permittee shall install, operate, calibrate, and maintain an instrument for continuously monitoring the concentrations of CO_2 and O_2 (dry basis).
- The permittee shall install, operate, and maintain each CO_2 and O_2 monitor according to Performance Specification 3 of appendix B to 40 CFR 60.
 - The permittee shall conduct performance evaluations of each CO_2 and O_2 monitor according to the requirements in §60.13(c) and Performance Specification 3 of appendix B to 40 CFR Subpart 60. The permittee shall use Method 3 of appendix A-3 to 40 CFR Subpart 60 for conducting the relative accuracy evaluations.
 - The permittee shall comply with the quality assurance requirements of procedure 1 of appendix F to 40 CFR, Part 60, including quarterly accuracy determinations for CO_2 monitors, annual accuracy determinations for O_2 monitors, and daily calibration drift tests.

[OAC rule 3745-77-07(C)(1);40 CFR, Part 63, Subpart UUU; and PTI No. P0129038]

- (7) The permittee shall maintain records of the average coke burn-off rate and hours of operation.

[OAC rule 3745-77-07(C)(1);40 CFR, Part 63, Subpart UUU; and PTI No. P0129038]

- (8) The permittee shall install, operate, and maintain equipment to continuously monitor and record NO_x emissions for this emissions unit, in units of ppmvd. The span value of this NO_x monitor shall be 200 ppmv NO_x . The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

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

- Emissions of NO_x in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;

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- b. Emissions of NO_x in all units of the applicable standard(s) in the appropriate averaging period;
- c. Results of quarterly CGAs;
- d. Results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. Results of required relative accuracy test audit(s) (RATAs), 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 d)(8)g. and d)(8)h.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (9) 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 NO_x monitoring system for the FCC regenerator flue gas 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 Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (10) The permittee shall maintain a written quality assurance/quality control plan for the continuous NO_x monitoring system for the FCC regenerator flue gas, designed to ensure continuous valid and representative readings of NO_x 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 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 RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (11) The permittee shall install, operate, and maintain equipment to continuously monitor and record SO₂ emissions from this emissions unit, in units of ppmvd. The span value of this SO₂ monitor shall be 200 ppmv SO₂. 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 SO₂ monitoring system including, but not limited to:

- a. Emissions of SO₂ in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. Emissions of SO₂ in all units of the applicable standard(s) in the appropriate averaging period;
- c. Results of quarterly CGAs;
- d. Results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. Results of required RATA(s), including results in units of the applicable standard(s);
- f. Hours of operation of the emissions unit, continuous SO₂ 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 SO₂ 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 SO₂ monitoring system; as well as,
- i. The reason (if known) and the corrective actions taken (if any) for each such event in d)(11)g. and d)(11)h.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (12) 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 SO₂ monitoring system for the FCC regenerator flue gas 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 Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (13) The permittee shall maintain a written quality assurance/quality control plan for the continuous SO₂ monitoring system for the FCC regenerator flue gas, designed to ensure continuous valid and representative readings of SO₂ 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 SO₂ monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60, except as noted below.

- a. Conduct a RATA of the SO₂ CEMS at a minimum frequency of once every three years, and
- b. Conduct CGAs on the SO₂ CEMS during each quarter when a RATA is not conducted.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (14) The permittee shall install, operate and maintain equipment to continuously monitor and record oxygen (O₂) emitted from this emissions unit, in units of percent O₂. The span value of this O₂ monitor shall be between 10 and 25%, inclusive. 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 O₂ monitoring system including, but not limited to:

- a. Percent O₂ for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. Results of quarterly CGAs;
- c. Results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- d. Results of required RATA(s);
- e. Hours of operation of the emissions unit, continuous O₂ monitoring system;
- f. The date, time, and hours of operation of the emissions unit without the continuous O₂ monitoring system;
- g. The date, time, and hours of operation of the emissions unit during any malfunction of the continuous O₂ monitoring system; as well as,



- h. The reason (if known) and the corrective actions taken (if any) for each such event in d)(14)f. and d)(14)g.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (15) 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 O₂ monitoring system for the FCC regenerator flue gas has been certified to meet the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 3. The letter/document of certification shall be made available to the Director (the Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (16) The permittee shall maintain a written quality assurance/quality control plan for the continuous O₂ monitoring system for the FCC regenerator flue gas, designed to ensure continuous valid and representative readings of O₂ 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 SO₂ monitoring system must be kept on site and available for inspection during regular office hours.

- a. The plan shall include the requirement to conduct quarterly CGAs or RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (17) The permittee shall operate and maintain equipment to continuously monitor and record CO emissions from this emissions unit, in units of ppmvd. The span value for this CO monitor shall be 2,500 ppmv CO. 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 CO monitoring system including, but not limited to:

- a. Emissions of CO in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. Emissions of CO in all units of the applicable standard(s) in the appropriate averaging period;
- c. Results of quarterly CGAs;

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- d. Results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. Results of required RATA(s), including results in units of the applicable standard(s);
- f. Hours of operation of the emissions unit, continuous CO 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 CO 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 CO monitoring system; as well as,
- i. The reason (if known) and the corrective actions taken (if any) for each such event in d)(17)g. and d)(17)h.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0129038]

- (18) 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 CO monitoring system for the FCC regenerator flue gas has been certified to meet the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 4 or 4a, as appropriate. The letter/document of certification shall be made available to the Director (the Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0129038]

- (19) The permittee shall maintain a written quality assurance/quality control plan for the continuous CO monitoring system for the FCC regenerator flue gas, designed to ensure continuous valid and representative readings of CO 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 CO monitoring system must be kept on site and available for inspection during regular office hours.

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

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0129038]

- (20) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1564(b)(1) and Table 3	Install, operate, and maintain a continuous monitoring system(s) according to the requirements in 63.1572 and Table 3.
63.1564(c)(1), Table 1, Table 2, Table 6 and Table 7	Demonstrate continuous compliance with each emission limitation in Tables 8 and 9 of this subpart that applies to this unit according to the methods specified in Tables 6 and 7.
63.1564(c)(2)	Document Conformance with Operations, Maintenance and Monitoring Plan
63.1565(b)(1) and Table 10	Install and Operate a CO CEMS
63.1565(c)(1), Table 8, Table 9, Table 13 and Table 14	Continuous Compliance - CO Monitoring
63.1564(a)(3), 63.1565(a)(3) and 63.1565(c)(2)	Prepare and comply with an operation, maintenance, and monitoring plan according to the requirements in 63.1574(f) and operate at all times according to the procedures in the plan
63.1570(c) and 63.1570(d)	General Duty and Maintain Log of Procedures Prior to Continuous Monitoring System Validation
63.1572(a)(1) through 63.1572(a)(4), 63.1572(c)(1) through 63.1572(c)(5), 63.1572(d)(1) through 63.1572(d)(2) and Table 40 and Table 41	Continuous Emission Monitoring System and Continuous Parameter Monitoring System Requirements as Applicable
63.1576(a)(1) through 63.1576(a)(3), 63.1576(b)(1) through 63.1576(b)(5), 63.1576(d) through 63.1576(i), Table 6, Table 7, Table 13 and Table 14	Recordkeeping Requirements

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0129038]

- (21) The permit to install for this emissions unit P010 was evaluated based on the actual materials (typically coatings and cleanup 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" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISC-PRIME (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISC-PRIME

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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):

Pollutant: Ammonia

TLV (mg/m³): 17.0

Maximum Hourly Emission Rate (lbs/hr): 14.0 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (mg/m³): 0.0182

MAGLC (mg/m³): 0.405

[PTI No. P0129038]

- (22) Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
- a. Changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

[PTI No. P0129038]

- (23) If the permittee determines that the "Air Toxic Policy" 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 the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

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- a. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. Documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. Where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

[PTI No. P0129038]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation reports that identify the following:
 - a. Each period of time (start time and date, and end time and date) when the pressure drop across the scrubber or the liquid flow rate was outside of the appropriate range or limit specified by the manufacturer and outside of the acceptable range for each parameter following any required compliance demonstration;
 - b. Any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the SCR and/or scrubber;
 - c. Each incident of deviation described in e)(1)a. or e)(1)b. (above) where a prompt investigation was not conducted;
 - d. Each incident of deviation described in e)(1)a. or e)(1)b. where prompt corrective action, that would bring the pressure drop across the scrubber or the liquid flow rate into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - e. Each incident of deviation described in e)(1)a. or e)(1)b. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (2) The results of the permittee's ammonia slip commissioning report shall be submitted with the initial emission(s) test report required in term and condition f)(1)g. The report shall include a statement that the manufacturer guarantee ammonia slip rate was met.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NOx 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 Ohio EPA, Northwest

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District Office, 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 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). If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect.

- 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 operating time (hours) of the emissions unit;
 - vi. The total operating time of the continuous NO_x monitoring system while the emissions unit was in operation;
 - vii. Results and dates of quarterly CGAs;
 - viii. Unless previously submitted, results and dates of the RATA(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
 - ix. Unless previously submitted, the results of any RATA showing the continuous NO_x monitor out-of-control and the compliant results following any corrective actions;
 - x. The date, time, and duration of any/each malfunction* of the continuous NO_x monitoring system, emissions unit, and/or control equipment;
 - xi. The date, time, and duration of any downtime* of the continuous NO_x monitoring system and/or control equipment while the emissions unit was in operation; and
 - xii. The reason (if known) and the corrective actions taken (if any) for each event in e)(3)b.x. and e)(3)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

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

(4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO₂ 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 Ohio EPA, Northwest District Office, documenting all instances of SO₂ emissions in excess of any applicable ppmvd limit specified in OAC rule 3745-31-05(D), 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 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). If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect.

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 SO₂ 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 SO₂ monitoring system while the emissions unit was in operation;
- vii. Results and dates of quarterly CGAs;



- viii. Unless previously submitted, results and dates of the RATA(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
- ix. Unless previously submitted, the results of any RATA showing the continuous SO₂ monitor out-of-control and the compliant results following any corrective actions;
- x. The date, time, and duration of any/each malfunction* of the continuous SO₂ monitoring system, emissions unit, and/or control equipment;
- xi. The date, time, and duration of any downtime* of the continuous SO₂ monitoring system and/or control equipment while the emissions unit was in operation; and
- xii. The reason (if known) and the corrective actions taken (if any) for each event in e)(4)b.x. and e)(4)b.xi.

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

* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (5) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous O₂ 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 Ohio EPA, Northwest District Office, documenting all instances of continuous O₂ monitoring system downtime and malfunction while the emissions unit was on line.
 - 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 O₂ 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 total operating time (hours) of the emissions unit;

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- v. The total operating time of the continuous O₂ monitoring system while the emissions unit was in operation;
- vi. Results and dates of quarterly CGAs;
- vii. Unless previously submitted, results and dates of the RATA(s) (during appropriate quarter(s));
- viii. Unless previously submitted, the results of any RATA showing the continuous O₂ monitor out-of-control and the compliant results following any corrective actions;
- ix. The date, time, and duration of any/each malfunction* of the continuous O₂ monitoring system while the emissions unit was in operation;
- x. The date, time, and duration of any downtime* of the continuous O₂ monitoring system while the emissions unit was in operation; and
- xi. The reason (if known) and the corrective actions taken (if any) for each event in e)(5)b.ix. and e)(5)b.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

* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (6) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous CO 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 Ohio EPA, Northwest District Office, documenting all instances of CO emissions in excess of any applicable limit specified in this permit, 40 CFR, Part 60; OAC Chapter 3745-21, 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 January 30, April 30, July 30, and October 30 of each year and shall include the following:

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- i. The facility name and address;
- ii. The manufacturer and model number of the continuous CO and other associated monitors;
- iii. A description of any change in the equipment that comprises the 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 CO emissions for the calendar quarter (tons);
- vi. The total operating time (hours) of the emissions unit;
- vii. The total operating time of the continuous CO monitoring system while the emissions unit was in operation;
- viii. Results and dates of quarterly CGAs;
- ix. Unless previously submitted, results and dates of the RATA(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
- x. Unless previously submitted, the results of any RATA showing the continuous CO monitor out-of-control and the compliant results following any corrective actions;
- xi. The date, time, and duration of any/each malfunction** of the continuous CO monitoring system, emissions unit, and/or control equipment;
- xii. The date, time, and duration of any downtime** of the continuous CO monitoring system and/or control equipment while the emissions unit was in operation; and
- xiii. The reason (if known) and the corrective actions taken (if any) for each event in e)(6)b.xi. and e)(6)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

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0129038]

- (7) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1563(f), 63.1574(a)	Notification Requirements, including Performance Test Notifications
63.1574(a)(3), 63.1574(d) and Table 42	Notification of Compliance Status
63.1570(f)	Report Deviations Including Startups, Shutdowns and Malfunctions
63.1564(b)(6), 63.1564(b)(7) 63.1565(b)(5) and 63.1565(b)(6)	Submit Notification of Compliance Status, including Operations Maintenance and Monitoring Plan
63.1574(f)(1), 63.1574(f)(2)(i) through 63.1574(f)(2)(iv) and 63.1574(f)(2)(viii) through 63.1574(f)(2)(x)	Submit Changes to the Operation, Maintenance and Monitoring Plan for Approval
63.1575(a), 63.1575(b)(1) through 63.1575(b)(5), 63.1575(c), 63.1575(e)(1) through 63.1575(e)(13), 63.1575(f)(1) through 63.1575(f)(2), 63.1575(g) and Table 43	Compliance Report Requirements
63.1575(i)	Planned Maintenance Reporting Requirements

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0129038]

f) Testing Requirements

- (1) 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 on the following schedule in accordance with 40 CFR, Part 60, Subparts A and Ja:
 - b. For PM, NO_x, SO₂ and CO: The emission testing shall be conducted approximately 2.5 years after the effective date of the Title V renewal permit (Title V Permit P0133998) and within 6 months prior to the permit expiration.
 - i. For PM: A performance test shall be conducted at least annually (*i.e.*, once per calendar year, with an interval of at least 8 months but no more than 16 months between annual tests).
 - c. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PM, NO_x, SO₂ and CO, in the appropriate averaging period(s)

- d. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
- For PM: Methods 1-5 of 40 CFR, Part 60, Appendix A;
- For NO_x: Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A;
- For SO₂: Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A; and
- For CO: Methods 1-4 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. During the emission testing, the emissions unit shall be operated under operational conditions approved in advance by the Ohio EPA Northwest District Office. Operational conditions that may need to be approved include, but are not limited to, the production rate, the type of material processed, material make-up (solvent content, etc.), or control equipment operational limitations (burner temperature, precipitator voltage, etc.). In general, testing shall be done under "worst case" conditions expected during the life of the permit. As part of the information provided in the "Intent to Test" notification form described below, the permittee shall provide a description of the emissions unit operational conditions they will meet during the emissions testing and describe why they believe "worst case" operating conditions will be met. Prior to conducting the test(s), the permittee shall confirm with the Ohio EPA Northwest District Office that the proposed operating conditions constitute "worst case". Failure to test under the approved conditions may result in Ohio EPA 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 Ohio EPA Northwest District Office. 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 Ohio EPA Northwest District Office 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.
- h. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northwest District Office 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 Ohio EPA Northwest District Office.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

- (2) 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:

70 ppmvd of NO_x at 0% excess air as a 365 day rolling block average, 80 ppmvd of NO_x at 0% excess air as a 7 day rolling block average and 140 ppmvd of NO_x at 0% excess air as a 7 day rolling block average

Applicable Compliance Method:

The permittee shall demonstrate compliance with the emission limitation in accordance with the testing requirements in f)(1).

Ongoing compliance with the NO_x emission limitations shall be based upon the monitoring and record keeping requirements specified in section d)(8) through d)(10). For this emissions unit and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR, Part 60.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

b. Emission Limitation:

1 lb of PE per 1,000 lbs of coke burned, as a 1-hour block average

Applicable Compliance Method:

The permittee shall demonstrate compliance with the emission limitation in accordance with the testing requirements in f)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

c. Emission Limitation:

25 ppmvd of SO₂ at 0% excess air as a 365 day rolling block average, and 50 ppmvd of SO₂ at 0% excess air as a 7 day rolling block average

Applicable Compliance Method:

The permittee shall demonstrate compliance with the emission limitation in accordance with the testing requirements in f)(1).

Ongoing compliance with the SO₂ emission limitations shall be based upon the monitoring and record keeping requirements specified in section d)(11) through



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d)(13). For this emissions unit and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR, Part 60.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

d. Emission Limitation:

Visible PE 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 emission limitation shall be demonstrated in accordance with the methods and procedures identified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

e. Emission Limitation:

0.92 lb of SO₂/1,000 lbs of fresh feed

Applicable Compliance Method:

The permittee shall demonstrate compliance with the emission limitation in accordance with the testing requirements in f)(1).

Additional testing shall be determined in accordance with Ohio EPA Engineering Guide 16.

[OAC rule 3745-77-07(C)(1) and PTI No. P0129038]

f. Emission Limitation:

500 ppmvd of CO at 0% oxygen, as a one-hour block average

Applicable Compliance Method:

The permittee shall demonstrate compliance with the emission limitation in accordance with the testing requirements in f)(1).

Ongoing compliance with the CO emission limitations shall be based upon the monitoring and record keeping requirements specified in section d)(17) through d)(19). For this emissions unit and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR, Part 60.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0129038]



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- (3) The permittee shall comply with the applicable testing requirements under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1571(a)(5) and Table 4	5 Year Performance Testing for PM or Ni
63.1571(b)(1) through 63.1571(b)(4)	Performance Test General Requirements
63.1571(c)(1) through 63.1571(c)(4)	Engineering Assessment Procedures as Applicable
63.1571(d)(1), 63.1571(d)(4) and 63.1571(d)(3)	Procedures for Changing the Values Measured when Establishing an Operating Limit as Applicable
63.1571(e)(1) through 63.1571(e)(3)	Procedure for Changing Operating Limit as Applicable

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0129038]

g) Miscellaneous Requirements

- (1) None.



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29. P014, Vacuum II Distillation Tower Process

Operations, Property and/or Equipment Description:

Vacuum II Distillation Tower (PR 164058)

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 operations(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. 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 3745-18-06(E)(2)	1,620 lbs of sulfur dioxide (SO ₂)/hr [See b)(2)a.]
b.	OAC rule 3745-21-09(M)(1)	See b)(2)b. and b)(2)c.
c.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source since the vacuum II distillation tower is considered a Group 1 process vent which is controlled by compressing the vapors to the refinery fuel system or use of the LIU flare (emissions unit P007) and with backup to the FCC/Coker flare (emissions unit P006)]	See b)(2)c., b)(2)d. and e)(1)
d.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. The allowable SO₂ emission limitation is based on the equation in OAC rule 3745-18-06(E)(2) and a maximum process weight rate of 385.25 tons per hour.



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- b. The permittee shall control the emissions of volatile organic compounds (VOCs) from any vacuum producing system by compressing the vapors and adding them to the refinery fuel gas system.
- c. This emissions unit is vented to a flare. All operational restrictions, monitoring, recordkeeping, reporting, and testing requirements for the flare are established in the terms and conditions for emissions unit P006 and P007 and are also applicable to emissions unit P014. Therefore, no additional monitoring, record keeping, reporting, and testing requirements are necessary for the flare in this emissions unit.
- d. Maximum Available Control Techology (MACT) requirements in 40 CFR, Part 63, Subpart CC are applicable for each Group 1 process vent that is part of this emissions unit, and is routed to either emissions unit P007 and/or P006, the LIU flare or FCC/Coker flare, respectively.

The permittee shall comply with the applicable control requirements, emission limit and compliance demonstration methods under 40 CFR, Part 63, Subpart CC, including the following sections:

63.643(a)(1)	Required Use of Flare to Reduce Organic Hazardous Air Pollutants
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c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) None.

e) Reporting Requirements

- (1) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.655(g)	Semi-annual Deviation Report for Group 1 Miscellaneous Process Vents
63.655(g)(6)	Semi-annual Deviation Report for Group 1 Miscellaneous Process Vents – Excess Emissions Reporting

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

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:

1,620 lbs of SO₂/hr

Applicable Compliance Method:

Compliance shall be based upon the emission testing conducted on December 9, 2004. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with Methods 1 through 4, and 6 of 40 CFR, Part 60, Appendix A.

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

g) Miscellaneous Requirements

- (1) None.

30. P017, Aromatics Process

Operations, Property and/or Equipment Description:

Aromatics process: Extraction column (PR 164477), Benzene Recovery Column (PR164480), Cold Box (No PR)

- 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 operations(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. 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 61, Subpart J [40 CFR 61.110 – 61.112] (PTI No. 03-1138, issued 3/8/82)	See b)(2)a. and d)(1)
b.	40 CFR, Part 61, Subpart V [40 CFR 61.240 – 61.247]	See b)(2)a.,d)(1) and Facility-Wide Term and Condition B.2.
c.	40 CFR, Part 61, Subpart BB [40 CFR 61.300 – 61.306]	See b)(2)c.
d.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
e.	OAC rule 3745-21-09(T)	See b)(2)a., d)(1) and Facility-Wide Term and Condition B.2.
f.	40 CFR, Part 63, Subpart EEEE [40 CFR 63.2330 – 63.2406] [In accordance with 40 CFR 63.2334, this emissions unit is an affected source consisting of an organic liquid distribution (OLD) operation, subject to the emission limitations/control measures specified in this section.]	See b)(2)b., b)(2)c., c)(1), c)(2), d)(2), d)(3), d)(4), e)(1) and f)(1)
g.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 12 to 40 CFR, Part 63, Subpart EEEE – Applicability of General Provisions to Subpart EEEE shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
h.	40 CFR, Part 63, Subpart CC	See b)(2)d.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source since it contains Group 1 process vents that are routed to the LIU flare (emissions unit P007)]	

(2) Additional Terms and Conditions

- a. The requirements of this rule are equivalent to or less stringent than the alternative leak detection and repair (LDAR) plan submitted by the permittee. Terms and conditions for the alternative LDAR plan are listed in section B.2 of the Facility-Wide Terms and Conditions of this permit.
- b. The control device for this emissions unit is the benzene vent scrubber which also is used as the control device for emissions unit P023. Thus, portions of 40 CFR, Part 63, Subpart EEEE for use of a scrubber are applicable to this emissions unit.
- c. Pursuant to the Ohio EPA approval letter dated March 21, 2007, when operating the scrubber as the control device for P023, the permittee shall comply with the U.S. EPA approved Alternative Monitoring Plan (AMP) to comply with the requirements of 40 CFR, Part 61, Subpart BB and 40 CFR, Part 63, Subpart EEEE, which, as stated in the approved AMP, is consistent with existing terms and conditions.
- d. This emissions unit is vented to a flare. All operational restrictions, monitoring, recordkeeping, reporting, and testing requirements for the flare are established in the terms and conditions for emissions unit P007 and are also applicable to emissions unit P017. Therefore, no additional monitoring, record keeping, reporting, and testing requirements are necessary for the flare in this emissions unit.

c) Operational Restrictions

- (1) Pursuant to the U.S. EPA approval letter dated November 12, 1998 for alternate monitoring parameters in accordance with 40 CFR 63.151(g), the following operating parameters shall be met by the permittee when operating the benzene vent scrubber as the control device:
 - a. benzene vent scrubber:
 - i. maintain the lean solvent temperature less than 120 degrees Fahrenheit.
 - ii. maintain the rich solvent pH greater than 6.5.
 - iii. maintain the rich solvent percent hydrocarbon less than 10 percent.

- b. tetra stripper solvent reboiler:
 - i. maintain the bottoms temperature greater than 275 degrees Fahrenheit.

[OAC rule 3745-77-07(A)(1) and 40 CFR 63.151(g)]

- (2) The emissions from this emissions unit shall be vented to the benzene vent scrubber at all times the emissions unit is in operation.

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

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall include the aromatics process fugitive emissions and associated components in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall be conducted in accordance with the alternative monitoring plan submitted by the permittee. Applicable requirements are listed in section B.2 of the Facility-Wide Terms and Conditions of this permit.

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

- (2) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart EEEE, including the following sections:

63.2366(a)	Install Continuous Monitoring System (CMS) on Control Device
63.2374(a) through 63.2374(c)	Monitoring per 40 CFR, Part 63, Subpart SS; Monitor continuously when in OLD operation except for CMS malfunction, repair and quality assurance; Excluded CMS data
63.2394(a) through 63.2394(c)	Records Format, Retention Time and Location

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart EEEE]

- (3) The permittee shall calibrate, maintain, and operate according to manufacturer's specifications, device(s) to continuously monitor the temperature of the scrubber absorbing fluid. The device(s) shall be operated such that the benzene vent scrubber lean solvent temperature and tetra stripper solvent reboiler bottoms temperature can be determined.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart EEEE]

- (4) The permittee shall obtain daily samples of the scrubber absorbing fluid and conduct an analysis of the fluid for rich solvent pH and rich solvent percent hydrocarbon.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart EEEE]

e) Reporting Requirements

- (1) The permittee shall comply with the applicable compliance deadline and reporting requirements under 40 CFR, Part 63, Subpart EEEE, including the following sections:

63.2342(b)(1)	Compliance Deadlines
63.2342(d)	Notification Deadlines
63.2382(a), 63.2382(b), 63.2382(d)	Required Notification and Notification of Compliance Status
63.2386(a) through 63.2386(e), and Table 11	Compliance Reports

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart EEEE]

f) Testing Requirements

- (1) The permittee shall comply with the applicable testing requirements under 40 CFR, Part 63, Subpart EEEE, including the following section:

63.2362(a)	Subsequent Performance Tests
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[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart EEEE]

g) Miscellaneous Requirements

- (1) None.

31. P018, Isomerization Process

Operations, Property and/or Equipment Description:

Isomerization process: Stabilizer tower (PR 164491), Isomerization Reactor (PR 164976-head) (PR 164977-tail), Fuel Gas Scrubber (PR 164489)

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 operations(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. 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.,d)(1) and Facility-Wide Term and Condition B.2.
b.	40 CFR, Part 60, Subpart GGG [40 CFR 60.590 – 60.593]	See b)(2)a. and d)(1)
c.	40 CFR, Part 60, Subpart VV [40 CFR 60.480 – 60.489]	See b)(2)a. and d)(1)
d.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
e.	PTI No. 03-1138, issued 3/8/82	None.
f.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source since it contains Group 1 process vents that are routed to the LIU flare (emissions unit P007)]	See b)(2)b.

(2) Additional Terms and Conditions

a. The requirements of this rule are equivalent to or less stringent than the alternative leak detection and repair (LDAR) plan submitted by the permittee. Terms and conditions for the alternative LDAR plan are listed in section B.2 of the Facility-Wide Terms and Conditions of this permit.

b. This emissions unit is vented to a flare. All operational restrictions, monitoring, recordkeeping, reporting, and testing requirements for the flare are established in the terms and conditions for emissions unit P007 and are also applicable to

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emissions unit P018. Therefore, no additional monitoring, record keeping, reporting, and testing requirements are necessary for the flare in this emissions unit.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall include the Isomerization process fugitive emissions and associated components in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall be conducted in accordance with the alternative monitoring plan submitted by the permittee. Applicable requirements are listed in section B.2 of the Facility-Wide Terms and Conditions of this permit.

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

e) Reporting Requirements

(1) None.

f) Testing Requirements

(1) None.

g) Miscellaneous Requirements

(1) None.

32. P023, Benzene Loading Rack

Operations, Property and/or Equipment Description:

Benzene Single RR Car Loading Rack

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 operations(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. 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 No. P0133425, modification issued 12/19/22)	5.16 lbs of benzene/hr
b.	40 CFR, Part 61, Subpart J [40 CFR 61.110 – 61.112]	See b)(2)a.
c.	40 CFR, Part 61, Subpart V [40 CFR 61.240 – 61.247]	See b)(2)a.
d.	40 CFR, Part 61, Subpart BB [40 CFR 61.300 – 61.306]	See b)(2)b. through b)(2)m., d)(4) through d)(9), e)(1), and f)(2) through f)(7)
e.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
f.	40 CFR, Part 63, Subpart EEEE [40 CFR 63.2330 – 63.2406] [In accordance with 40 CFR 63.2334, this emissions unit is an affected source consisting of an organic liquid distribution (OLD) operation, subject to the emission limitations/control measures specified in this section.]	See b)(2)b. through b)(2)o., d)(10), e)(2) and f)(8)
g.	40 CFR, Part 63, Subpart SS [40 CFR 63.980 – 63.999] [In accordance with 40 CFR 63.980, the provisions of Subpart SS include requirements for closed vent systems, control devices and routing of air emissions to a fuel gas system	See b)(2)p., d)(11), e)(3) and f)(9) These air emission standards are placed here for administrative convenience and only apply to those permittees of facilities subject to a referencing subpart. The provisions of 40 CFR, Part 63, Subpart A (General Provisions) do not apply to this

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	or process. These provisions apply since 40 CFR, Part 63, Subpart EEEE references the use of this Subpart for such air emission control.]	subpart except as specified in a referencing subpart.
h.	40 CFR 63.1 through 63.15	Table 12 to 40 CFR, Part 63, Subpart EEEE – Applicability of General Provisions to Subpart EEEE shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
i.	OAC rule 3745-21-07(M)	See b)(2)n.
j.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source since it contains Group 1 process vents that are routed to the LIU flare (emissions unit P007)]	See b)(2)q.

(2) Additional Terms and Conditions

- a. The requirements of this rule are equivalent to or less stringent than the alternative leak detection and repair (LDAR) plan submitted by the permittee. Terms and conditions for the alternative LDAR plan are listed in section B.2 of the Facility-Wide Terms and Conditions of this permit.
- b. When using the flare (LIU flare, emissions unit P007) as a control device for P023, the permittee shall meet the requirements in 63.983 for closed vent systems; 63.987 for flares; 63.997(a), (b) and (c) for provisions regarding flare compliance assessments; the monitoring, recordkeeping, and reporting requirements referenced therein; and the applicable recordkeeping and reporting requirements of 63.998 and 63.999.

[40 CFR 63.2346(b)(1) and 40 CFR 63.982(3)(ii)]
- c. Pursuant to the Ohio EPA approval letter dated March 21, 2007, when operating the scrubber as the control device for P023, the permittee shall comply with the U.S. EPA approved Alternative Monitoring Plan (AMP) to comply with the requirements of 40 CFR, Part 61, Subpart BB and 40 CFR, Part 63, Subpart EEEE, which, as stated in the approved AMP, is consistent with existing terms and conditions.
- d. The permittee shall equip each loading rack with a vapor collection system that is:
 - i. Designed to collect all benzene vapors displaced from railcars during loading, and

- ii. Designed to prevent any benzene vapors collected at one loading rack from passing through another loading rack to the atmosphere.
- e. The permittee shall install a control device and reduce benzene emissions routed to the atmosphere through the control device by 98 weight percent.
- f. The permittee shall operate any flare used to comply with 40 CFR 61.302(b) in accordance with the requirements of 40 CFR 60.18(b) through (f), and comply with 63.987 as specified in 40 CFR, Part 63, Subpart EEEE, Table 3, option 7.
- g. The permittee shall limit the loading of benzene into vapor-tight railcars using the following alternative method for each car every time the car is loaded:
 - i. Connect the loading arms, vent connections, grounding cable, etc. per the loading procedures.
 - ii. Pressurize each car with nitrogen to 30 psig. For new cars, or cars returning from the maintenance shop, the nitrogen pressure must be taken to 35 psig.
 - iii. When the nitrogen pressure reaches 30 psig (or 35 psig for new or repaired cars) at the vent end pressure gauge of each car, close the nitrogen valve to each car.
 - iv. Using liquid soap, spray each of the following: every flange, isolation valves, safety valves, bleed valves, manways (top and bottom), and level probe connections.
 - v. Report any and all leaks to the Operating Supervisor and repair as needed.
 - vi. If a major repair is needed, such as changing out a safety valve or replacing a valve or hose gasket; after the repair, re-pressure that particular car and re-soap for leaks.
 - vii. When all leaks are repaired or if there were no leaks, slowly release the pressure from each car to 10 psig or less to the benzene vent scrubber.
 - viii. Continue with the normal loading procedure.
- h. The permittee shall limit loading of benzene to railcars equipped with vapor collection equipment that is compatible with the affected facility's vapor collection system.
- i. The permittee shall limit loading of railcars to railcars whose collection systems are connected to the affected facility's vapor collection systems.
- j. The permittee shall ensure that the vapor collection and benzene loading equipment of railcars shall be designed and operated to prevent gauge pressure in the railcar from exceeding, during loading, the initial pressure the railcar was pressured up to and shown to be vapor tight at during the most recent vapor-tightness test using Method 27 of Appendix A to 40 CFR, Part 60. As an alternative

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to Method 27, the permittee may use the procedures listed in term and condition b)(2)g.i. through b)(2)g.viii. of this emissions unit, as allowed by 40 CFR 61.302(d)(3) to conduct the vapor-tightness test. This vapor-tightness test pressure is not to be exceeded when measured by the procedures specified in 40 CFR 61.304(c).

- k. The permittee shall ensure that no pressure-vacuum vent in the affected facility's vapor collection system for railcars shall begin to open at a system pressure less than the maximum pressure at which the railcar is operated.
- l. The permittee shall inspect the vapor collection system and the control device for detectable emissions, and shall repair any leaks detected, in accordance with 40 CFR 61.242-11 (e) and (f). This inspection of the vapor collection system and control device shall be done during the loading of railcars.
- m. Vent systems that contain valves that could divert a vent stream from a control device shall have car-sealed opened all valves in the vent system from the emission source to the control device, and car-sealed closed all valves in the vent system that would lead the vent stream to the atmosphere, either directly or indirectly, bypassing the control device.
- n. This emissions unit is exempt from the requirements of OAC rule 3745-21-07(M) pursuant to the requirements of OAC rule 3745-21-07(M)(3)(a)(i). This facility is not located in one of the Priority 1 counties identified in OAC rule 3745-21-06(A).
- o. The permittee shall comply with the applicable control requirements, operating limits and emission limits under 40 CFR, Part 63, Subpart EEEE, including the following sections:

63.2346(b)	Transfer Racks Control Requirements
63.2346(b)(1) and Table 2	Transfer Racks Emission Limits
63.2346(d)	Transport Vehicle Control Requirements
63.2346(e) and Table 3	Transfer Rack Operating Limits
63.2346(g)	Procedures for Requesting Alternative Standards
63.2346(i)	Safety Device
63.2350(a) through 63.2350(c)	Comply at all times, Comply with 63.6(e)(1)(i) and Develop Startup, Shutdown and Malfunction Plan
63.2354(a)(2)	Design Evaluation Procedures
63.2354(c)	HAP Content Determination Procedures



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63.2358(b)(1) and 63.2358(c)(2)	Initial Compliance Demonstration Date – Emission Limits and Work Practices
63.2370(a), 63.2370(b), and Tables 5 through 7	Initial Compliance Demonstration for Loading Rack Design Evaluation, Transport Vehicles
63.2378(b)(1) through 63.2378(b)(3)	Startup, Shutdown and Malfunction Requirements
63.2378(c)	Limits on Planned Routine Maintenance
63.2396(b)	Regulatory Overlap with 40 CFR, Part 61, Subpart BB

- p. The permittee shall comply with the applicable control and operating requirements under 40 CFR, Part 63, Subpart SS, including the following sections:

63.985(b)(1)(i)(A)	Design Evaluation
63.990(a)(1)	Equipment and Operating Requirements
63.990(a)(2)	Operate Control Device At All Times Emissions Are Vented To It.

- q. This emissions unit is vented to a flare. All operational restrictions, monitoring, recordkeeping, reporting, and testing requirements for the flare are established in the terms and conditions for emissions unit P007 and are also applicable to emissions unit P023. Therefore, no additional monitoring, record keeping, reporting, and testing requirements are necessary for the flare in this emissions unit.

c) Operational Restrictions

- (1) The permittee shall use submerged fill whenever this emissions unit is in operation.

[OAC rule 3745-77-07(A)(1) and PTI No. P0133425]

- (2) Pursuant to the U.S. EPA approval letter dated November 12, 1998 for alternate monitoring parameters in accordance with 40 CFR 63.151(g), the following operating parameters shall be met by the permittee when operating the benzene vent scrubber as the control device:

- a. benzene vent scrubber:

- i. maintain the lean solvent temperature less than 120 degrees Fahrenheit.

- ii. maintain the rich solvent pH greater than 6.5.
- iii. maintain the rich solvent percent hydrocarbon less than 10 percent.

b. tetra solvent re-boiler:

- i. maintain the bottoms temperature greater than 275 degrees Fahrenheit.

[OAC rule 3745-77-07(A)(1), 40 CFR 63.151(g) and PTI No. P0133425]

- (3) The permittee shall operate the benzene vent scrubber or the LIU flare as the control device for this emissions unit whenever clean railcars are being loaded.

[OAC rule 3745-77-07(A)(1) and PTI No. P0133425]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall include the benzene single railroad car loading rack fugitive emissions and associated components in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall be conducted in accordance with the alternative monitoring plan submitted by the permittee. Applicable requirements are listed in section B.2 of the Facility-Wide Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0133425]

- (2) The permittee shall calibrate, maintain, and operate according to manufacturer's specifications, device(s) to continuously monitor the temperature of the scrubber absorbing fluid. The device(s) shall be operated such that the benzene vent scrubber lean solvent temperature and tetra solvent reboiler bottoms temperature can be determined.

[OAC rule 3745-77-07(C)(1) and PTI No. P0133425]

- (3) The permittee shall obtain daily samples of the scrubber absorbing fluid and conduct an analysis of the fluid for rich solvent pH and rich solvent percent hydrocarbon.

[OAC rule 3745-77-07(C)(1) and PTI No. P0133425]

- (4) The permittee of an affected facility who wishes to demonstrate compliance with the standards specified under 40 CFR 61.302(b) using control devices other than an incinerator, steam generating unit, process heater, carbon adsorber, or flare shall provide the Administrator with 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.

[OAC rule 3745-77-07(C)(1), 40 CFR 61.303(e) and PTI No. P0133425]

- (5) Each permittee of an affected facility complying with 40 CFR 61.302(e)(1) shall install, calibrate, maintain, and operate a recording pressure measurement device (magnehelic gauge or equivalent device) and an audible and visible alarm system that is activated

when the pressure vacuum specified in 40 CFR 61.302(e)(1) is not attained. The permittee shall place the alarm system so that it can be seen and heard where cargo transfer is controlled and on the open deck.

[OAC rule 3745-77-07(C)(1), 40 CFR 61.303(e) and PTI No. P0133425]

- (6) Permittees using a vent system that contains valves that could divert a vent stream from a control device used to comply with the provisions of this subpart shall do one or a combination of the following:
- a. Install a flow indicator immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere. The flow indicator shall be capable of recording flow at least once every 15 minutes.
 - b. Monitor the valves once a month, checking the position of the valves and the condition of the car seal, and identify all times when the car seals have been broken and the valve position has been changed (i.e., from opened to closed for valves in the vent piping to the control device and from closed to open for valves that allow the stream to be vented directly or indirectly to the atmosphere).

[OAC rule 3745-77-07(C)(1), 40 CFR 61.303(g) and PTI No. P0133425]

- (7) If a vent system containing valves that could divert the emission stream away from the control device is used, each permittee subject to the provisions of this subpart shall keep for at least 2 years up-to-date, readily accessible continuous records of:
- a. All periods when flow is indicated if flow indicators are installed under 40 CFR 61.303(g)(1).
 - b. All times when maintenance is performed on car-sealed valves, when the car seal is broken, and when the valve position is changed (i.e., from open to closed for valves in the vent piping to the control device and from closed to open for valves that vent the stream directly or indirectly to the atmosphere bypassing the control device) if valves are monitored under 40 CFR 60.303(g)(2).

[OAC rule 3745-77-07(C)(1), 40 CFR 61.305(c) and PTI No. P0133425]

- (8) The permittee of an affected facility shall keep the vapor-tightness documentation required under 40 CFR 61.302(d) on file at the affected facility in a permanent form available for inspection.

[OAC rule 3745-77-07(C)(1), 40 CFR 61.305(g) and PTI No. P0133425]

- (9) The permittee of an affected facility shall update the documentation file required under 40 CFR 61.302(d) for each railcar at least once per year to reflect current test results as determined by the appropriate method. The permittee shall include, as a minimum, the following information in this documentation:
- a. test title;



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- b. railcar owner and address;
- c. railcar identification number;
- d. testing location;
- e. date of test;
- f. tester name and signature;
- g. witnessing inspector: name, signature, and affiliation;
- h. test results, including, for railcars, the initial pressure up to which the tank was pressured at the start of the test, and any repairs that were necessary to ensure vapor tightness; and
- i. a checklist indicating that each of the procedures outlined in the alternative method has been followed.

[OAC rule 3745-77-07(C)(1), 40 CFR 61.305(h) and PTI No. P0133425]

(10) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart EEEE, including the following sections:

63.2366(a)	Install Continuous Monitoring System (CMS) on Control Device
63.2374(a) through 63.2374(c)	Monitoring per 40 CFR, Part 63, Subpart SS; Monitor continuously when in OLD operation except for CMS malfunction, repair and quality assurance; Excluded CMS data
63.2378(a) and Tables 8 through 10	Continuous Compliance Demonstration for Loading Rack and Transport Vehicles
63.2390(b)(2) and Tables 8 through 10	Compliance Records – Loading Rack and Transport Vehicles
63.2390(c)(1)	Transport Vehicle Tightness Records
63.2390(d)	Record of Total Actual Annual Facility-level Organic Liquid Loading Volume
63.2394(a) through 63.2394(c)	Records Format, Retention Time and Location
63.2396(e)	Monitoring and Recordkeeping Regulatory Overlap



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[OAC rule 3745-77-07(C)(1), 40 CFR, Part 63, Subpart EEEE and PTI No. P0133425]

- (11) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart SS, including the following sections:

63.990(c) and 63.990(c)(1)	Absorber Monitoring Requirements
63.996(a)(1)	Monitoring Requirements - Applicability
63.996(b)(1)	Conduct of Monitoring
63.996(b)(2)	Backup Continuous Parameter Monitoring Systems
63.996(c)(1), 63.996(c)(2)(i), 63.996(c)(2)(ii), 63.996(c)(2)(iii), and 63.996(c)(3) through 63.996(c)(6)	Continuous Parameter Monitoring Systems: Installation and Calibration, Operation and Maintenance, Malfunction, Continuous Operation, Establish Range of Monitored Parameters, and Monitoring Alternatives
63.996(d)(1) and 63.996(d)(2)	Monitoring Alternatives
63.998(b)(1)(i) through 63.998(b)(1)(iv)	Continuous Records and Monitoring System Data Handling, and Approved Alternatives
63.998(b)(2)	Excluded Monitoring Data
63.998(b)(3)	Records of Daily Averages
63.998(b)(5)(i)(A) through 63.998(b)(5)(i)(F), 63.998(b)(5)(ii), 63.998(b)(5)(ii)(B) and 63.998(b)(5)(ii)(C)	Alternative Recordkeeping: Detect Unreasonable Data, Generates Running Average, Detect Unchanging Data, Alarm, Verify Proper Functioning, Records, Reduced Frequency Excursion and Reduced Frequency Records
63.998(b)(6)(i) and 63.998(b)(6)(ii)	Excursion Definition and Excused Excursion
63.998(c)(1) and 63.998(c)(3)	Monitoring System Records - Continuous Parameter Monitoring Systems and Absorbers

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 63, Subpart SS and PTI No. P0133425]

e) Reporting Requirements

- (1) Each permittee of an affected facility subject to the requirements of 40 CFR 61.302 shall submit to the Administrator quarterly reports of the following information. The permittee shall submit the initial report within 90 days after the effective date of this subpart or 90 days after startup for a source that has an initial startup date after the effective date. Subsequent quarterly reports shall be submitted on January 30, April 30, July 30 and October 30 each year.
- a. all periods recorded under 40 CFR 61.305(c)(1) when the vent stream is diverted from the control device;
 - b. all times recorded under 40 CFR 61.305(c)(2) when maintenance is performed on car-sealed valves, when the car seal is broken, and when the valve position is changed; and
 - c. all deviations from the operational restrictions in sections c)(2)a. and c)(2)b. of this permit.

[OAC rule 3745-77-07(C)(1), 40 CFR 61.305(f) and PTI No. P0133425]

- (2) The permittee shall comply with the applicable compliance deadline and reporting requirements under 40 CFR, Part 63, Subpart EEEE, including the following sections:

63.2342(b)(1)	Compliance Deadlines
63.2342(d)	Notification Deadlines
63.2370(c)	Notice of Compliance Status – Initial Compliance Determination
63.2382(a), 63.2382(b), 63.2382(d)	Required Notification and Notification of Compliance Status
63.2386(a) through 63.2386(e), and Table 11	Compliance Reports
63.2396(e)	Reporting Regulatory Overlap

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 63, Subpart EEEE and PTI No. P0133425]

- (3) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart SS, including the following sections:

63.998(b)(5)(ii)(A)	Reduced Frequency Notification for Alternative Recordkeeping
63.999(b)(3)(i) through 63.999(b)(3)(iii), 63.999(b)(5) and 63.999(c)(6)(iv)	Notification of Compliance Status: Operating Range for Monitored Parameters, Rationale for Operating



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	Range for Monitored Parameters, Definition of Operating Day, and Alternative Recordkeeping
63.999(c)(1) and 63.999(c)(6)(i)	Periodic Reports – Included Information for Transfer Racks
63.999(d)(1) and 63.999(d)(2)	Requests for Approval of Monitoring Alternatives, including Different Parameter

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 63, Subpart SS and PTI No. P0133425]

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:

5.16 lbs of benzene/hr

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be based upon the record keeping requirements specified in sections d)(2) through d)(9) for this emissions unit. If required, the permittee shall demonstrate compliance with the hourly allowable benzene emission limitation by conducting emission testing in accordance with Methods 1 through 4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0133425]

(2) The procedures for determining compliance with 40 CFR 61.302(b) for all control devices other than flares is as follows:

a. All testing equipment shall be prepared and installed as specified in the appropriate test methods.

i. The time period for a performance test shall be not less than 6 hours, during which at least 300,000 liters of benzene are loaded. If the throughput criterion is not met during the initial 6 hours, the test may be either continued until the throughput criterion is met, or resumed the next day with at least another 6 complete hours of testing.

ii. For intermittent control devices:

(a) The vapor holder level of the intermittent control device shall be recorded at the start of the performance test. The end of the

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performance test shall coincide with the time when the vapor holder is at its original level.

- (b) At least two startups and shutdowns of the control device shall occur during the performance test. If this does not occur under an automatically controlled operation, the system shall be manually controlled.
- iii. An emission testing interval shall consist of each 5-minute period during the performance test. For each interval:
 - (a) The reading from each measurement instrument shall be recorded.
 - (b) Method 1 or 1A of 40 CFR, Part 60, Appendix A, as appropriate, shall be used for selection of the sampling site.
 - (c) The volume exhausted shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR, Part 60, Appendix A, as appropriate.
 - (d) The average benzene concentration upstream and downstream of the control device in the vent shall be determined using Method 25A or Method 25B of 40 CFR, Part 60, Appendix A, using benzene as the calibration gas. The average benzene concentration shall correspond to the volume measurement by taking into account the sampling system response time.

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 61, Subpart BB and PTI No. P0133425]

- (3) The mass emitted during each testing interval shall be calculated as follows:

$$M_i = FKVsC$$

where:

M_i = Mass of benzene emitted during testing interval i , kg;

V_s = Volume of air-vapor mixture exhausted, m^3 at standard conditions;

C = Benzene concentration (as measured) at the exhaust vent, ppmv;

K = Density, (kg/ m^3 benzene), standard conditions;

$K = 3.25$ for benzene;

F = Conversion factor, (m^3 benzene/ m^3 air)(1/ppmv);

$F = 10^{-6}$; and

s = Standard conditions, 20 degrees Celsius and 760 mm Hg.

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 61, Subpart BB and PTI No. P0133425]

- (4) The benzene mass emission rates before and after the control device shall be calculated as follows:

$$E = (\text{summation of } M_i, i=1,n)/T$$

where:

E = Mass flow rate of benzene emitted, kg/hr;

M_i = Mass of benzene emitted during testing interval i, kg;

T = Total time of all testing intervals, hr; and

n = Number of testing intervals.

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 61, Subpart BB and PTI No. P0133425]

- (5) The percent reduction across the control device shall be calculated as follows:

$$R = [(E_b - E_a)/E_b](100)$$

where:

R = Control efficiency of control device, %;

E_b = Mass flow rate of benzene prior to control device, kg/hr; and

E_a = Mass flow rate of benzene after control device, kg/hr.

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 61, Subpart BB and PTI No. P0133425]

- (6) For the purpose of determining compliance with 40 CFR 61.302(h), the following procedures shall be used:

- a. Calibrate and install a pressure measurement device (liquid manometer, magnehelic gauge, or equivalent instrument), which has a precision of +/- 2.5 millimeters (mm) water in the range that the railcar was initially pressured to during the most recent vapor-tightness test.
- b. Connect the pressure measurement device to a pressure tap in the affected facility's vapor collection system, located as close as possible to the connection with the railcar.
- c. During the performance test, record the pressure every 5 minutes while a railcar is being loaded, and record the highest instantaneous pressure that occurs during each loading cycle. Every loading rack shall be tested at least once during the performance test.
- d. If more than one loading rack is used simultaneously, then the performance test shall be conducted simultaneously to represent the maximum capacity.



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[OAC rule 3745-77-07(C)(1), 40 CFR, Part 61, Subpart BB and PTI No. P0133425]

- (7) Immediately prior to a performance test required for determination of compliance with 40 CFR 61.302(b), all potential sources of vapor leakage in the affected facility's vapor collection system equipment shall be inspected for detectable emissions as required in 40 CFR 61.302(k). The monitoring shall be conducted only while a vapor-tight railcar is being loaded. All identified leaks in the terminal's vapor collection system shall be repaired prior to conducting the performance test.

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 61, Subpart BB and PTI No. P01033425]

- (8) The permittee shall comply with the applicable testing requirements under 40 CFR, Part 63, Subpart EEEE, including the following sections:

63.2362(a)	Subsequent Performance Tests
63.2362(b)(1)	Annual Vapor Tightness Testing

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 63, Subpart EEEE and PTI No. P0133425]

- (9) The permittee shall comply with the applicable testing requirements under 40 CFR, Part 63, Subpart SS, including the following sections:

63.990(b)	Performance Test Requirements
63.997(b)	Prior Test Results and Waivers

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 63, Subpart SS and PTI No. P0133425]

g) Miscellaneous Requirements

- (1) None.

33. P025, NESHAPs Oil/Water Separator System

Operations, Property and/or Equipment Description:

Benzene NESHAPs Sewer System including Oil/Water Separator. There are two scrubbers on the inlet side and one scrubber on the discharge of the compressor 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 operations(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. 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 No. P0107935, modification issued 4/8/11)	See b)(2)a.
b.	OAC rule 3745-15-06(A)(3)	See b)(2)f.
c.	OAC rule 3745-21-09(M)(2)	See b)(2)b.
d.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358] [In accordance with 40 CFR 61.340, this emissions unit is an affected source consisting of a sewer system and oil/water separator associated with wastewater operations for processing wastewater containing benzene.]	See b)(2)c., d)(1), d)(3) through d)(5), e)(1) and f)(1)
e.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
f.	40 CFR, Part 60, Subpart QQQ [40 CFR 60.690 – 60.699] [In accordance with 40 CFR 63.690, this emissions unit is an affected facility located at a petroleum refinery and is subject to the individual drain system and oil-water separator provisions]	See b)(2)d., d)(7), e)(3) and f)(2)
g.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
h.	40 CFR, Part 63, Subpart DD	See b)(2)g.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	<p>[40 CFR 63.680 – 63.698]</p> <p>[In accordance with 40 CFR 63.680, this emissions unit is an affected source since the facility accepts waste materials from other facilities for processing in this emissions unit and both of the following conditions in paragraphs (a)(1) and (a)(2) of 40 CFR 63.680 are applicable:</p> <p>The plant site is a major source of hazardous air pollutant (HAP) emissions as defined in 40 CFR 63.2; and</p> <p>One or more operations at the facility receive off-site materials as specified in paragraph (b) of 40 CFR 63.680 and the operation is one of the waste management operations or recovery operations as specified in paragraphs (a)(2)(i) through (a)(2)(vi) of 40 CFR 63.680.]</p>	
i.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 2 to 40 CFR, Part 63, Subpart DD – Applicability of General Provisions to Subpart DD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. PTI No. P0106824 was an administrative modification of PTI No. 03-07545 to delete the requirement to use a portable flare during periods of compressor maintenance. PTI No. 03-07545 modification was issued for installation of a new compressor system. This installation was completed by the due date of April 1, 2008.

The permittee shall operate and maintain a compressor system to route all vapors from this emissions unit to the existing sulfur recovery unit fuel gas amine treater ("Compressor System").

- 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 volatile organic compounds (VOC) from any wastewater separator by equipping all forebay

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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.

- c. During all times when the vent from this emissions unit is routed to the Compressor System used to compress vapors from emissions unit P025, the gaseous stream is exempt from 40 CFR, Part 61, Subpart FF, per 40 CFR 61.340(d). In accordance with 40 CFR 61.340(d), during these times, no testing, monitoring, recordkeeping or reporting is required under this subpart for the vent stream from this emissions unit.

The permittee shall comply with the applicable control requirements, operating limits and emission standards under 40 CFR, Part 61, Subpart FF, including the following sections:

61.340(c) and 61.340(d)	Exempted Streams
61.342(a)(2) through 61.342(a)(4)	Total Annual Benzene Quantity Calculation Procedure – Material Sold, Remediation Waste, and Calculated Before Treatment
61.342(b)	Compliance Dates
61.342(c)(1)	General Operating Requirements and Definition of Exempt Waste Stream
61.342(e)(1)	6 Megagram Compliance Alternative – Less Than 10% Water Streams
61.342(e)(2)	6 Megagram Compliance Alternative – Greater Than or Equal to 10% Water Streams
61.342(g)	General Compliance Demonstration Procedure
61.345(a)(1)(i), 61.345(a)(1)(ii), 61.345(a)(2), 61.345(a)(3)(i), 61.345(a)(3)(ii)(B), 61.345(a)(3)(ii)(C), 61.345(a)(3)(iii) and 61.345(a)(4),	Standards: Containers – Annual No Detectable Emissions Check, Closed Sealed Covers; Pump Must Use Submerged Fill; Treatment of Waste Closed Vent/Control Device Options; Treatment of Waste Closed Vent/Control Device Design Requirements; Treatment of Waste – Covers With No Detectable Emissions; Treatment of Waste – Safety Devices Allowed; Negative Pressure



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61.345(b)	Standards: Containers – Quarterly Visual Inspection
61.345(c)	Standards: Containers – Repair
61.346(a)(1) through 61.346(a)(3), 61.346(b)(1) through 61.346(b)(5)	Standards: Individual Drain Systems – Cover and Closed Vent, Quarterly Visual Inspection, Repair, Alternative Seal, Alternative Junction Box, Alternative Sewer Lines, Alternative Quarterly Inspection, and Alternative Repair
61.347(a) through 61.347(c)	Standards: Oil/Water Separators – Fixed Roof and Closed Vent, Quarterly Visual Inspection, and Repair
61.348(a)(1), 61.348(a)(2), 61.348(a)(4), 61.348(b)(2)(ii)(B), 61.348(d), 61.348(e)(1), 61.348(e)(2) and 61.348(g)	Standards: Treatment Processes – General Standards Compliance Options, Referenced Standards, Aggregation Allowed to Facilitate Treatment, Mixed Streams Conditions for Waste Management Unit Exemption, Exemption for Certain Treatment Processes, Quarterly Visual Inspection, Repair, Treatment Processes Shall Be Monitored Per 61.354
61.349(a)(1)(i) through 61.349(a)(1)(iv), 61.349(a)(2)(ii), 61.349(b), 61.349(c), 61.349(e), 61.349(f) and 61.349(g)	Standards: Closed-Vent Systems and Control Devices – No Detectable Emissions, Bypass Monitoring, Gauging and Sampling Systems, Permissible Vent Devices, Control Device Design Requirements, Operate Closed Vent System and Control Device During Operation, Control Device Compliance Demonstration, Testing of Control Device at Request of Administrator, Visual Inspection of Closed-Vent System and Control Device, and Repair Defects Within 15 Calendar Days
61.350(a) and 61.350(b)	Standards: Delay of Repair
61.354(d) and 61.354(f)	Monitoring of Non-regenerated Carbon Adsorption System, and Bypass Monitoring Requirements

- d. The permittee shall comply with the applicable standards required under 40 CFR, Part 60, Subpart QQQ, including the following sections:



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60.692-1(a) through (d)	Standards: General
60.692-2(a)(1) through (e)	Standards: Individual Drain Systems
60.692-3(a) through (f)	Standards: Oil-Water Separators
60.692-4	Standards: Aggregate Facility
60.692-5(a) through (e)	Standards: Closed Vent Systems and Control Devices
60.692-6(a) and (b)	Standards: Delay of Repair
60.692-7(a) and (b)	Standards: Delay of Compliance

- e. The permittee shall identify and mark all area drains that are segregated storm water drains.
- f. During periods of compressor maintenance, recordkeeping and reporting for the compressor system shall be conducted in accordance with OAC rule 3745-15-06(A)(3).
- g. The permittee accepts chemical wastes from other facilities and has the capability to process these waste materials in this emissions unit. Thus, the permittee shall comply with the applicable compliance dates and general standards under 40 CFR, Part 63, Subpart DD, including the following sections:

63.680(a)(1)	Applicability – Major Hazardous Air Pollutant Source
63.680(a)(2)(ii)	Applicability – Waste Management Operation Exemption from Treatment, Storage and Disposal Facility Requirements
63.680(b)(1), 63.680(b)(2)(iii) and 63.680(b)(2)(vi)	Off-site Material: Criteria, Exemption - RCRA Corrective Action, and Exemption – Benzene Waste Operations NESHAP
63.680(c)(1) and 63.680(c)(3)	Affected Sources: Off-site Material Management Units and Equipment Leaks
63.680(e)(1)(i)	Compliance Dates – Existing Sources
63.683(a)	General Standards
63.683(b)(1)(iii)	Volatile Organic Hazardous Air Pollutant Concentration Option

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63.683(d)	Equipment Leaks
63.694	Testing Methods and Procedures

h. This emissions unit is exempt from requirements in 40 CFR, Part 63, Subpart CC since the emission points are routed to a fuel gas system, as defined in 40 CFR 63.641 of this subpart. No testing, monitoring, recordkeeping, or reporting is required 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 comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.356(a)	Maintain Records for On-Site for Two Years
61.356(b)(1), and 61.356(b)(4) through 61.356(b)(6)	Recordkeeping: Identity of Each Waste Stream, Whether it is Controlled for Benzene Emissions, and Related Data
61.356(d)	Recordkeeping: Design Documentation of Control Equipment
61.356(e)(1) through 61.356(e)(4)	Recordkeeping: Waste Treatment System Unit: Certification of Design, Design Analysis, Performance Tests and Control Device Records Per 61.356(f)
61.356(f)(1) and 61.356(f)(2)	Recordkeeping: Closed Vent System and Control Device: Certification of Design, Design Analysis, and Performance Tests
61.356(g)	Recordkeeping: Visual Inspections
61.356(h)	Recordkeeping: Test Results of No Detectable Emissions
61.356(i)	Recordkeeping: Unit Operation
61.356(j)(1) through 61.356(j)(3), and 61.356(j)(10)	Recordkeeping: Control Device Operation and Carbon Canister Breakthrough

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 61, Subpart FF and PTI No. P0107935]



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- (2) The permittee shall include the benzene National Emission Standard for Hazardous Air Pollutants (NESHAPs) sewer system, including oil/water separator, fugitive emissions and associated components in the current site leak detection and repair (LDAR) program. The LDAR program shall be conducted in accordance with the alternative monitoring plan submitted by the permittee.

Applicable requirements are listed in section B.2 of the Facility-Wide Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107935]

- (3) The permittee shall conduct monthly visual inspections of all water traps within the Refinery's individual drain systems that are controlled under 40 CFR, Part 61, Subpart FF.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 61, Subpart FF and PTI No. P0107935]

- (4) Where installed pursuant to 40 CFR, Part 61, Subpart FF, the permittee shall visually monitor all conservation vents or indicators on process sewers for detectable leaks on a weekly basis and reset any vents where leaks are detected. After two (2) years of weekly inspection, and based upon an evaluation of the recorded results, the permittee may submit a request to U.S. EPA Region V to modify the frequency of the inspections.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 61, Subpart FF and PTI No. P0107935]

- (5) The permittee shall conduct quarterly monitoring, in accordance with the "no detectable emissions" provision in 40 CFR 61.347, of oil-water separators controlled in accordance with 40 CFR 61.347.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 61, Subpart FF and PTI No. P0107935]

- (6) Once per shift, the permittee shall verify that the Compressor System is in operation. The permittee shall keep records of any instance when the Compressor System was not operating.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107935]

- (7) The permittee shall comply with the applicable monitoring and record keeping requirements required under 40 CFR, Part 60, Subpart QQQ, including the following sections:

60.695(a) through (c)	Parametric Monitoring Device for Appropriate Control Device
60.697(a) through (k)	Record Keeping Requirements

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart QQQ and PTI No. P0107935]

e) Reporting Requirements

- (1) The permittee shall comply with the applicable reporting requirements required under 40 CFR, Part 61, Subpart FF, including the following sections:



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61.357(a)(1) through 61.357(a)(4)	Initial Report and Reporting for New Sources
61.357(d)(1)	Initial Certification
61.357(d)(2) and 61.357(d)(5)	Annual Benzene Waste Operations NESHAPS Report, Including Requirements Under 61.342(e)
61.357(d)(6), 61.357(d)(7)(i), 61.357(d)(7)(ii), 61.357(d)(7)(iii), 61.357(d)(7)(iv)(D) and 61.357(d)(7)(iv)(I),	Quarterly Report: Inspection Certification, and 10 ppm Benzene Exceedances, Treatment Process Exceedances, Benzene Exceedances, Exceedances in Control Device Exhaust, Carbon Canister Replacement Exceedances, and
61.357(d)(8)	Annual Report Summarizing Inspections with Detectable Emissions

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 61, Subpart FF and PTI No. P0107935]

- (2) The permittee shall submit to the Administrator quarterly reports documenting all periods when the Compressor System was not operating. Quarterly reports shall be submitted on January 30, April 30, July 30 and October 30 each year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107935]

- (3) The permittee shall submit reports and such other notifications and reports to the Ohio EPA, Northwest District Office as are required pursuant to 40 CFR, Part 60, Subpart QQQ, per the following sections:

60.698(a) through (e)	Reporting Requirements, including any deviations found during parametric monitoring
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart QQQ and PTI No. P0107935]

f) Testing Requirements

- (1) The permittee shall comply with the applicable testing requirements required under 40 CFR, Part 61, Subpart FF, including the following sections:

61.355(a)(1) through 61.355(a)(3), and 61.355(a)(6)	Total Annual Benzene (TAB) Determination – Streams With Greater Than 10% Water, Sum Waste Streams, Requirements if 10 Megagrams Per Year or Greater, and Streams Generated Less Than One Time Per Year
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61.355(b)(1)	TAB Determination – Streams Processed In Sour Water Strippers
61.355(b)(5) through 61.355(b)(7)	Methods for Determining Annual Waste Quantity (Options)
61.355(c)(1)(i)(A), 61.355(c)(1)(i)(D), 61.355(c)(1)(ii) through 61.355(c)(1)(v), 61.355(c)(2), and 61.355(c)(3)(i) through 61.355(c)(3)(v)	Determination of Flow-Weighted Annual Average Benzene Concentration: Sour Water Stripper Exemption, Process Turnaround Waste, Volatilization Not Used, Mixing or Dilution Not Used, Prior to Treatment, Multiple Phases, Waste Knowledge, Measurement, Waste in Enclosed Pipes, Sampling From Enclosed Pipes Not Feasible, Measurement Methods, and Calculation of Flow-Weighted Average
61.355(h)	Testing for No Detectable Emissions
61.355(k)(1), 61.355(k)(2)(i) through 61.355(k)(2)(v), and 61.355(k)(3) through 61.355(k)(7)	Determination of Benzene Quantity for 61.342(e)(2): Uncontrolled Streams, Controlled Streams Waste Entering Management Unit, Controlled Streams Wastes Not Treated, Controlled Streams Transferred Offsite, Controlled Streams Annual Waste Quantity Determination, Controlled Streams Flow Weighted Annual Average Benzene Concentration, Streams Generated Less Than One Time Per Year, Mixed Streams Entering Enhanced Biodegradation Unit, Sum Quantities for Streams, Controlled Streams Multiply Waste Quantity Times Flow-Weighted Annual Average Benzene Concentration, Multiple Counting of Streams

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 61, Subpart FF and P0107935]

- (2) The permittee shall comply with the applicable performance test methods, procedures and compliance provisions required under 40 CFR, Part 60, Subpart QQQ, section 60.696(a) through (d).

[40 CFR, Part 60, Subpart QQQ and PTI No. P0107935]

g) Miscellaneous Requirements

- (1) None.

34. P027, Decanted Oil Filter Process

Operations, Property and/or Equipment Description:

Decanted Oil Filter with Knockout Drum controlled by flare

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 operations(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. 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 CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source since the emissions are routed to the FCC/Coker flare (emissions unit P006) with backup to the LIU flare (emission unit P007), which is subject to 40 CFR, Part 63, Subpart CC.]	See b)(2)a.
b.	OAC rule 3745-31-05(A)(3) (PTI No. 03-6995, issued on 2/24/93)	less than 0.1 lb of volatile organic compounds (VOC)/hr
c.	OAC rule 3745-21-09(T)	See b)(2)b.,d)(1) and Facility-Wide Term and Condition B.2.
d.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. This emissions unit is controlled by the FCC/Coker flare (emissions unit P006) with backup to the LIU flare (emissions unit P007). All operational restrictions, monitoring, recordkeeping, reporting, and testing requirements for the flare are established in the terms and conditions for emissions unit P006 and P007 and are



also applicable to emissions unit P027. Therefore, no additional monitoring, record keeping, reporting, and testing requirements are necessary for the flare in this emissions unit.

- b. The requirements of this rule are equivalent to or less stringent than the alternative leak detection and repair (LDAR) plan submitted by the permittee. Terms and conditions for the alternative LDAR plan are listed in section B.2 of the Facility-Wide Terms and Conditions of this permit.
- c) Operational Restrictions
 - (1) None.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall include the decanted oil filter with knockout drum and associated components in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall be conducted in accordance with the alternative monitoring plan submitted by the permittee. Applicable requirements are listed in section B.2 of the Facility-Wide Terms and Conditions of this permit.
- 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:

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

a. Emission Limitation:

less than 0.1 lb of VOC/hr

Applicable Compliance Method:

The permittee may determine compliance with the hourly allowable VOC limitation by multiplying an emission factor of 10.8 lbs of VOC/day* vented to the FCC flare from this emissions unit, dividing by 24 hr/day, and then multiplying by (1 - 95% control efficiency of the FCC flare).

* The emission factor was supplied by the company, and was based on material balance in conjunction with a Pro/II Version 3.12 computer simulation for emissions vented to the FCC flare.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-6995]



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g) Miscellaneous Requirements

(1) None.

35. P028, Oily Sludge Centrifuge Process

Operations, Property and/or Equipment Description:

Oily sludge centrifuge system. Vapors are routed to the National Emission Standard for Hazardous Air Pollutants (NESHAPs) compressor 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 operations(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. 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.,d)(1) and Facility-Wide Term and Condition B.2.
b.	40 CFR, Part 60, Subpart GGG [40 CFR 60.590 – 60.593]	See b)(2)a.
c.	40 CFR, Part 60, Subpart VV [40 CFR 60.480 – 60.489]	See b)(2)a.
d.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19

(2) Additional Terms and Conditions

a. The requirements of this rule are equivalent to or less stringent than the alternative leak detection and repair (LDAR) plan submitted by the permittee. Terms and conditions for the alternative LDAR plan are listed in section B.2 of the Facility-Wide Terms and Conditions of this permit.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall include the oily sludge system process fugitive emissions and associated components in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall be conducted in accordance with the alternative monitoring plan submitted by the permittee. Applicable requirements are listed in section B.2 of the Facility-Wide Terms and Conditions of this permit.

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

- (2) The vent from this emissions unit is routed to the Compressor System used to compress vapors from emissions unit P025 and route these vapors to the existing fuel gas amine treater. Therefore, the permittee shall comply with all applicable monitoring and record keeping requirements for the Compressor System listed for emissions unit P025.

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

e) Reporting Requirements

- (1) The permittee shall comply with all applicable reporting requirements for the Compressor System listed for emissions unit P025.

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

f) Testing Requirements

- (1) None.

g) Miscellaneous Requirements

- (1) None.



36. P030, Reformer Process

Operations, Property and/or Equipment Description:

Cyclic, catalytic reformer, controlled by LIU flare

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 operations(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. 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 UUU [40 CFR 63.1560 – 63.1579] [In accordance with 40 CFR 63.1562, this emissions unit is an affected source consisting of groups of process vents on the cyclic catalytic reforming unit with a fixed-bed gas-solid adsorption system that are associated with regeneration of the catalyst used in the unit. This affected source includes vents that are used during the unit depressurization, purging, coke burn, and catalyst rejuvenation, subject to the emission limitations/control measures specified in this section.]	See b)(2)b., d)(1), e)(1) and f)(1)
b.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 44 to 40 CFR, Part 63, Subpart UUU – Applicability of General Provisions to Subpart UUU shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
c.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source since the reformer process is considered a Group 1 process vent	See b)(2)a.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	which is controlled by the LIU flare (emissions unit P007) and with backup to the FCC flare (emissions unit P006)]	

(2) Additional Terms and Conditions

- a. This emissions unit is vented to a flare. All operational restrictions, monitoring, recordkeeping, reporting, and testing requirements for the flare are established in the terms and conditions for emissions unit P006 and P007 and are also applicable to emissions unit P030. Therefore, no additional monitoring, record keeping, reporting, and testing requirements are necessary for the flare in this emissions unit.
- b. The permittee shall comply with the applicable control requirements, operating limits and emission limits under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1566(a)(1)(i), 63.1566(a)(2) and Table 15	Meet Emission Limitations Through the Use of a Flare
63.1566(a)(3)	Emission Limitations Applicable During Initial Catalyst DePressuring/Purging Prior to Coke Burn-off
63.1566(a)(3) and 63.1566(a)(4)	Table 15 and 16 Emission Limitations Not Applicable at 5 psig Metal HAP, Coke Burn-off, Catalyst Rejuvenation, Reduction/Activation Vents
63.1566(a)(5)	Prepare Operation, Maintenance and Monitoring Plan
63.1566(b)(3) Table 16, Table 17, Table 20 and Table 21	Flare Operating Limits and Continuous Monitoring Requirements
63.1566(b)(6) and Table 19	Initial Compliance Demonstration for Flare Visible Emissions
63.1566(c)(2)	Comply with Operations, Maintenance and Monitoring Plan
63.1567(a)(1)(ii) and Table 22	HCl Concentration Emission Limitation – Reduce uncontrolled emissions of HCl by 97 percent (%) by weight or to a concentration of 10 ppmv (dry basis), corrected to 3 percent oxygen for each



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	applicable catalytic reforming unit process vent during coke burn-off and catalyst rejuvenation
63.1567(a)(2) and Table 23	Emission Limitation During Coke Burn-off, Catalyst Rejuvenation –The daily average temperature of the gas entering or exiting the adsorption system and the hydrochloric acid (HCl) concentration in the adsorption system exhaust gas must not exceed the limits established during the performance test during coke burn-off and catalyst rejuvenation
63.1570(a)	Maintain Compliance with Non-Opacity Standards

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1567(b)(1), Table 24 and Table 41	Install and Operate Temperature Monitor on Adsorption System Entering or Exiting and a Colorimetric Tube Sampling System for Measuring Gaseous HCl Concentration (Meeting the requirements in Table 41) Exhaust During Coke Burn-of and Catalyst Rejuvenation
63.1567(a)(3)	Prepare Operation, Maintenance and Monitoring Plan
63.1567(c)(1), 63.1567(c)(2), Table 22, Table 23, Table 27 and Table 28	HCl Control during Coke Burn-off and Catalyst Rejuvenation; Continuous Compliance Demonstration – HCl Measurement, Hourly and Daily Average Absorber Outlet Temperature; and Document Conformance with Operation, Maintenance and Monitoring Plan
63.1570(c)	General Duty



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63.1572(c)(1) through 63.1572(c)(5), and Table 41	Continuous Parameter Monitoring System (Including Colormetric Tube Sampling) Installation, Operation and Quality Assurance Requirements
63.1572(d)(1) and 63.1572(d)(2)	Monitor at All Times Affected Source is Operating, Excluding Malfunctions, Repair Periods and Quality Assurance/Quality Control Activities
63.1576(a)(1) through 63.1576(a)(3), 63.1576(d) through 63.1576(i), Table 20, Table 21, Table 27 and Table 28	Recordkeeping Requirements

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart UUU]

e) Reporting Requirements

- (1) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1563(f) and 63.1574(a)	Notification Requirements
63.1574(f)(1), 63.1574(f)(2)(i) through 63.1574(f)(2)(xi)	Submit Changes to the Operation, Maintenance and Monitoring Plan for Approval
63.1570(f)	Report Deviations Including Startups, Shutdowns and Malfunctions
63.1574(a)(2)	Performance Test Notification
63.1575(a), 63.1575(b)(3) through 63.1575(b)(5), 63.1575(c), 63.1575(d)(1) through (4), 63.1575(f), 63.1575(g) and Table 43	Semi-annual Compliance Reports Required

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart UUU]

f) Testing Requirements

- (1) The permittee shall comply with the applicable testing requirements under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1566(b)(2) and Table 18	Conduct Flare Performance Test
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63.1566(b)(5)(i)	Total Organic Compounds performance test not required if emissions are vented to a flare
63.1567(b)(2) and Table 25	Establish Operating Limits – CRU Absorber
63.1567(b)(3) and Table 23	Establish Operating Limits – Coke Burn-off and Catalyst Rejuvenation
63.1567(b)(4)(i) and 63.1567(b)(4)(iii)	Initial Compliance Demonstration – HCl Calculation
63.1567(b)(5) and Table 26	Initial Compliance Demonstration – HCl
63.1571(e)(1) and 63.1571(e)(2)	Procedures for Changing Operating Limit for Continuous Parameter Monitoring System

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart UUU]

g) Miscellaneous Requirements

- (1) None.

37. P033, SRU Cooling Tower

Operations, Property and/or Equipment Description:

Sulfur Recovery Unit 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 operations(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. 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 No. P0107936, modification issued 4/7/11)	22.95 tons of particulate emissions (PE)/yr The requirements of this rule also include compliance with OAC rule 3745-17-11(B) and OAC rule 3745-17-07(A).
b.	OAC rule 3745-17-11(B)	5.24 lbs of PE/hr [See b)(2)a.]
c.	OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

(2) Additional Terms and Conditions

a. The total dissolved solids (TDS) present in cooling water drift are directly responsible for the formation of particulate emissions (PE) when the drift is discharged from a cooling tower. The process weight rate (PWR) used to determine the allowable particulate mass emission rate is the total tons of TDS processed per hour through the cooling tower. Based on the maximum TDS concentration for optimum cooling tower operation of 1,600 parts per million (ppm) and the cooling water maximum process flow rate of 3,600 gallons per minute (gpm), a PWR of 1.442 tons of TDS per hour was calculated. Using Table 1 in OAC rule 3745-17-11(B), the allowable particulate mass emission rate was determined to be 5.24 lbs/hr.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall test and record the TDS content, in ppm, of the cooling water at least once per month. The TDS content shall be measured using test procedures that conform to regulation 40 CFR, Part 136, "Test Procedures for the Analysis of Pollutants" or an equivalent method approved by the Ohio EPA, Northwest District Office.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107936]

- (2) The permittee shall calculate and record the PE, in lbs per hr. The PE shall be calculated as follows:

$$[(3,600 \text{ gallons/minute}) \times (\text{ppm TDS}) \times (0.0002) \times (60 \text{ min/hr}) \times (0.0584)] / (7,000 \text{ grains/lb}) = \text{PE, in lbs/hr}$$

where:

3,600 gallons/minute = the maximum water flow rate;

ppm TDS = the TDS level, on a monthly average basis, if more than one measurement is taken in a month;

0.0002 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon; and

7,000 gr/lb = conversion factor for grains to pounds.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107936]

e) Reporting Requirements

- (1) The permittee shall submit deviation reports in accordance with the Standard Terms and Conditions of this permit that identify any exceedances of the allowable mass emission limitation.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107936]

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:

5.24 lbs of PE/hr



Effective Date: To be entered upon final issuance

Applicable Compliance Method:

Compliance shall be demonstrated by the monitoring and record keeping requirements specified in sections d)(1) and d)(2) of these terms and conditions.

If required, the permittee shall conduct drift measurement testing to determine the drift factor for this cooling tower utilizing the "Isokinetic Drift Measurement Test Code for Water Cooling Towers", ATC-140(94), June 1994 (or the most recent edition) from the Cooling Technology Institute.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107936]

b. Emission Limitation:

22.95 tons of PE/yr

Applicable Compliance Method:

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107936]

c. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A; and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0107936]

g) Miscellaneous Requirements

(1) None.



38. P034, BH Cooling Tower

Operations, Property and/or Equipment Description:

Boiler House 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 operations(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. 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 PE shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
b.	40 CFR, Part 63, Subpart CC [In accordance with 40 CFR 63.641, this emissions unit meets the definition of a 'heat exchanger' and is subject to the applicable emissions limitations/control requirements specified in this subpart.]	See b)(2)b.
c.	40 CFR 63.1 through 63.15	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 – 63.15 apply.
d.	OAC rule 3745-31-05(A)(3) (PTI No. P0123731, issued 11/29/18)	24.05 tons of particulate emissions (PE)/yr The requirements of this rule also include compliance with OAC rule 3745-17-11(B) and OAC rule 3745-17-07(A).
e.	OAC rule 3745-17-11(B)	5.49 lbs of PE/hr [See b)(2)a.]

(2) Additional Terms and Conditions

a. The TDS present in cooling water drift are directly responsible for the formation of PE when the drift is discharged from a cooling tower. The PWR used to determine the allowable particulate mass emission rate is the total tons of TDS processed



per hour through the cooling tower. Based on the maximum TDS concentration for optimum cooling tower operation of 1,600 ppm and the cooling water maximum process flow rate of 3,860 gallons per minute, a PWR of 1.546 tons of TDS per hour was calculated. Using Table 1 in OAC rule 3745-17-11(B), the allowable particulate mass emission rate was determined to be 5.49 lbs/hr.

- b. This emissions unit is subject to the heat exchanger requirements in 40 CFR 63.654.
- c) Operational Restrictions
 - (1) None.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall test and record the Total Dissolved Solids (TDS) content, in ppm, of the cooling water at least once per month. The TDS content shall be measured using test procedures that conform to regulation 40 CFR, Part 136, "Test Procedures for the Analysis of Pollutants" or an equivalent method approved by the Ohio EPA, Northwest District Office.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]
 - (2) Each month, the permittee shall calculate and record the PE, in lbs per hr. The PE shall be calculated as follows:

$$[(\text{gallons/minute}) \times (\text{ppm TDS}) \times (0.0002) \times (60 \text{ min/hr}) \times (0.0584)] / (7,000 \text{ grains/lb}) = \text{PE, in lbs/hr}$$

where:

gallons/minute = the maximum or actual water flow rate, as a monthly average basis;

ppm TDS = the TDS level, on a monthly average basis, if more than one measurement is taken in a month;

0.0002 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon; and

7,000 gr/lb = conversion factor for grains to pounds.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]
 - (3) The permittee shall comply with the applicable control requirements, emission limit and compliance demonstration methods under 40 CFR, Part 63, Subpart CC, including the following sections:



Effective Date: To be entered upon final issuance

63.654(c)(1)	Monitoring requirements to identify leaks of total strippable VOC for the heat exchange system
63.654(c)(3) through c)(6)	Monitoring method for total strippable hydrocarbon concentration (in ppm), frequency and leak action level for existing sources and definition of a leak
63.654(d) through 63.654(g)	Reduce measured concentration of a leak to below applicable level within 45 days, return line monitoring provisions, Delay of Repair
63.655(i)(5)	Retain records for 5 years

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0123731]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation reports that identify all exceedances of the following:
- a. Any exceedances of the TDS content restriction of 4,778 ppm;
 - b. Any exceedances of the allowable PE emission limitation;

The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.655(e)(2) and 63.655(g)(9)(i) through (g)(9)(iv)	Heat Exchanger Provisions – Periodic Reporting Requirements
63.655(e)(3) and 63.655(h)(7)	30-day notification prior to changing 63.654(c)(4) monitoring option

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0123731]

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:

5.49 lbs of PE/hr; 24.05 tons of PE/yr

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated by the monitoring and record keeping requirements specified in sections d)(1) and d)(2) of these terms and conditions.

If required, the permittee shall conduct drift measurement testing to determine the drift factor for this cooling tower utilizing the "Isokinetic Drift Measurement Test Code for Water Cooling Towers", ATC-140(94), June 1994 (or the most recent edition) from the Cooling Technology Institute.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

b. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A; and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

g) Miscellaneous Requirements

(1) None.

39. P037, LIU Cooling Tower

Operations, Property and/or Equipment Description:

LIU 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 operations(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. 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 3745-17-11(B)	43.95 lbs particulate emissions (PE)/hr [See b)(2)c.]
b.	OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
c.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.641, this emissions unit meets the definition of a ‘heat exchanger’ and is subject to the applicable emissions limitations/control requirements specified in this subpart.]	See b)(2)d., d)(6) and e)(2)
d.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 – 63.15 apply.
e.	OAC rule 3745-31-05(D) (PTI No. P0123731, issued 11/29/18)	13.63 lbs particulate emissions (PE)/hr and 59.68 tons PE per rolling, 12-month period 9.54 lbs particulate matter less than or equal to 10 microns in diameter (PM10)/hr and 41.78 tons PM10 per rolling, 12-month period



Effective Date: To be entered upon final issuance

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		5.72 lbs particulate matter less than or equal to 2.5 microns in diameter (PM2.5)/hr and 25.07 tons PM2.5 per rolling, 12-month period 3.40 lbs volatile organic compounds (VOC)/hr and 14.90 tons VOC per rolling, 12-month period See b)(2)a.
f.	ORC 3704.03(T) (PTI No. P0123731, issued 11/29/18)	See b)(2)b.

(2) Additional Terms and Conditions

- a. The federally-enforceable emissions limitations in b)(1)e. were established to represent the potential to emit (PTE). The federally enforceable emission limitations are voluntary restrictions and are based on the operational restrictions contained in c)(1).
- b. The Best Available Technology (BAT) requirements under ORC 3704.03(T) for PM10, PM2.5 and VOC have been determined to be compliance with the rolling, 12-month emissions limitations and requirements established pursuant to OAC rule 3745-31-05(D).
- c. The emission limitation of 43.95 lbs PE/hr by OAC rule 3745-17-11(B) is applicable until P037 is modified. After modification, the emission limitation is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- d. This emissions unit is subject to the heat exchanger requirements in 40 CFR 63.654.

c) Operational Restrictions

- (1) The following operational restrictions have been included in this permit for the purpose of establishing the following federally enforceable requirements to represent PTE [See b)(2)a.):
 - a. The permittee shall not exceed a total dissolved solids (TDS) content of 5,600 mg/l (as a monthly average) in the cooling water for this emissions unit; and
 - b. Use of a high efficiency drift eliminator designed to achieve a drift rate of 0.006 percent.

[OAC rule 3745-77-07(A)(1) and PTI No. P0123731]



Effective Date: To be entered upon final issuance

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall test and record the TDS content, in ppm, of the cooling water at least once per month. The TDS content shall be measured using test procedures that conform to regulation 40 CFR, Part 136, "Test Procedures for the Analysis of Pollutants" or an equivalent method approved by the Ohio EPA, Northwest District Office.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) The permittee shall calculate and record the PE, in lbs per hr. The PE shall be calculated as follows:

$[(\text{gallons/minute}) \times (\text{ppm TDS}) \times (0.0002) \times (60 \text{ min/hr}) \times (0.0584)] / (7000 \text{ grains/lb}) = \text{PE, in lbs/hr}$

where:

gallons/minute = the maximum or actual water flow rate, as a monthly average basis;

ppm TDS = the TDS level, on a monthly average basis, if more than one measurement is taken in a month;

0.0002 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon; and

7,000 gr/lb = conversion factor for grains to pounds.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (3) Each month, the permittee shall calculate and record the PM10, in lbs per hr. The PM10 shall be calculated as follows:

$[(\text{gallons/minute}) \times (\text{ppm TDS}) \times (0.00006) \times (60 \text{ min/hr}) \times (0.0584)] / (7,000 \text{ grains/lb}) \times 0.70 = \text{PM10, in lbs/hr}$

where:

gallons/minute = the maximum or actual water flow rate, as a monthly average basis;

ppm TDS = the TDS level, on a monthly average basis, if more than one measurement is taken in a month;

0.00006 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;



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0.0584 = conversion factor for ppm to grains/gallon;

7,000 gr/lb = conversion factor for grains to pounds; and

0.70 = PM10 is 70 percent of total PE, based on California Emissions Inventory Development and Reporting System

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (4) Each month, the permittee shall calculate and record the PM2.5, in lbs per hr. The PM2.5 shall be calculated as follows:

$$[(\text{gallons/minute}) \times (\text{ppm TDS}) \times (0.00006) \times (60 \text{ min/hr}) \times (0.0584)] / (7,000 \text{ grains/lb}) \times 0.42 = \text{PM2.5, in lbs/hr}$$

where:

gallons/minute = the maximum or actual water flow rate, as a monthly average basis;

ppm TDS = the TDS level, on a monthly average basis, if more than one measurement is taken in a month;

0.00006 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon;

7,000 gr/lb = conversion factor for grains to pounds; and

0.42 = PM2.5 is 42 percent of total PE, based on California Emissions Inventory Development and Reporting System

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (5) Each month, the permittee shall calculate and record the calendar year to date emissions of PE, PM10, PM2.5 and VOC, in tons.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (6) The permittee shall comply with the applicable control requirements, emission limit and compliance demonstration methods under 40 CFR, Part 63, Subpart CC, including the following sections:

63.654(c)(1)	Monitoring requirements to identify leaks of total strippable volatile organic chemical (VOC) for the heat exchange system
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Effective Date: To be entered upon final issuance

63.654(c)(3) through c)(6)	Monitoring method for total strippable hydrocarbon concentration (in ppm), frequency and leak action level for existing sources and definition of a leak
63.654(d) through 63.654(g)	Reduce measured concentration of a leak to below applicable level within 45 days, return line monitoring provisions, Delay of Repair
63.655(i)(5)	Retain records for 5 years

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation reports that identify all exceedances of the following:

- a. Any exceedances of the TDS content restriction of 5,600 ppm;
- b. Any exceedances of the allowable PE emission limitation;
- m. Any exceedances of the allowable PM10 emission limitation;
- n. Any exceedances of the allowable PM2.5 emission limitation; and
- o. Any exceedances of the allowable VOC emission limitations.

The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

(2) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.655(e)(2) and 63.655(g)(9)(i) through (g)(9)(iv)	Heat Exchanger Provisions – Periodic Reporting Requirements
63.655(e)(3) and 63.655(h)(7)	30-day notification prior to changing 63.654(c)(4) monitoring option

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0123731]



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:

43.95 lbs of PE/hr

Applicable Compliance Method:

Compliance shall be demonstrated by the monitoring and record keeping requirements specified in sections d)(1) and d)(2) of these terms and conditions.

If required, the permittee shall conduct drift measurement testing to determine the drift factor for this cooling tower utilizing the "Isokinetic Drift Measurement Test Code for Water Cooling Towers", ATC-140(94), June 1994 (or the most recent edition) from the Cooling Technology Institute.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

b. Emission Limitations:

13.63 lbs PE/hr and 59.68 tons PE per rolling, 12-month period

Applicable Compliance Method:

Compliance with hourly emission limitation shall be demonstrated by the monitoring and record keeping requirements specified in sections d)(1) and d)(2) of these terms and conditions.

If required, the permittee shall conduct drift measurement testing to determine the drift factor for this cooling tower utilizing the "Isokinetic Drift Measurement Test Code for Water Cooling Towers", ATC-140(94), June, 1994 (or the most recent edition) from the Cooling Technology Institute.

The annual emission limitation was established as follows:

$$[(81,000 \text{ gallons/minute}) \times (5,600 \text{ ppm TDS}) \times (0.00006) \times (60 \text{ min/hr}) \times (8,760 \text{ hours/year}) \times (0.0584)] / [(7,000 \text{ grains/lb}) \times (2,000 \text{ lbs/ton})] = \text{PE, in tons/yr}$$

where:

81,000 gallons/minute = the maximum water flow rate;

ppm TDS = the TDS level;

0.00006 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;



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0.0584 = conversion factor for ppm to grains/gallon;

7,000 gr/lb = conversion factor for grains to pounds; and

Therefore, provided compliance is shown with the TDS restriction, compliance with the rolling, 12-month emission limitation shall also be demonstrated. limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

c. Emission Limitations:

9.54 lbs PM10/hr and 41.78 tons PM10 per rolling, 12-month period

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated by the monitoring and record keeping requirements specified in sections d)(1) and d)(3) of these terms and conditions.

If required, the permittee shall conduct drift measurement testing to determine the drift factor for this cooling tower utilizing the "Isokinetic Drift Measurement Test Code for Water Cooling Towers", ATC-140(94), June, 1994 (or the most recent edition) from the Cooling Technology Institute.

The annual emission limitation was established as follows:

$$[(81,000 \text{ gallons/minute}) \times (5,600 \text{ ppm TDS}) \times (0.00006) \times (60 \text{ min/hr}) \times (8,760 \text{ hours/year}) \times (0.0584)] / [(7,000 \text{ grains/lb}) \times (2,000 \text{ lbs/ton})] \times 0.70 = \text{PM10, in tons/yr}$$

where:

81,000 gallons/minute = the maximum water flow rate;

ppm TDS = the TDS level;

0.00006 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon;

7,000 gr/lb = conversion factor for grains to pounds; and

0.70 = PM10 is 70 percent of total PE, based on California Emissions Inventory Development and Reporting System

Therefore, provided compliance is shown with the TDS restriction, compliance with the rolling, 12-month emission limitation shall also be demonstrated.



Effective Date: To be entered upon final issuance

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

d. Emission Limitations:

5.72 lbs PM2.5/hr and 25.07 tons PM2.5 per rolling, 12-month period

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated by the monitoring and record keeping requirements specified in sections d)(1) and d)(4) of these terms and conditions.

If required, the permittee shall conduct drift measurement testing to determine the drift factor for this cooling tower utilizing the "Isokinetic Drift Measurement Test Code for Water Cooling Towers", ATC-140(94), June, 1994 (or the most recent edition) from the Cooling Technology Institute.

The annual emission limitation was established as follows:

$$[(81,000 \text{ gallons/minute}) \times (5,600 \text{ ppm TDS}) \times (0.00006) \times (60 \text{ min/hr}) \times (8,760 \text{ hours/year}) \times (0.0584)] / [(7,000 \text{ grains/lb}) \times (2,000 \text{ lbs/ton})] \times 0.42 = \text{PM2.5, in tons/yr}$$

where:

81,000 gallons/minute = the maximum water flow rate;

ppm TDS = the TDS level;

0.00006 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon;

7,000 gr/lb = conversion factor for grains to pounds; and

0.42 = PM2.5 is 42 percent of total PE, based on California Emissions Inventory Development and Reporting System

Therefore, provided compliance is shown with the TDS restriction, compliance with the rolling, 12-month emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

e. Emission Limitations:

3.40 lbs VOC/hr and 14.90 tons VOC per rolling, 12-month period



Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly limitation by multiplying the appropriate VOC emission factor of 0.7 pounds per million gallons of flow, from AP-42 Table 5.1-2 (1/95), by the maximum flow of 4,860,000 gallons per hour.

The annual emission limitation was established by multiplying the hourly emission limitation times the maximum operating schedule of 8,760 hrs/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the rolling, 12-month emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

f. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A; and the requirements specified in OAC rule 3745-17-03(B)(1).

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

g) **Miscellaneous Requirements**

- (1) None.



40. P040, SRU Claus 1, 2 and TGTU

Operations, Property and/or Equipment Description:

Sulfur Recovery Unit (SRU) including Claus Unit 1, 55 long tons per day and Claus Unit 2 with oxygen enrichment, 80 long tons per day (135 long tons per day combined capacity); with Tail Gas Treatment Unit; and Natural Gas Fired Tail Gas Incinerator primarily controlled by the Acid Gas Flare (FCC flare can be used as backup)

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 operations(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. 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 CC [40 CFR 63.640 – 63.656] [In accordance with 40 CFR 63.640, the rich amine flash drum that is part of this emissions unit is an affected source since it contains a Group 1 process vent that is routed to the Acid Gas Flare (emissions unit P050) with backup to the FCC/Coker flare (emissions unit P006)]	See b)(2)j., b)(2)k. and e)(4)
b.	40 CFR, Part 63, Subpart UUU [40 CFR 63.1560 – 63.1579] [In accordance with 40 CFR 63.1562, this emissions unit is an affected source consisting of process vent or group of process vents on the two Claus sulfur recovery plant units and the tail gas treatment unit serving the sulfur recovery plant, that are associated with sulfur recovery, including any bypass line(s), that is routed to the acid gas flare (emissions unit P050), subject to the	See b)(2)l., d)(5), e)(5) , and f)(3)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	emission limitations/control measures specified in this section.]	
c.	OAC rule 3745-21-09(T)	leaks from petroleum refinery equipment [See b)(2)m.]
d.	OAC rule 3745-21-09(DD)	leaks from petroleum refinery equipment [See b)(2)m.]
e.	40 CFR, Part 60, Subpart VV	leaks from petroleum refinery equipment [See b)(2)m.]
f.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
g.	40 CFR, Part 61, Subpart V	leaks from petroleum refinery equipment [See b)(2)m.]
h.	OAC rule 3745-18-08(C)(3)	100 lbs SO ₂ /1,000 lbs of sulfur processed [See b)(2)c.]
i.	OAC rule 3745-17-11(B)(1)	None [See b)(2)h.]
j.	OAC rule 3745-17-07(A)	None [See b)(2)i.]
k.	OAC rule 3745-21-08(E)	None [See b)(2)t.]
l.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358] [In accordance with 40 CFR 61.340, the sour water components of this emissions unit are an affected source since processing of wastewater containing benzene occurs.]	See b)(2)n.
m.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
n.	40 CFR 63.1 through 63.15	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply. Table 44 to 40 CFR, Part 63, Subpart UUU – Applicability of General Provisions to Subpart UUU shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.
o.	40 CFR, Part 60, Subpart J [In accordance with 40 CFR 60.101(g), the tail gas incinerator is considered a fuel gas combustion device due to the combustion of the BB Treater spent air stream, Ohio EPA emissions unit P041.]	250 parts per million by volume (dry basis) (ppmvd) of SO ₂ at 0% excess air See 40 CFR 60.104(a)(1), 60.105(a)(4)(iv) and 60.105(b) See b)(2)o. and b)(2)p.
p.	OAC rule 3745-31-05(D) (PTI No. P0123731, issued 11/29/18)	Combustion emissions from the tail gas incinerator shall not exceed the following:

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>0.11 lb of particulate emissions/particulate matter less than or equal to 10 microns in diameter/particulate matter less than or equal to 2.5 microns in diameter (PE/PM10/PM2.5)/hr and 0.47 ton of PE/PM10/PM2.5 per rolling, 12-month period</p> <p>0.08 lb of volatile organic compounds (VOC)/hr and 0.34 ton of VOC per rolling, 12-month period</p> <p>Visible PE shall not exceed 20% opacity, as a six-minute average.</p> <p>See b)(2)a., b)(2)b., b)(2)d., b)(2)e. and b)(2)s.</p>
q.	ORC 3704.03(T) (PTI No. P0123731, issued 11/29/18)	See b)(2)f.
r.	OAC rule 3745-31-05(A)(3)(a)(ii) (PTI No. P0123731, issued 11/29/18)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM10/PM2.5, VOC, NOx and CO emissions from this air contaminant source since the potential to emit is less than 10 tons/yr taking into account the federally enforceable restrictions in b)(1)r. and the Best Available Control Measures (BACT) restrictions in b)(1)u.
s.	OAC rule 3745-31-10 through 3745-31-20 (PTI No. P0123731, issued 11/29/18)	<p>Combustion emissions from the tail gas incinerator shall not exceed the following:</p> <p>1.41 lbs of nitrogen oxides (NOx)/hr and 6.16 tons of NOx per rolling, 12-month period</p> <p>1.18 lbs of carbon monoxide (CO)/hr and 5.17 tons of CO per rolling, 12-month period</p> <p>Carbon dioxide equivalents (CO_{2e}) emissions shall not exceed 28,047 tons per rolling, 12-month period</p> <p>Process emissions from the tail gas incinerator shall not exceed the following:</p>



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		19.18 lbs of sulfur dioxide (SO ₂)/hr, as a 12-hr rolling average; 84.02 tons of SO ₂ per rolling, 12-month period; and 250 ppmvd of SO ₂ at 0% excess air as a 12-hour rolling average See b)(2)g. and b)(2)s.
t.	40 CFR, Part 60, Subpart J [In accordance with 40 CFR 60.101(g), the tail gas incinerator is considered a fuel gas combustion device due to the combustion of the BB Treater spent air stream, Ohio EPA emissions unit P041.]	250 ppmvd of SO ₂ at 0% excess air See 40 CFR 60.104(a)(1), 60.105(a)(4)(iv) and 60.105(b) See b)(2)o. and b)(2)p.
u.	40 CFR, Part 60, Subpart Ja 40 CFR 60.102a(f)(1)	250 ppmvd of SO ₂ at 0% excess air as a 12-hour rolling average See b)(2)p. and b)(2)q.
v.	40 CFR, Part 60, Subpart GGGa	See b)(2)r.

(2) Additional Terms and Conditions

- a. PTI P0105024, issued on 7/6/09 identified this emissions unit as being an affected facility and subject to the applicable fuel gas combustion requirements of 40 CFR, Part 60, Subpart J.

Emissions unit P040 consists of two sulfur recovery units (Claus Unit 1 and Claus Unit 2) which operate in a parallel configuration with the tail gas from each unit being routed to a common tail gas treating unit and incinerator. Claus Units 1 and 2 receive acid gas from the "Lima Integrated Unit" (LIU) amine treatment system, historical Ohio EPA emissions unit P002.

The LIU amine treatment system treats the sour gas generated by various LIU process units and provides this treated fuel gas to heaters located on the LIU units. In order for heaters and boilers served by the LIU fuel gas system to meet the fuel gas combustion requirements of 40 CFR, Part 60, Subpart J, the LIU amine treatment system must be upgraded. The upgrade to the amine treatment system does not constitute a modification as defined in OAC rule 3745-31-01 based on PTI No. 03-13794, issued on 5/29/08 [see b)(2)b. for additional details].

PTI P0105024, issued on 7/6/09 was requested by the permittee to address any activities associated with the upgrade to the LIU amine treatment system that could be considered applicable to new source review requirements. It should be noted



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that this permit is virtually identical in requirements to those contained in PTI No. 03-13794 issued on 5/29/08.

- b. Emissions unit P040 was established in PTI No. 03-13794, issued on 5/29/08, as a consolidation of three existing emissions units (P002, P011, and P015) which comprised an existing sulfur recovery unit/system at the facility.

The consolidation was granted by Ohio EPA as requested by the permittee due to modifications which resulted in the sulfur recovery unit/system having one common egress point of emissions, the exhaust stack for the tail gas incinerator. It should be noted that the consolidation resulting in the establishment of P040 does not remove the applicability of OAC rule 3745-18-08. Because P040 is simply a grouping of P002, P011 and P015, it will continue to be subject to OAC rule 3745-18-08. In addition, this common egress point will include a spent air stream from the new Butane-Butylene Treater (emissions unit P041) which is routed to the oxidation chamber of the tail gas incinerator. Therefore, all the above emission limits are combined for these emissions units (P040 and P041). Requirements for Emissions unit P041 were established in PTI No. 03-13794, issued 5/29/08.

- c. The OAC rule 3745-18-08 SO₂ limit of 100 lbs SO₂/1,000 lbs sulfur processed is less stringent than the limit established under OAC rule 3745-31-10 through 3745-31-20 and 40 CFR, Part 60, Subpart Ja. Compliance with this limit will be demonstrated through compliance with OAC rule 3745-31-10 through 3745-31-20 and NSPS Ja.
- d. It is assumed that all PE are equivalent to both PM₁₀ and PM_{2.5}.
- e. The federally-enforceable emissions limitations in b)(1)p. were established to represent the potential to emit of the emissions unit.
- f. The BAT requirements for SO₂ emissions under ORC 3704.03(T) have been determined to be compliance with the emission limitation and requirements established pursuant to OAC rule 3745-31-10 through 3745-31-20:
 - i. 250 ppmvd of SO₂ at 0% excess air as a 12-hour rolling average.
- g. The permittee shall employ Best Available Control Technology (BACT) for this emissions unit. BACT has been determined to be the following:

Pollutant	BACT Requirements
NOx	1.41 lbs of nitrogen oxides (NOx)/hr; and Use of good combustion practices.
SO ₂	Compliance with 40 CFR, Part 60, Subpart Ja; 19.18 lbs of sulfur dioxide (SO ₂)/hr, as a 12-hr average; 250 ppmvd of SO ₂ at 0% excess air as a 12-hour average; and



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	Use of a tail gas treatment unit and tail gas incinerator.
CO	1.18 lbs of CO/hr; and Use of good combustion practices.
CO ₂ e	Use of low-carbon gaseous fuel (natural gas and/or refinery fuel gas) as supplemental fuel in the tail gas incinerator

h. The uncontrolled mass rate of 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)(22).

* The burning of gaseous fuels is the only source of PE from this emissions unit

i. 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 the requirements of OAC rule 3745-17-11.

j. Pursuant to the Group 1 miscellaneous process vent requirements in 40 CFR 63.641, the permittee shall reduce emissions of organic HAP's using a flare(s) that meets the requirements of 40 CFR 63.11(b) of subpart A for emissions from the rich amine flash drum.

k. MACT requirements in 40 CFR, Part 63, Subpart CC are applicable for the Group 1 process vent that is part of this emissions unit, the rich amine flash drum, and is routed to either emissions unit P050 (Acid Gas flare) with backup to emissions unit P006 (FCC/Coker flare). All operational restrictions, monitoring, record keeping, reporting and testing requirements for the flare are established in the terms and conditions for emissions units P050 and P006 and are also applicable to emissions unit P040. Therefore, no additional monitoring, record keeping, reporting and testing requirements are necessary for the flare in this emissions unit.

The permittee shall comply with the applicable control requirements, emission limit and compliance demonstration methods under 40 CFR, Part 63, Subpart CC, including the following sections:

63.643(a)(1)	Required Use of Flare to Reduce Organic Hazardous Air Pollutants
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l. The permittee shall comply with the applicable control requirements, operating limits, emission limits and work practice standards under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1568(a)(1) and Table 29	Sulfur Dioxide (SO ₂) Emission Limit for New Source Performance Standard Units:
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	Meet Option A – 250 ppm by volume (dry basis) of SO ₂ at 0% excess air (use of oxidation or reduction control system followed by incineration)
63.1568(a)(3)	Prepare Operation, Maintenance and Monitoring Plan
63.1570(a)	Compliance with Non-Opacity Standards
63.1570(g)	Deviations during Startup, Shutdown or Malfunction

- m. This emissions unit is subject to the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of OAC rule 3745-21-09(T) – Leaks from petroleum refinery equipment, OAC rule 3745-21-09(DD) – Leaks from process units that produce organic chemicals, 40 CFR, Part 60, Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry), 40 CFR, Part 60, Subpart GGG (Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries), 40 CFR, Part 60, Subpart GGGa (Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries), 40 CFR, Part 63, Subpart CC (Petroleum Refinery MACT Standards), and 40 CFR, Part 61, Subpart V (National Emission Standard for Equipment Leaks – Fugitive Emission Sources).

The requirements of these rules are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to OAC rule 3745-21-09(T)(4) and 40 CFR, Part 63, Subpart CC. Terms and conditions for the alternative LDAR plan are listed in Facility-Wide Terms and Conditions B.2.

- n. The permittee shall include the sour water components of this emissions unit, SRU 1 & 2, in the current site benzene waste operations program. The program shall comply with the appropriate provisions (includes operational restrictions, monitoring and record keeping, reporting, and testing) of 40 CFR, Part 61, Subpart FF.

Note: Compliance with rule is demonstrated through compliance with the requirements of the permittee’s NESHAPs Oil/Water Separator System (emissions unit P025).

- o. The permittee shall not burn any refinery fuel gas in these emissions units that contains hydrogen sulfide (H₂S) in excess of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 ppmv of H₂S). This H₂S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d).

NSPS requirements for fuel gas combustion devices at 40 CFR 60.104(a)(1) are applicable to the tail gas incinerator. The tail gas incinerator is considered a fuel gas combustion device per 40 CFR 60.101(h) due to the combustion of the BB treater spent air stream (Ohio EPA emissions unit P041.)

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As this stream has been previously demonstrated to be inherently low in sulfur content, this stream is exempt from the monitoring requirements of 60.105(a)(4), per 60.105(a)(4)(iv)(d). Details are provided in the written application submitted to Ohio EPA on 11/3/2009, company file #A14-09-46, in accordance with 60.105(b).

A fuel gas stream that is determined to be low-sulfur is exempt from the monitoring requirements of 60.105(a)(3) and (4) until there are changes in the operating conditions or stream composition.

No further action is required outside of the written application request in accordance with 40 CFR Part 60.105(b)(3) unless refinery operating conditions change in a way that would affect the composition of the exempt fuel gas stream.

- p. The permittee complied with the 230 mg/dscm emission limitation under 40 CFR, Part 60, Subpart J until P040 was modified. Since P040 was modified, the emissions unit has been considered an “affected facility” and has been subject to the 230 mg/dscm, as a 3-hour rolling average emission limitation under 40 CFR, Part 60, Subpart Ja.

The requirements of 40 CFR, Part 60, Subpart Ja are equivalent to and/or more stringent than the requirements of 40 CFR, Part 60, Subpart J. Once P040 was reconstructed, the emissions unit must show compliance with 40 CFR, Part 60, Subpart J by demonstrating compliance with 40 CFR, Part 60, Subpart Ja. [See b)(2)r.].

The SO₂ concentration limit of 250 ppmv at 0% excess air specified by 40 CFR, Part 60, Subparts J and Ja are more stringent than the concentration limits of 250 ppmv established by OAC rule 3745-31-10 through 3745-31-20.

- q. The permittee shall not burn any refinery fuel gas in this emissions unit that contains H₂S in excess of the following limitations:
- i. 230 mg/dscm, as a 3-hour rolling average (0.10 grain/dscf) (the equivalent concentration is 162 ppmv of H₂S). This H₂S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition of 40 CFR 60.101(d); or stack SO₂ not to exceed 20 ppmvd, corrected to zero percent excess air; and
 - ii. 60 ppmvd of H₂S, as a 365-day rolling average; or stack SO₂ not to exceed 8 ppmvd, corrected to zero percent excess air.

This H₂S standard in 40 CFR 60.102a(g)(1)(ii) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101a.

- r. The SRU Claus 1, Claus 2 and TGTU process unit is not subject to leak detection and repair (LDAR) requirements in 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), since it does not meet the definition of "modification" in 40 CFR 60.590a.

- s. The spent air stream from the B-B Treater shall be routed to the oxidation chamber of the tail gas incinerator at the sulfur recovery unit (SRU). The tail gas incinerator is a common egress point for emissions from the SRU (P040) and the B-B Treater (P041) spent air stream; therefore, all the emission limitations are combined for these emission units (P040 and P041).
- t. The CO waste gas stream from this emissions unit shall burn at a minimum temperature of 1300 degrees Fahrenheit for 0.3 seconds or greater in a direct-flame afterburner or boiler equipped with an indicating pyrometer which is positioned in the working area at the operator's eye level.

c) Operational Restrictions

- (1) The permittee shall burn only refinery fuel gas or natural gas in this emissions unit. The sulfur content of the refinery fuel gas or natural gas burned in this emissions unit shall comply with the allowable SO₂ emission limitations specified in section b)(1).

[OAC rule 3745-77-07(A)(1) and PTI No. P0123731]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall operate and maintain equipment to continuously monitor and record SO₂ from this emissions unit in units of the applicable standard. The span value of the continuous emission monitoring system (CEMS) shall be 500 ppm SO₂. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the continuous SO₂ monitoring system including, but not limited to, parts per million of SO₂ for each cycle time of the analyzer, with no resolution less than one data point per minute required, and lbs/hr of SO₂, as a 12-hr average; results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

The permittee shall maintain a written quality assurance/quality control (QA/QC) plan for the SO₂ CEMS that follows the requirements of 40 CFR, Part 60, Appendix F. The QA/QC plan and logbook for the SO₂ CEMS must be kept on site and available for inspection during regular office hours.

[OAC rule 3745-77-07(C)(1); 40 CFR Part 60.13; 40 CFR, Part 60, Appendix F; and PTI No. P0123731]

- (2) The permittee shall operate and maintain equipment to continuously monitor and record the oxygen (O₂) from this emissions unit in percent O₂. The span value of the CEMS shall be 25 percent O₂. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 or as approved by the Ohio EPA, Central Office.



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The permittee shall maintain records of all data obtained by the continuous O₂ monitoring system including, but not limited to percent O₂ for each cycle time of the analyzer, with no resolution less than one data point per minute required, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

The permittee shall maintain a quality assurance/quality control plan for the continuous O₂ monitoring system designed to ensure continuous valid and representative readings. 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 O₂ system must be kept on site and available for inspection during regular office hours.

[OAC rule 3745-77-07(C)(1); 40 CFR Part 60.13 and PTI No. P0123731]

- (3) The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the total amount of sulfur processed;
 - b. the total SO₂ emissions, in lbs; and
 - c. the average SO₂ emission rate, in lb of SO₂ per 1,000 lbs of sulfur processed.

For a specific period of time, the amount of sulfur processed is equal to the amount of sulfur entering the Claus units plus the amount of any sulfur bypassed to the flare(s) from the amine units and/or the sour water stripper, except for periods of start-up, shutdown, or malfunction as defined in 40 CFR 60.2.

[OAC rule 3745-77-07(C)(1); 40 CFR 60.2 and PTI No. P0123731]

- (4) The permittee shall include the SRU fugitive emissions and associated components in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall be conducted in accordance with the alternative monitoring plan submitted by the permittee. Applicable requirements are listed in section B.2 of the Facility-Wide Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (5) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1568(a)(3)	Prepare Operation, Maintenance and Monitoring Plan
63.1568(b)(1) and Table 31	Install, Operate and Maintain SO ₂ Continuous Emission Monitor
63.1568(c)(1), Table 34 and Table 35	Continuous Compliance - SO ₂ Continuous Emission Monitor

63.1568(c)(2)	Continuous Compliance with Operation, Maintenance and Monitoring Plan
63.1570(c)	General Duty
63.1572(a)(1), 63.1572(a)(3), 63.1572(a)(4), 63.1572(d)(1), 63.1572(d)(2) and Table 40	SO2 Continuous Emission Monitor Requirements
63.1574(f)(2)(i), 63.1574(f)(2)(ii), and 63.1574(f)(2)(viii) through 63.1574(f)(2)(x)	Operation, Maintenance and Monitoring Plan Requirements
63.1576(a)(1), 63.1576(a)(2), 63.1576(d) through 63.1576(i), Table 34 and Table 35	Recordkeeping Requirements
63.1576(b)(1) through 63.1576(b)(5)	Continuous Emissions Monitor Recordkeeping Requirements

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0123731]

- (6) 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 SO2 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 (Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart J and PTI No. P0123731]

- (7) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

e) Reporting Requirements

- (1) Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(l) and 3704.031 and 40 CFR, Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all 12 hour periods of SO2 values in excess of the applicable lbs/hr and NSPS limitations for SO2.

These reports also shall identify all instances of daily SO₂ emission values in excess of the limitation specified in OAC rule 3745-18-08 (including those instances due to the bypassing of the Claus unit(s)) and shall specify the total SO₂ emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any continuous SO₂ monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken.

The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report.

Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Ohio EPA, Northwest District Office within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

These quarterly excess emission reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1); OAC rule 3745-15-04; ORC sections 3704.03(I) and 3704.031; 40 CFR, Parts 60.7 and 60.13(h); and PTI No. P0123731]

- (2) Pursuant to 40 CFR, Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any continuous O₂ system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken.

The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Parts 60.7 and 60.13(h); and PTI No. P0123731]

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- (3) All quarterly reports and deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (4) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.655(f)(1)(ii)	Notification of Compliance Status Identification of Miscellaneous Process Vents
63.655(g)	Semi-annual Deviation Report for Group 1 Miscellaneous Process Vents
63.655(g)(6)	Semi-annual Deviation Report for Group 1 Miscellaneous Process Vents – Including Excess Emissions Reporting

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and P0123731]

- (5) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1563(f)	Notification Requirements
63.1568(b)(6) and 63.1658(b)(7)	Submit Notice of Compliance Status, including Operation, Maintenance and Monitoring Plan
63.1570(f)	Report Deviations Including Startups, Shutdowns and Malfunctions
63.1574(a), 63.1574(a)(3), 63.1574(b), 63.1574(d), Table 42.1, Table 42.2 and Table 42.3	Notice of Compliance Status – Identify Affected Sources, Emission Limits and Monitoring Options
63.1574(f)(1), 63.1574(f)(2)(i) through 63.1574(f)(2)(xi)	Submit Changes to the Operation, Maintenance and Monitoring Plan for Approval
63.1575(a), 63.1575(b)(1) through 63.1575(b)(5), 63.1575(c), 63.1575(d)(1) through 63.1575(d)(4), 63.1575(e)(1) through 63.1575(e)(13), 63.1575(f)(1), 63.1575(f)(2), 63.1575(g) and Table 43	Compliance Report Requirements



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63.1575(h)(1) and 63.1575(h)(2)	Startup, Shutdown and Malfunction Reporting Requirements
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU and PTI No. P0123731]

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

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 six-minute average, combustion emissions from the tail gas incinerator

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

b. Emission Limitation:

0.14 lb of PE/hr, 0.61 ton of PE/yr combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the appropriate particulate emission factor of 7.6 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 standard cubic foot/hr. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]



c. Emission Limitation:

1.84 lbs of NO_x/hr, 8.06 tons of NO_x/yr combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the appropriate NO_x emission factor of 100 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 standard cubic foot/hr.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

d. Emission Limitation:

1.88 lbs of CO/hr, 8.23 tons of CO/yr combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The CO emission limitation was derived from a vendor guarantee of a maximum CO emission rate of 100 ppm. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

e. Emission Limitation:

0.10 lb of VOC/hr, 0.44 ton of VOC/yr combustion emissions from the tail gas incinerator



Applicable Compliance Method:

The hourly emission limitation was established by multiplying the appropriate VOC emission factor of 5.5 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 standard cubic foot/hr.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with Methods 1 through 4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

f. Emission Limitation:

100 lbs of SO₂/1,000 lbs of sulfur processed, process emissions from the tail gas incinerator

Applicable Compliance Method:

Ongoing compliance with the SO₂ emission 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 record keeping in d)(1) and d)(2), 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 with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 6 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

g. Emission Limitations:

0.11 lb of PE/PM₁₀/PM_{2.5}/hr and 0.47 ton of PE/PM₁₀/PM_{2.5} per rolling, 12-month period, combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the appropriate particulate emission factor of 7.6 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 standard cubic feet/hr.



If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the rolling, 12-month emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

h. Emission Limitations:

0.08 lb of VOC/hr, 0.34 ton of VOC per rolling, 12-month period, combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the appropriate VOC emission factor of 5.5 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 standard cubic feet/hr.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with Methods 1 through 4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the rolling, 12-month emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

i. Emission Limitations:

1.41 lbs of NO_x/hr and 6.16 tons of NO_x per rolling, 12-month period [combustion emissions from the tail gas incinerator]

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the appropriate NO_x emission factor of 100 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 standard cubic feet/hr.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A.

The rolling, 12-month emission limitation was established by multiplying the hourly emission limitation times the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the

hourly emission limitation, compliance with the rolling, 12-month period emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

j. Emission Limitation:

1.18 lbs of CO/hr and 5.17 tons of CO per rolling, 12-month period, combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The hourly CO emission limitation was derived from a vendor guarantee of a maximum CO emissions rate of 100 parts per million.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 10 of 40 CFR, Part 60, Appendix A.

The rolling, 12-month emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the rolling, 12-month period emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

k. Emission Limitation:

CO₂e emissions shall not exceed 28,047 tons per rolling, 12-month period

Applicable Compliance Method:

The rolling, 12-month limitation represents the potential to emit based on an average flow rate during four stack tests between 2006 and 2008 of 17,311 standard cubic feet per minute (scfm) multiplied by 60 min/hr by 6.3 percent (the average fraction of GHG to total emissions during four stack tests) by 44 lb/lb mole conversion divided by 379 scf/lb mole conversion, multiplied by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

l. Emission Limitations:

19.18 lbs of SO₂/hr, as a 12-hr rolling average; 84.02 tons SO₂/yr and 84.02 tons of SO₂ per rolling, 12-month period [process emissions from the tail gas incinerator]

Applicable Compliance Method:

Ongoing compliance with the SO₂ emission limitations contained in this permit; 40 CFR, Part 60 and any other applicable standard(s) shall be demonstrated through

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the data collected as required in the monitoring and record keeping in d)(1) and d)(2), 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 with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 6 of 40 CFR, Part 60, Appendix A.

The rolling, 12-month emission limitation was established by multiplying the hourly emission limitation times the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the rolling, 12-month period emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

m. Emission Limitation:

250 ppmvd, 12-hour rolling average of SO₂ at 0% excess air, process emissions from the tail gas incinerator

Applicable Compliance Method:

Ongoing compliance with the SO₂ emission 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 record keeping in d)(1) and d)(2), 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 with the SO₂ emission limitation above based on the results of emission testing conducted in accordance with the requirements specified in Methods 1 through 4, and 6 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

g) Miscellaneous Requirements

(1) None.



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41. P041, Butane-Butylene Treater

Operations, Property and/or Equipment Description:

Butane-Butylene (B-B) Treater

- 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 operations(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. 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 No. P0107904, modification issued 6/9/11)	See b)(2)a. Combustion emissions from the tail gas incinerator shall not exceed the following: 0.14 lb of particulate emissions (PE)/hr, 0.61 ton of PE/yr [See b)(2)b.]; 1.84 lbs of nitrogen oxides (NOx)/hr, 8.06 tons of NOx/yr; 1.88 lbs of carbon monoxide (CO)/hr, 8.23 tons of CO/yr; and 0.10 lb of volatile organic compounds (VOC)/hr, 0.44 ton of VOC/yr. Visible PE shall not exceed 20% opacity, as a six-minute average. Process emissions from the tail gas incinerator shall not exceed the following: 19.18 lbs of sulfur dioxide (SO ₂)/hr, as a 12-hr average, and 84.02 tons of SO ₂ /yr; and 250 parts per million by volume (dry basis) (ppmvd) of SO ₂ at 0% excess air.

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-18-06(E)	See b)(2)c.
c.	OAC rule 3745-17-11(B)(1)	None [See b)(2)d.]
d.	OAC rule 3745-17-07(A)	None [See b)(2)e.]
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source since it contains Group 1 process vents that are routed to either the Acid Gas flare (emissions unit P050) with backup to the FCC/Coker flare (emissions unit P006)]	See b)(2)f. and e)(4)
f.	OAC rule 3745-21-08(E)	None [See c)(2), d)(4) and e)(6)]
g.	OAC rule 3745-21-09(T)	leaks from petroleum refinery equipment [See b)(2)h. and Facility-Wide Term and Condition B.2]
h.	OAC rule 3745-21-09(DD)	leaks from petroleum refinery equipment [See b)(2)h. and Facility-Wide Term and Condition B.2]
i.	40 CFR, Part 60, Subpart VV [40 CFR 60.480 – 60.489]	leaks from petroleum refinery equipment [See b)(2)h. and Facility-Wide Term and Condition B.2]
j.	40 CFR, Part 60, Subpart GGG [40 CFR 60.590 – 60.593]	leaks from petroleum refinery equipment [See b)(2)h. and Facility-Wide Term and Condition B.2]
k.	40 CFR, Part 60, Subpart J [40 CFR 60.100 – 60.109]	See b)(2)i.
l.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358] [In accordance with 40 CFR 61.340, this emissions unit is an affected source since processing of wastewater containing benzene occurs.]	See b)(2)g.
m.	40 CFR, Part 61, Subpart V [40 CFR 61.240 – 61.247]	leaks from petroleum refinery equipment [See b)(2)h.]
n.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The spent air stream from the B-B Treater shall be routed to the oxidation chamber of the tail gas incinerator at the sulfur recovery unit (SRU), emissions unit P040. The tail gas incinerator is a common egress point for emissions from the SRU and the B-B Treater spent air stream; therefore, all the emission limitations are combined for these emission units (P040 and P041).
- b. It is assumed that all particulate emissions are PM10.
- c. The emission limitation specified by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- d. The uncontrolled mass rate of 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)(14).

* The burning of gaseous fuels is the only source of PE from this emissions unit.

- e. 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 the requirements of OAC rule 3745-17-11.
- f. MACT requirements in 40 CFR, Part 63, Subpart CC are applicable for each Group 1 process vent that is part of this emissions unit, and is routed to either emissions unit P050 (Acid Gas flare) with backup to emissions unit P006 (FCC/Coker flare). All operational restrictions, monitoring, record keeping, reporting and testing requirements for the flare are established in the terms and conditions for emissions units P050 and P006 and are also applicable to emissions unit P041. Therefore, no additional monitoring, record keeping, reporting and testing requirements are necessary for the flare in this emissions unit.

The permittee shall comply with the applicable control requirements, emission limit and compliance demonstration methods under 40 CFR, Part 63, Subpart CC, including the following sections:

63.643(a)(1)	Required Use of Flare to Reduce Organic Hazardous Air Pollutants
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- g. The permittee shall include the B-B Treater in the current site benzene waste operations program. The program shall comply with the appropriate provisions (includes operational restrictions, monitoring and record keeping, reporting, and testing) of 40 CFR, Part 61, Subpart FF [See emissions unit P025].
- h. This emissions unit is subject to the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of OAC rule 3745-21-09(T) – Leaks from petroleum refinery equipment, OAC rule 3745-21-



09(DD) – Leaks from process units that produce organic chemicals, 40 CFR, Part 60, Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry), 40 CFR, Part 60, Subpart GGG (Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries, 40 CFR, Part 63, Subpart CC (Petroleum Refinery MACT Standards), and 40 CFR, Part 61, Subpart V (National Emission Standard for Equipment Leaks – Fugitive Emission Sources).

The requirements of these rules are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to OAC rule 3745-21-09(T)(4) and 40 CFR, Part 63, Subpart CC. Terms and conditions for the alternative LDAR plan are listed in section B.2 of the Facility-Wide Terms and Conditions of this permit.

- i. New Source Performance Standards (NSPS) requirements in 40 CFR, Part 60, Subpart J, 60.104(a)(1) are applicable to the tail gas incinerator, part of Ohio EPA emissions unit P040, as the tail gas incinerator is considered a fuel gas combustion device as per 40 CFR, Part 60, Subpart J, 60.101(h) due to the combustion of the B-B treater spent air stream. As this stream has been previously demonstrated to be inherently low in sulfur content, this stream is exempt from the monitoring requirements presented in 40 CFR, Part 60, Subpart J, 60.105(a)(4) according to 40 CFR, Part 60, Subpart J, 60.105(a)(4)(iv)(d). Please refer to the written application submitted to Ohio EPA on 11/3/2009, company file #A14-09-46, in accordance with the application requirements presented in 40 CFR, Part 60, Subpart J, 60.105 (b).

A fuel gas stream that is determined to be low-sulfur is exempt from the monitoring requirements in 40 CFR, Part 60, Subpart J, 60.105(a)(3) and (4) until there are changes in the operating conditions or stream composition. No further action is required outside of the written application request in accordance with 40 CFR, Part 60, Subpart J, 60.105(b)(3) unless refinery operating conditions change in such a way that affects the exempt fuel gas stream (e.g. the stream composition changes).

c) Operational Restrictions

- (1) The permittee shall burn only refinery fuel gas, natural gas or tail gas in this emissions unit. The sulfur content of the refinery fuel gas, natural gas or tail gas burned in this emissions unit shall comply with the allowable SO₂ emission limitations specified in section b)(1).

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

- (2) The CO waste gas stream from this emissions unit shall burn at a minimum temperature of 1,300 degrees Fahrenheit for 0.3 seconds or greater in a direct-flame afterburner or boiler equipped with an indicating pyrometer which is positioned in the working area at the operator's eye level.

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

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall operate and maintain equipment to continuously monitor and record SO₂ from this emissions unit in units of the applicable standard. The span value of the continuous emission monitoring system (CEMS) shall be 500 ppm SO₂. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the continuous SO₂ monitoring system including, but not limited to, parts per million of SO₂ for each cycle time of the analyzer, with no resolution less than one data point per minute required, and lbs/hr of SO₂; as a 12-hr average, results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

The permittee shall maintain a written quality assurance/quality control (QA/QC) plan for the SO₂ CEMS that follows the requirements of 40 CFR, Part 60 Appendix F. The QA/QC plan and logbook for the SO₂ CEMS must be kept on site and available for inspection during regular office hours.

[OAC rule 3745-77-07(C)(1); 40 CFR Part 60.140 CFR Part 60.13; 40 CFR, Part 60, Appendix F and PTI No. P0107904]

- (2) The permittee shall operate and maintain equipment to continuously monitor and record the oxygen (O₂) from this emissions unit in percent O₂. The span value of the CEMS shall be 25 percent O₂. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 or as approved by the Ohio EPA, Central Office.

The permittee shall maintain records of all data obtained by the continuous O₂ monitoring system including, but not limited to percent O₂ for each cycle time of the analyzer, with no resolution less than one data point per minute required, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

The permittee shall maintain a quality assurance/quality control plan for the continuous O₂ monitoring system designed to ensure continuous valid and representative readings. 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 O₂ system must be kept on site and available for inspection during regular office hours.

[OAC rule 3745-77-07(C)(1); 40 CFR Part 60.13 and PTI No. P0107904]

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

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

- (4) The permittee shall maintain records that document any time period when the CO waste gas stream was not burned in accordance with the requirements outlined in c)(2).

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

e) Reporting Requirements

- (1) Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(I) and 3704.031 and 40 CFR, Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting the date, commencement and completion times, duration magnitude, reason (if known), and corrective actions taken (if any), of all 12 hour periods of SO₂ values in excess of the applicable lbs/hr and ppm limitations. These reports shall also contain the total SO₂ emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any continuous SO₂ monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken.

The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report.

These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Ohio EPA, Northwest District Office within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

[OAC rule 3745-77-07(C)(1); OAC rule 3745-15-04; ORC sections 3704.03(I) and 3704.031; 40 CFR, Parts 60.7 and 60.13(h); and PTI No. P0107904]

- (2) Pursuant to 40 CFR, Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any continuous O₂ system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee



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shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Parts 60.7 and 60.13(h); and PTI No. P0107904]

- (3) All quarterly reports and deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

- (4) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.655(g)	Semi-annual Deviation Report for Group 1 Miscellaneous Process Vents
63.655(g)(6)	Semi-annual Deviation Report for Group 1 Miscellaneous Process Vents – Excess Emissions Reporting

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC and PTI No. 0107904]

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

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

- (6) The permittee shall submit deviation (excursion) reports that identify any time periods when the CO waste gas stream was not burned in accordance with the requirements outlined in c)(2). Each report shall be submitted within 30 days after the deviation occurs.

[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:

0.14 lb of PE/hr, 0.61 ton of PE/yr combustion emissions from the tail gas incinerator



Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate particulate emission factor of 7.6 lbs/million standard cubic feet (MMscf), from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 scf/hr. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

b. Emission Limitation:

1.84 lbs of NO_x/hr, 8.06 tons of NO_x/yr combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate NO_x emission factor of 100 /MMscf, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 scf/hr.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

c. Emission Limitation:

1.88 lbs of CO/hr, 8.23 tons of CO/yr combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The CO emission limitation was derived from a vendor guarantee of a maximum CO emission rate of 100 ppm. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 10 of 40 CFR, Part 60, Appendix A.



The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

d. Emission Limitation:

0.10 lb of VOC/hr, 0.44 ton of VOC/yr combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate VOC emission factor of 5.5 lbs/MMscf, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 scf/hr. If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with Methods 1 through 4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

e. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, combustion emissions from the tail gas incinerator

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107904]

f. Emission Limitation:

250 ppmvd of SO₂ at 0% excess air, process emissions from the tail gas incinerator

Applicable Compliance Method:

Ongoing compliance with the SO₂ emission 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 record keeping in d)(1) and



d)(2), 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 with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 6 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. 0107904]

g. Emission Limitation:

19.18 lbs of SO₂/hr, as a 12-hr average; 84.02 tons of SO₂/yr process emissions from the tail as incinerator

Applicable Compliance Method:

Ongoing compliance with the SO₂ emission 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 record keeping in d)(1) and d)(2), 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 with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission rate times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

[OAC rule 3745-77-07(C)(1) and PTI No. 0107904]

g) Miscellaneous Requirements

(1) None.

42. P047, Backup AWWT Pump

Operations, Property and/or Equipment Description:

a) 300 hp diesel pump used for backup capacity in the AWWT (non-emergency) PR210793 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)k. and d)(4).

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 No. P0108339, issued 7/26/11)	Nitrogen oxides (NOx) emissions shall not exceed 6.3 g/kW-hr Volatile organic compound (VOC) emissions shall not exceed 6.3 g/kW-hr See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) (PTI No. P0108339, issued 7/26/11)	Best Available Technology (BAT) requirements do not apply to the carbon monoxide (CO), particulate matter less than 10 microns in size (PM10), and sulfur dioxide (SO2) emissions from this air contaminant source since the uncontrolled potential to emit for CO, PM10, and SO2 are each less than 10 tons per year.
c.	OAC rule 3745-17-11(B)(5)(a)	Particulate emissions (PE) shall not exceed 0.310 lb/MMBtu of actual heat input.
d.	OAC rule 3745-17-07(A)(1)	Visible PE shall not exceed twenty per cent opacity, as a six-minute average, except as provided by rule
e.	OAC rule 3745-18-06(G)	See b)(2)b.
f.	OAC rule 3745-110-03(F)(3)	See b)(2)c.
g.	40 CFR, Part 63, Subpart ZZZZ [40 CFR 63.6580 – 63.6675]	See b)(2)d.
h.	40 CFR, Part 60, Subpart IIII [40 CFR 60.4200 – 60.4219]	CO emissions shall not exceed 11.4 g/kW-hr



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Particulate matter (PM) emissions shall not exceed 0.54 g/kW-hr See b)(2)e. through b)(2)h.
i.	40 CFR 60. 1-19 [40 CFR 60.4218]	Table 8 to Subpart IIII of 40 CFR Part 60 – Applicability of General Provisions to Subpart IIII shows which parts of the General Provisions in 40 CFR 60.1-19 apply.
j.	ORC 3704.03(F) OAC rule 3745-114-01	See d)(4)

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirements for this emissions unit have been determined to be compliance with the emission limitations of 6.3 g/kW-hr for NOx and 6.3 g/kW-hr for VOC.
- b. OAC rule 3745-18-06(B) exempts stationary internal combustion engines which have rated heat input capacities equal to, or less than, 10 MMBtu/hr from the SO2 emission limit in OAC rule 3745-18-06(G). This emissions unit has a rated heat input of less than 10 MMBtu/hr.
- c. Pursuant to OAC rule 3745-110-03(J)(3), this emissions unit is not subject to this rule because it has an energy output capacity of less than 2,000 horsepower.
- d. The new compression ignition (CI) reciprocating internal combustion engine(s) (RICE), located at a major source for hazardous air pollutants (HAPs), is subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, Part 63, Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c)(7), the new stationary CI RICE installed on or after 6/12/06, shall meet the requirements of Part 63, Subpart ZZZZ upon startup, through demonstration of compliance with the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines, Part 60, Subpart IIII.
- e. The emission standards for NOx and VOC specified by this rule are equivalent to or less stringent than the emission limitations established pursuant to ORC 3704.03(T).
- f. The stationary CI ICE has a model year of 2005 but was installed in 2010. Pursuant to 40 CFR 60.4208(a), the permittee was required to install an engine certified to meet the emissions standards for 2007 model year engines, as identified in 40 CFR 60.4201(a) and found in Table 1 of this subpart.

On June 15, 2004, U.S. EPA issued a “2005 Model Year Certification of Conformity” to the manufacturer (Deere Power Systems Group of Deere and



Company). As such, the permittee has fulfilled the requirements of 40 CFR 60.4280(a), 60.4201(a) and 60.4211(b)(1).

- g. Pursuant to 40 CFR 60.4206, the permittee shall operate and maintain the stationary CI ICE to achieve the emissions standards established in 40 CFR 60.4204(b) over the entire life of the engine.
- h. The diesel fuel burned in this emissions unit shall meet the following specifications identified in 40 CFR 60.4207(b) and found in 40 CFR 80.510(b):
 - i. a maximum sulfur content of 15 ppm; and
 - ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

Compliance with the above-mentioned specifications shall be determined by using the analytical results provided by the permittee or oil supplier for each shipment of oil.

c) **Operational Restrictions**

- (1) The permittee shall burn only distillate fuel oil in this emissions unit.

The oil combusted in this emissions unit shall only be distillate fuel oil (fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396-78, 89, 90, 92, 96, or 98, "Standard Specification for Fuel Oils"). The sulfur content of the distillate fuel oil shall contain no more than 0.5 weight percent sulfur.

[OAC rule 3745-77-07(A)(1) and PTI No. P0108339]

- (2) If the stationary CI ICE is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the permittee when the high backpressure limit of the engine is approached.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 60, Subpart IIII; and PTI No. P0108339]

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall use records of fuel supplier certification to demonstrate compliance with the operational restriction in section c)(1). Records of fuel supplier certification shall include the following information:
 - a. the name of the oil supplier;
 - b. and a statement from the oil supplier that the oil complies with the specifications under the definition of distillate fuel oil in c)(1) above.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108339]

- (2) For each day during which the permittee burns a fuel other than distillate fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108339]

- (3) The permittee shall comply with the following requirements identified in 40 CFR 60.4211:
- a. The stationary CI ICE and any control device shall be installed, operated, and maintained according to the manufacturer's emission-related written instructions and specifications;
 - b. The permittee shall only change those emission-related settings that are allowed by the manufacturer; and
 - c. The stationary CI ICE must also be installed and operated to meet the applicable requirements from 40 CFR Part 89, Control of Emissions from New and In-use Non-road CI ICE; and Part 1068, the General Compliance Provisions for Engine Programs, as applicable.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart IIII; and PTI No. P0108339]

- (4) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified PTI prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[PTI No. P0108339]

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than distillate fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108339]

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel containing greater than 0.5 weight percent sulfur was burned in the emissions unit. These deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108339]

- (3) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 60, Subpart IIII, 40 CFR 60.4200 to 60.4219.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108339]

- (4) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108339]

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. Emissions Limitations:

NOx emissions shall not exceed 6.3 g/kW-hr

VOC emissions shall not exceed 6.3 g/kW-hr

Applicable Compliance Methods:

The emission limitations above were established in accordance with the engine manufacturer's emissions specifications. The compliance requirements outlined in 40 CFR, Part 60, Subpart IIII shall be used for purposes of demonstrating compliance with the NOx and VOC emission limitations.

If required, the permittee shall demonstrate compliance with the NOx emission limitation above based on the results of emissions testing conducted in accordance with Methods 1-4 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, Northwest District Office.

If required, the permittee shall demonstrate compliance with the VOC emission limitation above based on the results of emissions testing conducted in accordance with Methods 1-4 and 18, 25 or 25A of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108339]

b. Emission Limitation:

PE shall not exceed 0.310 lb/MMBtu actual heat input



Applicable Compliance Method:

The emission factor found in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.3, Table 3.3-1(10/2006) is equivalent to the emission limitation of 0.310 lb/MMBtu actual heat input for PE. Therefore, provided compliance is shown with the emission factor, compliance with the emission limitation shall also be demonstrated. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1) and PTI No. P0108339]

c. Emission Limitations:

CO emissions shall not exceed 11.4 g/kW-hr

PM emissions shall not exceed 0.54 g/kW-hr

Applicable Compliance Method:

Compliance with the emission limitations above shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications.

If required, the permittee shall demonstrate compliance with the emission limitations through performance tests conducted in accordance with the provisions in term f)(2) below.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart IIII]

d. Emission Limitation:

Visible PE from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance with the visible PE limitation above shall be determined in accordance with the methods and procedures in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0108339]

(2) If it is determined by the Ohio EPA that a compliance demonstration is required through performance testing, it shall be conducted using one of the following test methods or procedures:

a. in accordance with 40 CFR 60.4212, conduct the exhaust emissions testing using the in-use testing procedures found in 40 CFR Part 1039, Subpart F, measuring the emissions of the regulated pollutants as specified in 40 CFR 1065; or



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- b. in accordance with 40 CFR 60.4213, conduct exhaust emissions testing using the test methods identified in Table 7 to Subpart IIII of Part 60.

If demonstrating compliance through the in-use testing procedures in 40 CFR part 1039, Subpart F, exhaust emissions from the stationary CI ICE shall not exceed the “not to exceed” (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112, determined from the following equation:

$$\text{NTE requirement for each pollutant} = 1.25 \times \text{STD}$$

Where:

STD = The standard specified for the pollutant in 40 CFR 89.112.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart IIII]

- g) Miscellaneous Requirements
 - (1) None.

43. **P048, Wastewater Treatment Plant (PRs 190786, 190790, 190794, 190798, 190801)**

Operations, Property and/or Equipment Description:

6,000 gallons per minute capacity Oil/Water Separator System including three API separators (PR-190786, PR-190790 and PR-190794); In Ground Lift Station (PR-190785), Two Dissolved Nitrogen Flotation Units (PR-190798 and PR-190801); and the following exempt storage vessels:

Description	Capacity (gallons)	Exempt by:
Flow splitter tank (PR-100133)	3,525	OAC rule 3745-31-03(B)(1)(I)(iv) – less than 19,815 gallons with submerged fill
Coagulation tank A (PR-100157)	940	OAC rule 3745-31-03(B)(1)(I)(iv) – less than 19,815 gallons with submerged fill
Coagulation tank B (PR-100159)	878	OAC rule 3745-31-03(B)(1)(I)(iv) – less than 19,815 gallons with submerged fill
Air dissolution standpipe A (PR-190804)	92.4	OAC rule 3745-31-03(B)(1)(I)(iii) – less than 700 gallons
Air dissolution standpipe B (PR-190805)	92.4	OAC rule 3745-31-03(B)(1)(I)(iii) – less than 700 gallons
Sludge standpipe A (PR-100158)	350	OAC rule 3745-31-03(B)(1)(I)(iii) – less than 700 gallons
Sludge standpipe B (PR-100600)	350	OAC rule 3745-31-03(B)(1)(I)(iii) – less than 700 gallons
Coagulant storage tank (PR-100630)	6,150	OAC rule 3745-31-03(B)(1)(I)(i) – inorganic liquid
Polymer storage tank (PR-100164)	2,250	OAC rule 3745-31-03(B)(1)(I)(i) – inorganic liquid

- 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

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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 No. P0109018, issued 3/5/12)	9.79 tons volatile organic compounds (VOC)/yr from inlet lift station 6.98 tons VOC/yr from fugitive emissions associated with leak detection and repair (LDAR) from wastewater operations for this emissions unit See b)(2)a.
b.	ORC 3704.03(T)	See b)(2)b.
c.	OAC rule 3745-21-09(M)(2)	See b)(2)c.
d.	40 CFR, Part 60, Subpart GGGa [40 CFR 60.590a – 60.593a]	See b)(2)d.
e.	40 CFR, Part 60, Subpart QQQ [40 CFR 60.690 – 60.699]	See b)(2)e.
f.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
g.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358]	See b)(2)f.
h.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
i.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640(c)(3), this emissions unit is an affected source since it contains wastewater streams]	See b)(2)d. and b)(2)g.
j.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 – 63.15 apply.

(2) Additional Terms and Conditions

- a. The federally-enforceable emissions limitations in b)(1)a. were established to limit the potential to emit (PTE). The limitations on PTE result in actual emission reductions and the establishment of creditable emission decreases which may be applied towards contemporaneous emission changes associated with the applicability of Prevention of Significant Deterioration requirements.



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- b. The Best Available Technology (BAT) requirements under ORC 3704.03(T) have been determined to be compliance with OAC rule 3745-31-05(D) and compliance with the terms and conditions of this permit.
- c. 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 volatile organic compounds from any wastewater separator no later than the date specified in paragraph (C)(13) of OAC rule 3745-21-04 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.
- d. This emissions unit is subject to the appropriate provisions of 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; and 40 CFR, Part 63, Subpart CC (Petroleum Refinery MACT Standards).

The requirements of these rules are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to OAC rule 3745-21-09(T)(4) and 40 CFR, Part 63, Subpart CC. Terms and conditions for the alternative LDAR plan are listed in section B.2 of the Facility-Wide Terms and Conditions of the facility's Title V renewal permit.

- e. The permittee shall comply with the applicable standards under 40 CFR, Part 60, Subpart QQQ, including the following sections:

40 CFR 60.692-2	Standards: Individual drain systems
40 CFR 60.693-1	Alternative standards for individual drain systems

- f. During all times when the gaseous waste stream from this emissions unit is routed to the refinery fuel gas system, the gaseous waste stream is exempt from 40 CFR, Part 61, Subpart FF, per 40 CFR 61.340(d). In accordance with 40 CFR 61.340(d), during these times, no testing, monitoring, recordkeeping or reporting is required under this subpart for the gaseous waste stream from this emissions unit.

In addition, all equipment located downstream of the inlet lift station which contacts the wastewater and is subject to 40 CFR, Part 61, Subpart FF is controlled by a nitrogen blanket routed to the refinery fuel gas system by the NESHAPS gas compressor system, and is thus, exempt from testing, monitoring, recordkeeping and reporting requirements of 40 CFR, Part 61, Subpart FF.

Note: on a facility-wide basis for benzene containing waste streams, the permittee complies with 40 CFR, Part 61, Subpart FF by use of 40 CFR 61.342(e)(2) – annual



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benzene quantity equal to or less than 6 megagrams (6 metric tons) for water streams containing greater than or equal to 10%.

- g. The permittee shall comply with the applicable standards under 40 CFR, Part 63, Subpart CC, including the following sections:

40 CFR 63.640(d)(5)	Operate closed vent to the refinery fuel gas system for API separators, DNF system, flow splitter tank, coagulation tanks, air dissolution standpipes and sludge standpipes.
40 CFR 63.647(a) – for the API Lift Station only	Except as provided in paragraph (b) of this section, each permittee of a Group 1 wastewater stream shall comply with the requirements of 40 CFR 61.340 through 61.355 of 40 CFR, Part 61, subpart FF for each process wastewater stream that meets the definition in 40 CFR 63.641.

- c) Operational Restrictions

- (1) None.

- d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall comply with the applicable monitoring and record keeping requirements required under 40 CFR, Part 60, Subpart QQQ, including the following sections:

40 CFR 60.692-2(a) through (e)	Standards: Individual drain systems: Inspection and corrective action requirements of drain water seal controls, junction boxes and unburied sewer lines, catch basin exemptions
40 CFR 60.692-3	Standards: Oil-water separators:
40 CFR 60.692-3	Standards: Oil-water separators
40 CFR 60.693-1	Alternative standards for individual drain systems

- 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. Emission Limitation:

9.79 tons VOC/yr from inlet lift station

Applicable Compliance Method:

The annual emission limitation was derived from Water9® computer program, and represents the potential to emit for the inlet lift station. The permittee shall use this computer program to demonstrate compliance with the emission limitation.

[OAC rule 3745-77-07(C)(1) and PTI No. P0109018]

b. Emission Limitation:

6.98 tons VOC/yr from fugitive emissions associated with LDAR from wastewater operations for this emissions unit

Applicable Compliance Method:

Compliance with the annual limitation shall be demonstrated by use of the U.S. EPA Protocol Document for Equipment Leaks (EPA-453/R-95-017, November 1995) – emission factors from Tables 2-2, 2-10 and 2-12. The emissions are based on the following approximate number of new LDAR components for this project:

Valves: 500 in vapor service, 500 in light liquid service

Pumps: 25 in light liquid service

Connectors/Flanges: 500 in vapor service, 500 in light liquid service

Heavy Liquid Components: 250 valves, 25 pumps, 250 connectors

Pressure Relief Valves: 50 in gas service

Sampling Connectors: 30 in gas service

Compressors: 10 in gas service

[OAC rule 3745-77-07(C)(1) and PTI No. P0109018]

g) Miscellaneous Requirements

(1) None.



44. P049, SRU 3

Operations, Property and/or Equipment Description:

SRU-Claus 3 with TGTU, and Natural Gas Fired Incinerator

- 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 No. P0123731, issued 11/29/18)	Combustion emissions from the tail gas incinerator shall not exceed the following: 0.16 lb of particulate emissions/particulate matter less than or equal to 10 microns in diameter/particulate matter less than or equal to 2.5 microns in diameter (PE/PM10/PM2.5)/hr and 0.72 ton of PE/PM10/PM2.5 per rolling, 12-month period 0.12 lb of volatile organic compounds (VOC)/hr and 0.52 ton of VOC per rolling, 12-month period 1.92 tons VOC per rolling, 12-month period from fugitive equipment leaks subject to leak detection and repair (LDAR) requirements Visible PE shall not exceed 20% opacity, as a six-minute average The requirements of this rule also include compliance with 40 CFR, Part 63, Subpart CC (for the rich amine flash drum) and 40 CFR 60.104(a) See b)(2)a. and b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3)(a)(ii) (PTI No. P0123731, issued 11/29/18)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM10/PM2.5, VOC, NOx and CO emissions from this air contaminant source since the potential to emit is less than 10 tons/yr taking into account the federally enforceable restrictions in b)(1)a. and the Best Available Control Measures (BACT) restrictions in b)(1)d.
c.	ORC 3704.03(T) (PTI No. P0123731, issued 11/29/18)	See b)(2)c.
d.	OAC rule 3745-31-10 through 3745-31-20 (PTI No. P0123731, issued 11/29/18)	<p>Combustion emissions from the tail gas incinerator shall not exceed the following:</p> <p>2.17 lbs of nitrogen oxides (NOx)/hr and 9.52 tons of NOx per rolling, 12-month period</p> <p>1.83 lbs of carbon monoxide (CO)/hr and 8.00 tons of CO per rolling, 12-month period</p> <p>Carbon dioxide equivalents (CO_{2e}) emissions shall not exceed 40,512 tons per rolling, 12-month period</p> <p>Process emissions from the tail gas incinerator shall not exceed the following:</p> <p>22.67 lbs of sulfur dioxide (SO₂)/hr, as a 12-hour rolling average; 99.30 tons of SO₂ per rolling, 12-month period; and 250 parts per million by volume (dry basis) (ppmvd) of SO₂ at 0% excess air as a 12-hour rolling average</p> <p>See b)(2)d., b)(2)e. b)(2)f., and b)(2)g.</p>
e.	<p>40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.656]</p> <p>[Miscellaneous Group 1 process vent provisions for the new rich amine flash drum]</p> <p>[In accordance with 40 CFR 63.640, the new rich amine flash drum that is</p>	See b)(2)k. through b)(2)m. and e)(4)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	part of this emissions unit is an affected source since it contains a Group 1 process vent that is routed to the Acid Gas flare (emissions unit P050) with backup to the FCC/Coker flare (emissions unit P006)]	
f.	40 CFR, Part 63, Subpart UUU [40 CFR 63.1560 – 63.1579] [In accordance with 40 CFR 63.1562, this emissions unit is an affected source consisting of a process vent or group of process vents on the Claus 3 sulfur recovery plant unit and the tail gas treatment unit serving the Claus 3 sulfur recovery plant, that are associated with sulfur recovery, including any bypass line(s), subject to the emission limitations/control measures specified in this section.]	See b)(2)j., d)(6) , e)(5) , and f)(2)
g.	40 CFR, Part 60, Subpart Ja 40 CFR 60.102a(f)(1)(i)	250 ppmvd of SO ₂ at 0% excess air as a 12-hour average
h.	OAC rule 3745-21-09(T)	leaks from petroleum refinery equipment [See b)(2)k.]
i.	OAC rule 3745-21-09(DD)	leaks from petroleum refinery equipment [See b)(2)k.]
j.	40 CFR, Part 60, Subpart VVa	leaks from petroleum refinery equipment [See b)(2)k.]
k.	40 CFR, Part 60, Subpart GGGa [40 CFR 60.640a through 60.679a]	leaks from petroleum refinery equipment [See b)(2)k.]
l.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
m.	40 CFR, Part 61, Subpart V	leaks from petroleum refinery equipment [See b)(2)k.]
n.	OAC rule 3745-17-11(B)(1)	None [See b)(2)h.]
o.	OAC rule 3745-17-07(A)	None [See b)(2)i]
p.	OAC rule 3745-18-06(E)(2)	122.10 lbs SO ₂ /hr [See b)(2)o.]
q.	OAC rule 3745-21-08(E)	None [See b)(2)p.]
r.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358] [In accordance with 40 CFR 61.340, the sour water components of this emissions unit are an affected source since processing of wastewater containing benzene occurs.]	See b)(2)n.
s.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
t.	40 CFR 63.1 through 63.15	<p>Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.</p> <p>Table 44 to 40 CFR, Part 63, Subpart UUU – Applicability of General Provisions to Subpart UUU shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.</p>

(2) Additional Terms and Conditions

- a. It is assumed that all PE are equivalent to both PM10 and PM2.5.
- b. The federally-enforceable emissions limitations in b)(1)a. were established to represent the potential to emit of the emissions unit.
- c. The BAT requirements for SO₂ emissions under ORC 3704.03(T) have been determined to be compliance with the emission limitation and requirements established pursuant to OAC rule 3745-31-10 through 3745-31-20:
 - i. 250 ppmvd of SO₂ at 0% excess air as a 12-hour rolling average.
- d. The permittee shall employ Best Available Control Technology (BACT) for this emissions unit. BACT has been determined to be the following:

Pollutant	BACT Requirements
NO _x	2.17 lbs of NO _x /hr; and Use of good combustion practices.
SO ₂	Use of tail gas treatment unit and tail gas incinerator; Compliance with 40 CFR, Part 60, Subpart Ja; 22.67 lbs of SO ₂ /hr, as a 12-hr rolling average; and 250 ppmvd of SO ₂ at 0% excess air as a 12-hour rolling average.
CO	1.83 lbs of CO/hr; and Use of good combustion practices.
CO _{2e}	Use of low-carbon gaseous fuel (natural gas or refinery fuel gas) as supplemental fuel in the tail gas incinerator

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- e. Each continuous SO₂ monitoring system shall be certified to meet the requirements of 40 CFR, Part 60, Appendix B, Performance Specifications 2 and 6. At least 45 days before commencing certification testing of the continuous SO₂ 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 SO₂ 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 SO₂ 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 test audits (RATA) as required in 40 CFR Part 60; and to RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

- f. Each continuous O₂ monitoring system shall be certified to meet the requirements of 40 CFR, Part 60, Appendix B, Performance Specification 3. At least 45 days before commencing certification testing of the continuous O₂ 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 O₂ 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 O₂ 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 RATAs as required in 40 CFR, Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR, Part 60.

- g. The continuous SO₂ and O₂ emission monitoring systems 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.
- h. The uncontrolled mass rate of 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)(14).

* The burning of gaseous fuels in the tail gas incinerator is the only source of PE from this emissions unit

- i. 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 the requirements of OAC rule 3745-17-11.

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- j. The permittee shall comply with the applicable control requirements, operating limits, emission limits and work practice standards under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1568(a)(1) and Table 29	Sulfur Dioxide (SO ₂) Emission Limit for New Source Performance Standard Units: Meet Option A – 250 ppmvd of SO ₂ at 0% excess air (use of oxidation or reduction control system followed by incineration)
63.1568(a)(3)	Prepare Operation, Maintenance and Monitoring Plan
63.1570(a)	Compliance with Non-opacity Standards during time specified in 40 CFR 63.6(f)(1)
63.1570(g)	Deviations during Startup, Shutdown or Malfunction

- k. This emissions unit is subject to the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of OAC rule 3745-21-09(T) – Leaks from petroleum refinery equipment, OAC rule 3745-21-09(DD) – Leaks from process units that produce organic chemicals, 40 CFR, Part 60, Subpart VVa (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction or Modification Commenced after November 7, 2006), 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), 40 CFR, Part 63, Subpart CC (Petroleum Refinery MACT Standards), and 40 CFR, Part 61, Subpart V (National Emission Standard for Equipment Leaks – Fugitive Emission Sources).

The requirements of these rules are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to OAC rule 3745-21-09(T)(4) and 40 CFR, Part 63, Subpart CC. Terms and conditions for the alternative LDAR plan are listed in Facility-Wide Terms and Conditions B.2.

- l. Pursuant to the Group 1 miscellaneous process vent requirements in 40 CFR 63.641, the permittee shall reduce emissions of organic HAP's using a flare(s) that meets the requirements of 40 CFR 63.11(b) of Subpart A for emissions from the rich amine flash drum.
- m. MACT requirements in 40 CFR, Part 63, Subpart CC are applicable for the Group 1 process vent that is part of this emissions unit, the rich amine flash drum, and is routed to either emissions unit P050 (Acid Gas flare) with backup to emissions unit P006 (FCC/Coker flare). All operational restrictions, monitoring, record keeping, reporting and testing requirements for the flare are established in the terms and conditions for emissions units P050 and P006 and are also applicable to emissions



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unit P049. Therefore, no additional monitoring, record keeping, reporting and testing requirements are necessary for the flare in this emissions unit.

The permittee shall comply with the applicable control requirements, emission limit and compliance demonstration methods under 40 CFR, Part 63, Subpart CC, including the following sections:

63.643(a)(1)	Required Use of Flare to Reduce Organic Hazardous Air Pollutants
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- n. The permittee shall include the sour water components of this emissions unit, SRU3, in the current site benzene waste operations program. The program shall comply with the appropriate provisions (includes operational restrictions, monitoring and record keeping, reporting, and testing) of 40 CFR, Part 61, Subpart FF.

Note: Compliance with rule is demonstrated through compliance with the requirements of the permittee's NESHAPs Oil/Water Separator System (emissions unit P025).

- o. The OAC rule 3745-18-06 SO2 limit of is less stringent than the limit established under OAC rule 3745-31-10 through 3745-31-20 and 40 CFR, Part 60, Subpart Ja. Compliance with this limit will be demonstrated through compliance with OAC rule 3745-31-10 through 3745-31-20 and NSPS Ja.
- p. The CO waste gas stream from this emissions unit shall burn at a minimum temperature of 1300 degrees Fahrenheit for 0.3 seconds or greater in a direct-flame afterburner or boiler equipped with an indicating pyrometer which is positioned in the working area at the operator's eye level.

c) **Operational Restrictions**

- (1) The permittee shall burn only refinery fuel gas or natural gas in this emissions unit. The sulfur content of the refinery fuel gas or natural gas burned in this emissions unit shall comply with the allowable SO2 emission limitations specified in section b)(1).

[OAC rule 3745-77-07(A)(1) and PTI No. P0123731]

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall install, operate, and maintain equipment to continuously monitor and record SO2 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 SO2 monitoring system including, but not limited to:

- a. emissions of SO2 in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;

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- b. emissions of SO₂ in pounds per hour and in units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly cylinder gas audits (CGAs);
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required RATA(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous SO₂ 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 SO₂ 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 SO₂ 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).

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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (2) Prior to the installation of the continuous SO₂ 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 SO₂ monitoring system meets the requirements of Performance Specifications 2 and 6. Once received, the letter(s)/document(s) of certification shall be maintained on-site and shall be made available to the Director (the Ohio EPA, Northwest District Office) upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (3) The permittee shall install, operate and maintain equipment to continuously monitor and record O₂ emitted from this emissions unit in percent O₂. 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 O₂ monitoring system including, but not limited to:

- a. the percent O₂ with each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. results of quarterly CGAs;



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- c. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- d. results of required RATA(s);
- e. hours of operation of the emissions unit, continuous O2 monitoring system;
- f. the date, time, and hours of operation of the emissions unit without the continuous O2 monitoring system;
- g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous O2 monitoring system; as well as,
- h. the reason (if known) and the corrective actions taken (if any) for each such event in (f) and (g).

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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (4) Prior to the installation of the continuous O2 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 3. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous O2 monitoring system meets the requirements of Performance Specification 3. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the Director (the Ohio EPA, Northwest District Office) upon request.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (5) The permittee shall include the SRU fugitive emissions and associated components in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall be conducted in accordance with the alternative monitoring plan submitted by the permittee. Terms and conditions for the alternative LDAR plan are listed in Facility-Wide Terms and Conditions B.2.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0123731]

- (6) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1568(b)(1) and Table 31	Install, Operate and Maintain Sulfur Dioxide Continuous Emission Monitor
63.1568(c)(1), Table 34 and Table 35	Continuous Compliance - Sulfur Dioxide Continuous Emission Monitor

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63.1568(c)(2)	Continuous Compliance with Operation, Maintenance and Monitoring Plan
63.1570(c)	General Duty – Log Prior to Continuous Monitoring System Validation
63.1572(a)(1), 63.1572(a)(4), 63.1572(d)(2) and Table 40	63.1572(a)(3), 63.1572(d)(1), Sulfur Dioxide Continuous Emission Monitor Requirements
63.1574(f)(2)(i), 63.1574(f)(2)(viii) through 63.1574(f)(2)(x)	63.1574(f)(2)(ii), and Operation, Maintenance and Monitoring Plan Requirements
63.1576(a)(1), 63.1576(b)(1) through 63.1576(d) and Table 35	63.1576(a)(2), 63.1576(b)(5), 63.1576(i), Table 34 and Table 35 Recordkeeping Requirements

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0123731]

- (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 SO₂ 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 (Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60 Subpart Ja; and PTI No. P0123731]

- (8) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

e) Reporting Requirements

- (1) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO₂ 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 Ohio EPA, Northwest District Office, documenting all instances of SO₂ 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. The quarterly reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit and shall include the following:
- i. the facility name and address;
 - ii. the manufacturer and model number of the continuous SO₂ 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 SO₂ emissions for the calendar quarter (tons);
 - vi. the total operating time (hours) of the emissions unit;
 - vii. the total operating time of the continuous SO₂ monitoring system while the emissions unit was in operation;
 - viii. results and date of quarterly cylinder gas audits;
 - ix. unless previously submitted, results and date of the RATA(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
 - x. unless previously submitted, the results of any RATA showing the continuous SO₂ monitor out-of-control and the compliant results following any corrective actions;
 - xi. the date, time, and duration of any/each malfunction** of the continuous SO₂ monitoring system, emissions unit, and/or control equipment;
 - xii. the date, time, and duration of any downtime** of the continuous SO₂ monitoring system and/or control equipment while the emissions unit was in operation; and
 - xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (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

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (2) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous O₂ 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 Ohio EPA, Northwest District Office, documenting all instances of continuous O₂ monitoring system downtime and malfunction while the emissions unit was on line.
 - b. These quarterly reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit and shall include the following:
 - i. the facility name and address;
 - ii. the manufacturer and model number of the continuous O₂ 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 total operating time (hours) of the emissions unit;
 - v. the total operating time of the continuous O₂ monitoring system while the emissions unit was in operation;
 - vi. results and dates of quarterly cylinder gas audits;
 - vii. unless previously submitted, results and dates of the RATA(s) (during appropriate quarter(s));
 - viii. unless previously submitted, the results of any RATA showing the continuous O₂ monitor out-of-control and the compliant results following any corrective actions;



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- ix. the date, time, and duration of any/each malfunction* of the continuous O2 monitoring system while the emissions unit was in operation;
- x. the date, time, and duration of any downtime* of the continuous O2 monitoring system while the emissions unit was in operation; and
- xi. 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.

* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (3) All quarterly reports and deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (4) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.655(g)	Semi-annual Deviation Report for Group 1 Miscellaneous Process Vents
63.655(g)(6)	Semi-annual Deviation Report for Group 1 Miscellaneous Process Vents – Excess Emissions Reporting

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0123731]

- (5) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1563(e)	Notification Requirements
63.1568(b)(6) and 63.1658(b)(7)	Submit Notice of Compliance Status, including Operation, Maintenance and Monitoring Plan
63.1570(f)	Report Deviations
63.1574(a), 63.1574(a)(3), 63.1574(b), 63.1574(d), 63.1574(f)(1), Table 42.1, Table 42.2 and Table 42.3	Notice of Compliance Status – Identify Affected Sources, Emission Limits and Monitoring Options



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63.1575(a), 63.1575(b)(1) through 63.1575(b)(5), 63.1575(c), 63.1575(e)(1) through 63.1575(e)(13), 63.1575(f)(1), 63.1575(f)(2), 63.1575(g) and Table 43	Compliance Report Requirements
63.1575(h)(1) and 63.1575(h)(2)	Startup, Shutdown and Malfunction Reporting Requirements

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0123731]

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

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 Limitations:

0.16 lb of PE/PM10/PM2.5/hr and 0.72 ton of PE/PM10/PM2.5 per rolling, 12-month period, combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the appropriate particulate emission factor of 7.6 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 22,000 standard cubic feet/hr.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the rolling, 12-month emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

b. Emission Limitations:

0.12 lb of VOC/hr, 0.52 ton of VOC per rolling, 12-month period, combustion emissions from the tail gas incinerator



Applicable Compliance Method:

The hourly emission limitation was established by multiplying the appropriate VOC emission factor of 5.5 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 22,000 standard cubic feet/hr.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with Methods 1 through 4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the rolling, 12-month emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

c. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average [combustion emissions from the tail gas incinerator]

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

d. Emission Limitations:

2.17 lbs of NO_x/hr and 9.52 tons of NO_x per rolling, 12-month period, combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the appropriate NO_x emission factor of 100 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 22,000 standard cubic feet/hr.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A.

The rolling, 12-month emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the rolling, 12-month period emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

e. Emission Limitations:

1.83 lbs of CO/hr and 8.00 tons of CO per rolling, 12-month period, combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the appropriate CO emission factor of 84 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 22,000 standard cubic feet/hr.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 10 of 40 CFR, Part 60, Appendix A.

The rolling, 12-month emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the rolling, 12-month period emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

f. Emission Limitation:

CO₂e emissions shall not exceed 40,512 tons per rolling, 12-month period

Applicable Compliance Method:

The rolling, 12-month limitation represents the estimated emissions at the maximum design sulfur load of 195 long tons per day which is estimated to result in 21,098 scfm of stack gas flow and an assumed 6.3% CO₂ concentration in the stack based on past stack testing of the existing SRU unit. The resulting calculated GHG emissions are 40,512 tons per rolling, 12-month period.

Compliance shall be demonstrated by use of actual stack gas flow rates and an assumed 6.3% CO₂ concentration in the stack (or other more recent test data, if available).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

g. Emission Limitation:

22.67 lbs of SO₂/hr, as a 12-hour rolling average and 99.30 tons of SO₂ per rolling, 12-month period [process emissions from the tail gas incinerator]



Applicable Compliance Method:

Ongoing compliance with the SO₂ emission 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 record keeping in d)(1), 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 with the SO₂ emission limitation above based on the results of emission testing conducted in accordance with the requirements specified in Methods 1 through 4, and 6 of 40 CFR, Part 60, Appendix A.

The rolling, 12-month emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the rolling, 12-month period emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

h. Emission Limitation:

250 ppmvd, as a 12-hour rolling average of SO₂ at 0% excess air, process emissions from the tail gas incinerator

Applicable Compliance Method:

Initial compliance with the SO₂ emission limitation shall be demonstrated in accordance with the testing requirements in f)(5) below.

Ongoing compliance with the SO₂ emission 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 record keeping in d)(1), 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 with the SO₂ emission limitation above based on the results of emission testing conducted in accordance with the requirements specified in Methods 1 through 4, and 6 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (2) The permittee shall comply with the applicable testing requirements under 40 CFR, Part 63, Subpart UUU, including the following sections:



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63.1568(b)(5) and Table 33	Initial Compliance – New Source Performance Standard Test
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0123731]

g) Miscellaneous Requirements

- (1) None.

45. P050, Acid Gas Flare

Operations, Property and/or Equipment Description:

Sulfur Recovery Units Acid Gas Flare, non-assisted

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 No. P0123731, modification issued 11/29/18)	0.25 ton particulate emissions/particulate matter less than or equal to 10 microns in diameter/particulate matter less than or equal to 2.5 microns in diameter (PE/PM10/PM2.5) per rolling, 12-month period from pilot and sweep gas firing only 18.80 tons volatile organic compounds (VOC) per rolling, 12-month period from pilot and sweep gas firing only 1.00 ton of NOx/calendar-yr during periods of process unit start-up and shutdown 100.00 tons of SO2/calendar-yr during periods of process unit start-up and shutdown See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) (PTI No. P0123731, modification issued 11/29/18)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM10/PM2.5 and NOx emissions from this air contaminant source since the potential to emit is less than 10 tons/yr taking into account the federally enforceable restrictions in b)(1)a. and the Best

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Available Control Measures (BACT) restrictions in b)(2)h.
c.	ORC 3704.03(T) (PTI No. P0123731, modification issued 11/29/18)	See b)(2)c.
d.	40 CFR Part 60.18(b)	See b)(2)k.
e.	40 CFR, Part 60, Subpart Ja [40 CFR 60.100a – 60.109a]	See b)(2)d. through b)(2)g.
f.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
g.	OAC rules 3745-31-10 through 3745-31-20 (PTI No. P0123731, modification issued 11/29/18)	2.24 tons nitrogen oxides (NO _x) per rolling, 12-month period from pilot and sweep gas firing only 0.02 ton sulfur dioxide (SO ₂) per rolling, 12-month period from pilot and sweep gas firing only 10.22 tons carbon monoxide (CO) per rolling, 12-month period from pilot and sweep gas firing only Carbon dioxide equivalents (CO ₂ e) emissions shall not exceed 3,860.5 tons per rolling, 12-month period from pilot and sweep gas firing only See b)(2)h.
h.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.670, this emissions unit is a flare 'used as a control device for an emission point subject to this subpart' and shall meet all applicable requirements.]	No visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, when regulated material is routed to the flare and the flare vent gas flow rate is less than the smokeless design capacity of the flare. See b)(2)i.
i.	40 CFR, Part 63, Subpart UUU [40 CFR 63.1560 – 63.1579] [In accordance with 40 CFR 63.1562, this emissions unit is an affected source due to its use for control for the sulfur recovery unit (emissions unit P040), and new sulfur recovery unit (emissions unit P049 upon completion), subject to the emission	See b)(2)j., d)(12), e)(7) and f)(2)



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	limitations/control measures specified in this section.]	
j.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	<p>Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.</p> <p>Table 44 to 40 CFR, Part 63, Subpart UUU – Applicability of General Provisions to Subpart UUU shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.</p>

(2) Additional Terms and Conditions

- a. It is assumed that all PE are equivalent to both PM10 and PM2.5.
- b. The federally-enforceable emissions limitations* in b)(1)a. were established to represent the potential to emit of the emissions unit.

*The emission limitations for NOx and SO2 during start-up and shutdown were established to alleviate reporting requirements associated with reportable quantities (RQ) under the Superfund Amendments and Reauthorization Act (SARA). The allowable limitations above do not apply to emissions associated with malfunctions and/or process upsets of the process unit. Any SO2 emissions associated with the start-up and shutdown of the sulfur recovery units at the facility (emissions units P040 and P049, upon completion) that are routed to this flare must still be applied to the emissions limitation of 100 lbs SO2/1,000 lbs of sulfur processed contained in OAC rule 3745-18-08(C)(3).
- c. The BAT requirements for VOC emissions under ORC 3704.03(T) have been determined to be compliance with the emission limitations and requirements established pursuant to OAC rule 3745-31-05(D).

The BAT requirements for SO2 and CO under ORC 3704.03(T) has been determined to be the following federally enforceable emission limitations established pursuant to OAC rule 3745-31-10 through 3745-31-20.
- d. For periods of start-up, shutdown and malfunction, this flare will be used to control H2S emissions from: The butane-butylene treater [emissions unit P041]; Claus 1 and 2 sulfur recovery units, LIU amine unit, SRU amine unit, sour water strippers 1 and 2, tail gas treatment unit [emissions unit P040]; and the new Claus 3 sulfur recovery unit [emissions unit P049], upon completion.
- e. The permittee shall not burn any fuel gas that contains H2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis.



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Note: This limit does not apply to process upset gases, fuel gas that is released to the flare as a result of relief valve leakage, or other emergency malfunctions.

- f. The permittee shall comply with the following requirements in 40 CFR, Part 60, Subpart Ja for new flares:
 - i. Conduct a root cause analysis and corrective action plan whenever the discharge to the flare exceeds:
 - (a) 500 lbs SO₂ in any 24-hour period; or
 - (b) 500,000 standard cubic feet (scf) above the baseline in any 24-hour period.
 - ii. Install, operate, calibrate and maintain a monitor to continuously measure and record the flow rate of gas discharged to the flare.
- g. The permittee submitted an alternative monitoring plan (AMP) to U.S. EPA on August 10, 2015. On November 2, 2015, U.S. EPA approved alternative methods for monitoring, recordkeeping, operation, calibration, maintenance and testing requirements to demonstrate compliance with the SO₂ and H₂S emission limitations. The approval required the permittee to identify which compliance method is being followed.
- h. The permittee shall employ Best Available Control Technology (BACT) for this emissions unit. BACT has been determined to be the following:

Pollutant	BACT Requirements
NO _x	Use of good combustion practices
SO ₂	Use of natural gas or refinery fuel gas for the flare pilot flame and sweep gases, and implementation of a load shedding plan to minimize periods of gas release from the sulfur recovery units (Claus 1, Claus 2 and Claus 3 units, upon completion) to the acid gas flare
CO	Use of good combustion practices
CO _{2e}	Use of low-carbon gaseous fuels (refinery fuel gas or natural gas) in the flare's pilot and sweep gases

- i. In accordance with 40 CFR, Part 63, Subpart CC, the permittee shall employ a flare to control emissions of organic hazardous air pollutants resulting from malfunctions and pressure relief episodes.

The permittee shall comply with the applicable control requirements and operating limits under 40 CFR, Part 63, Subpart CC, including the following sections:

63.670(b)	Pilot Flame Presence
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63.670(c)	Visible Emissions
63.670(d)	Flare Tip Velocity
63.670(e)	Combustion Zone Operating Limits
63.670(g)	Pilot Flame Monitoring
63.670(h)(2)	Visible Emissions Monitoring
63.670(i)	Flare Vent Gas, Steam Assist and Air Assist Flow Rate Monitoring
63.670(j)(1)	Flare Vent Gas Composition Monitoring
63.670(k)(2)(i)	Calculation Methods for Cumulative Flow Rates and Determining Compliance with V_{tip} Operating Limits
63.670(l)(1), 63.670(l)(4), and 63.670(l)(5)	Calculation Methods for Determining Flare Vent Gas Net Heating Value
63.670(m)(1)	Calculation Methods for Determining Combustion Zone Net Heating Value
63.670(p)	Flare Monitoring Records
63.670(q)	Reporting
63.671(a)	Operation of CPMS
63.671(b)	CPMS Monitoring Plan
63.671(c)	Out-of-Control Periods
63.671(e)(2)(ii) and 63.671(e)(3)	Additional Requirements for Gas Chromatographs

- j. The permittee shall comply with the applicable control requirements and operating limits under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1568(a)(3) and 63.1568(c)(2)	Operate According to Operation, Maintenance and Monitoring Plan
63.1568(a)(4)	Vent Purge Gases to a Flare during Startup or Shutdown

- k. The emission limitation specified by this rule is less stringent than or equivalent to the emission limitation established pursuant to 40 CFR 63.670(c).

c) Operational Restrictions

- (1) The flare shall be operated at all times when emissions are being vented to it.

[OAC rule 3745-77-07(A)(1) and PTI No. P0123731]

- (2) The flare shall be operated with a pilot flame present at all times. The presence of a pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

[OAC rule 3745-77-07(A)(1) and PTI No. P0123731]

- (3) The flare shall be operated using good combustion practices as BACT which shall be demonstrated by complying with the following flare requirements of 40 CFR 63.11(b).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart A; and PTI No. P0123731]

- (4) Only flare combustion zone gases with a net heating value of 10.1 MJ/scm (270 Btu/scf) or greater shall be combusted in this emissions unit. Net heating value shall be determined on a 15-minute block period basis and calculated as specified in 40 CFR Part 63.670(m)(1).

The flare shall be operated with an exit velocity less than 18.3 m/sec (60 ft/sec) except as specified in sections c)(5) and c)(6).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart A; and PTI No. P0123731]

- (5) If the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf), the permittee may operate the flare at an exit velocity equal to or greater than 18.3 m/sec (60 ft/sec), but less than 122 m/sec (400 ft/sec) and also less than the maximum allowed flare tip velocity as determined in accordance with 40 CFR Part 63.670(d)(2).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart A; and PTI No. P0123731]

- (6) Non-assisted flares may be operated with an exit velocity less than the maximum permitted velocity, but not greater than 122 m/sec (400 ft/sec). The maximum permitted velocity shall be determined in accordance with 40 CFR Part 63.670(d)(2).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart A; and PTI No. P0123731]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information during periods of start-up and shut-down:

- a. the flare flow rate, in scf/hr;

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- b. the high heating value (HHV), in Btu/scf, as determined from the flare gas molecular weight and source of the gas, laboratory analysis or Btu analyzer;
- c. the concentration of hydrogen sulfide in the flare gas, in weight fraction;
- d. an indication of which process is undergoing start-up/shut-down mode;
- e. the number of hours the process operated in start-up/shut-down mode;
- f. the calculated NOx emissions using the following equation:

$$E = (FR) \times (HV) \times (T) \times (EF)/1,000,000$$

Where:

E = NOx emissions in tons for each individual start-up and shut-down event;

FR = flare flow rate in scf per hour;

HV = high heating value, in Btu/scf;

T = time duration for each start-up/shut down event, in hours; and

EF = NOx emission factor of 0.068 lb of NOx/MMBtu (AP-42 Section 13.5, Industrial Flares [12/16])

- g. the annual NOx emission rate calculated as follows:

$$ET = E1 + E2 + E3 + \dots + En$$

Where:

ET = Annual NOx emissions, in tons, as summed for the calendar year from January to December; and

En = NOx emissions, in tons, for each individual start-up/shut-down event during the calendar year

- h. the calculated SO2 emissions using the following equation:

$$E = \{(FR) \times (H2S)\}/379.7\} \times (0.98) \times (64) \times (T)$$

where:

E = SO2 emissions in tons for each individual start-up and shut-down event;

FR = flare flow rate in scf/hr;

H2S = volume fraction of hydrogen sulfide in flare gas;



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379.7 = the volume, in ft³, of one lb mole of gas at standard conditions (60 degrees F & 1 atm) from the ideal gas law;

0.98 = efficiency of the flare for converting a lb mole of H₂S into a lb mole of SO₂;

64 = molecular weight of SO₂ in lb/lb mole; and

T = time duration for each start-up/shut down event, in hours

- i. the annual SO₂ emission rate calculated as follows:

$$ET = E1 + E2 + E3 + \dots + En$$

Where:

ET = Annual SO₂ emissions, in tons, as summed for the calendar year from January to December; and

En = SO₂ emissions, in tons, for each individual start-up/shut-down event during the calendar year

[OAC rule 3745-77-07(C)(1); and PTI No. P0123731]

- (2) The permittee shall operate and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The monitoring device must complete a minimum of one cycle of operation for each successive 15-minute period.

The permittee shall record the following information each day:

- a. all periods during which there was no pilot flame; and
- b. the downtime for the flare and monitoring equipment.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (3) The permittee shall continuously monitor either visually and/or by camera whether or not there are visible emissions from the flare. Whenever the permittee observes visible emissions from the flare, the permittee shall record the start-time and end-time of visible emissions in an operations log.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (4) The permittee shall develop, implement and maintain a copy of the written flare management plan pursuant to 40 CFR 60.103a(a)(1) through (a)(7) and shall be updated periodically to account for the changes described in 40 CFR 60.103a(b)(2). The permittee shall comply with the plan as submitted.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (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 one of the conditions specified in b)(2)i.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (6) The permittee shall implement the corrective action(s) identified in the corrective action analysis conducted pursuant to 40 CFR 60.103a(d) in accordance with the applicable requirements in 40 CFR 60.103a paragraphs (e)(1) through (3):

a. 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 40 CFR 60.108a(c)(6)(ix);

b. 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; and

c. 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 40 CFR 60.108a(c)(6)(x).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (7) The permittee shall properly install, operate, calibrate, and maintain a device to continuously measure and record the flow rate of gas discharged to the flare. The flow monitor shall comply with the following requirements:

a. Locate the monitor in a position that provides a representative measurement of total gas flow rate;

b. Use a flow sensor meeting the accuracy requirements specified in 40 CFR 60.107a(f)(1)(ii);

c. The monitor must be maintainable online and is able to continuously correct for temperature and pressure;

d. The monitor must record flow in standard conditions over one-minute averages;

e. If the flow monitor is not equipped with a redundant sensor, quarterly visual inspections must be conducted; and

f. The flow monitor shall be recalibrated in accordance with manufacturer's procedures and specifications on a biannual basis or at the frequency specified by the manufacturer.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (8) The permittee shall maintain a written quality assurance/quality control plan for the continuous monitoring system, designed to ensure continuous valid and representative readings of total reduced sulfur. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F. The quality assurance/quality control plan and logbook dedicated to the total reduced 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 (CGAs) or relative accuracy test audits (RATAs) as required in 40 CFR Part 60; and to conduct RATAs in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

In accordance with U.S. EPA's alternative monitoring plan approval letter, the permittee shall revise the current written QC program or modify or replace the monitoring system whenever excessive inaccuracies occur for two consecutive quarters.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (9) 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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (10) The permittee shall operate and maintain equipment to continuously monitor and record total reduced 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.

Pursuant to the Flare Management Plan submitted by the permittee on November 12, 2015, the permittee has chosen to demonstrate compliance with the monitoring requirements for the flare through Option 2 (TRS monitor calibration using low H₂S concentrations) of U.S. EPA's November 2, 2015 approval letter (LRC file number A7-15-03).

If the permittee elects to demonstrate compliance using a different approved method, the permittee shall identify the option used in the next quarterly deviation report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (11) The permittee shall maintain records of all data obtained by the continuous total reduced sulfur monitoring system including, but not limited to:
- a. emissions of total reduced sulfur in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
 - b. emissions of total reduced sulfur, in units of the applicable standard(s) and in the appropriate averaging period;



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- c. results of quarterly CGAs;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required RATA(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous total reduced sulfur 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 total reduced sulfur 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 total reduced sulfur monitoring system; as well as,
- i. the reason (if known) and the corrective actions taken (if any) for each such event in d)(11)g. and d)(11)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.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (12) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart UUU, including the following sections:

63.1568(b)(1), 63.1572(c) and Table 17	Initial Compliance Demonstration for Flare - Install Flame Monitor
63.1568(a)(4)(ii), 63.1572(c) and Table 31	Continuous Compliance Demonstration for Flare - Visible Emissions and Pilot Monitoring
63.1576(d) and Table 35	Flare Recordkeeping Requirements

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0123731]

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify all periods during which the flare pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period.

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) The permittee shall submit quarterly deviation reports that include the start-time and end-time of visible emissions observed from the flare that exceed a total time of five minutes during any consecutive two hour period.

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (3) The permittee shall submit annual reports that summarize the total annual actual emissions of NO_x and SO₂ during periods of process unit start-up and shutdown. The report shall be submitted by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (4) The permittee shall submit the flare management plan (and any updates) in accordance with 40 CFR 60.103(b)(1) through (b)(3).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (5) The permittee shall submit an excess emissions report for all periods of excess emissions according to the requirements of 40 CFR 60.7(c) except that the report shall contain the information specified in paragraphs (e)(5)(a) through (e)(5)(g) below.

- a. The date that the exceedance occurred;
- b. An explanation of the exceedance;
- c. Whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system; and
- d. A description of the action taken, if any.
- e. The information described in 40 CFR 60.108a(c)(6)(i) through (xi) for all discharges listed in 40 CFR 60.108a(c)(6).
- f. 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.
- g. A written statement, signed by a responsible official, certifying the accuracy and completeness of the information contained in the report.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (6) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous total reduced sulfur monitoring system:

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- 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 the Ohio EPA Northwest District Office, documenting all instances of total reduced 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 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 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 reduced sulfur 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 total reduced sulfur monitoring system while the emissions unit was in operation;
 - vii. results and dates of quarterly CGAs;
 - viii. unless previously submitted, results and dates of the RATA(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
 - ix. unless previously submitted, the results of any RATA showing the continuous total reduced sulfur monitor out-of-control and the compliant results following any corrective actions;
 - x. the date, time, and duration of any/each malfunction** of the continuous total reduced sulfur monitoring system, emissions unit, and/or control equipment;
 - xi. the date, time, and duration of any downtime** of the continuous total reduced sulfur monitoring system and/or control equipment while the emissions unit was in operation; and



- xii. the reason (if known) and the corrective actions taken (if any) for each event in e)(6)b.x. and e)(6)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

** each downtime and malfunction event shall be reported regardless of whether there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Ja; and PTI No. P0123731]

- (7) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart UUU, including the following section:

63.1575(a) and Table 43	Semiannual Reporting Requirements
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0123731]

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:

0.25 ton PE/PM10/PM2.5 per rolling, 12-month period from the flare's pilot and sweep gases

Applicable Compliance Method:

The annual emission limitation above represents the potential to emit [see b)(2)b.] based on an emission factor of 0.0075 lb of PE/PM10/PM2.5/MMBtu* multiplied by a maximum heat input to the flare's pilot and sweep gases of 7.529 MMBtu/hr, multiplied by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton.

*The emission factor was determined in accordance with AP-42, Table 1.4-2 (7/98).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

b. Emission Limitation:

18.80 ton VOC per rolling, 12-month period from the flare's pilot and sweep gases



Applicable Compliance Method:

The annual emission limitation above represents the potential to emit [see b)(2)b.] based on an emission factor of 0.57 lb of VOCMMBtu* multiplied by a maximum heat input to the flare's pilot and sweep gases of 7.529 MMBtu/hr, multiplied by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton.

*The emission factor was determined in accordance with AP-42, Table 13.5-2 (12/16).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

c. Emission Limitation:

1.00 ton of NOx/yr during periods of process unit start-up and shutdown

Applicable Compliance Method:

Compliance with the annual NOx emission limitation shall be demonstrated through recordkeeping requirements in section d)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

d. Emission Limitation:

100.00 tons of SO2/yr during periods of process unit start-up and shutdown

Applicable Compliance Method:

Compliance with the annual SO2 emission limitation shall be demonstrated through record keeping requirements in section d)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

e. Emission Limitation:

No visible emissions except for periods not to exceed a total of five minutes during any two consecutive hours

Applicable Compliance Method:

If required, compliance with the no VE limitation above shall be demonstrated based upon the procedures specified in Method 22 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

f. Emission Limitation:

2.24 tons of NOx per rolling, 12-month period from the flare's pilot and sweep gases



Applicable Compliance Method:

The rolling, 12-month limitation above represents the potential to emit [see b)(2)j.] based on an emission factor of 0.068 lb of NO_x/MMBtu* multiplied by a maximum heat input of 7.529 MMBtu/hr from the flare's pilot and sweep gases, multiplied by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton.

*The emission factor was determined in accordance with AP-42, Table 13.5-1 (12/16).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

g. Emission Limitation:

0.02 ton SO₂ per rolling, 12-month period from the flare's pilot and sweep gases

Applicable Compliance Method:

The rolling, 12-month limitation above represents the potential to emit [see b)(2)j.] based on an emission factor of 0.0006 lb of SO₂/MMBtu* multiplied by a maximum heat input of 7.529 MMBtu/hr from the flare's pilot and sweep gases, multiplied by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton.

*The emission factor was determined in accordance with AP-42, Table 1.4-2 (7/98).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

h. Emission Limitation:

10.22 tons CO per rolling, 12-month period from the flare's pilot and sweep gases

Applicable Compliance Method:

The rolling, 12-month limitation above represents the potential to emit [see b)(2)j.] based on an emission factor of 0.31 lb of CO/MMBtu* multiplied by a maximum heat input of 7.529 MMBtu/hr from the flare's pilot and sweep gases, multiplied by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton.

*The emission factor was determined in accordance with AP-42, Table 13.5-2 (12/16).

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

i. Emission Limitation:

CO₂e emissions shall not exceed 3,860.5 tons per rolling, 12-month period from pilot and sweep gas firing only



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Applicable Compliance Method:

The rolling, 12-month limitation above represents the potential to emit [see b)(2)j.] based on an emission factor of 53.06 kg of CO₂/MMBtu* multiplied by a conversion factor of 2.204 lbs/kg, times the maximum heat input of 7.529 MMBtu/hr from the flare's pilot and sweep gases, multiplied by the maximum operating schedule of 8,760 hrs/yr and dividing by 2,000 lbs/ton.

*The emission factor was determined in accordance with 40 CFR, Part 98, Table C-1, natural gas, global warming potential (GWP) from Table A-1.

[OAC rule 3745-77-07(C)(1) and PTI No. P0123731]

- (2) The permittee shall comply with the applicable testing requirements under 40 CFR, Part 63, Subpart UUU, including the following section:

63.1566(b)(2), Table 18, Option 1	Flare Performance Test Requirements
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart UUU; and PTI No. P0123731]

g) Miscellaneous Requirements

- (1) None.



46. P055, FCC Cooling Tower

Operations, Property and/or Equipment Description:

FCC Cooling Tower [Replacement of P038]

- 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 No. P0126470, issued 7/17/19)	2.52 lbs of particulate emissions (PE)/hr; 11.04 tons of PE per rolling, 12-month period 1.77 lbs of particulate matter less than 10 microns in size (PM10)/hr; 7.73 tons of PM10 per rolling, 12-month period 1.06 lbs of particulate matter less than 2.5 microns in size (PM2.5)/hr; 4.64 tons of PM2.5 per rolling, 12-month period 1.47 lbs of volatile organic compounds (VOC)/hr, 6.44 tons of VOC per rolling, 12-month period See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) (PTI No. P0126470, issued 7/17/19)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM10, PM2.5 and VOC emissions from this air contaminant source since the potential to emit is less than 10 tons per year taking into account the federally enforceable restrictions in b)(1)a. above.
c.	OAC rule 3745-17-11(B)	35.64 lbs PE/hr [See b)(2)b.]
d.	OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.641, this emissions unit meets the definition of a 'heat exchanger' and is subject to the applicable emissions limitations/ control requirements specified in this subpart.]	See b)(2)c., d)(6) and e)(2)
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 –63.15 apply.

(2) Additional Terms and Conditions

- a. The federally-enforceable emissions limitations in b)(1)a. were established to represent the potential to emit (PTE). The federally enforceable emission limitations are based on the operational restrictions contained in c)(1).
- b. The emission limitation established by to this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).

The total dissolved solids (TDS) present in cooling water drift are directly responsible for the formation of PM10 and PM2.5 when the drift is discharged from a cooling tower. The process weight rate (PWR) used to determine the allowable particulate mass emission rate is the total tons of TDS processed per hour through the cooling tower. Based on the maximum TDS concentration for optimum cooling tower operation of 2,878 ppm and the cooling water maximum process flow rate of 35,000 gallons per minute, a PWR of 25.22 tons of TDS per hour was calculated. Using Table 1 in OAC rule 3745-17-11(B), the allowable particulate mass emission rate was determined to be 35.64 lbs/hr.

- c. This emissions unit is subject to the heat exchanger requirements in 40 CFR 63.654.

c) Operational Restrictions

- (1) The following operational restrictions have been included in this permit for the purpose of establishing federally enforceable requirements to represent potential to emit [See b)(2)a.]:
 - a. The use of a high efficiency drift eliminator capable of achieving an outlet drift factor of 0.0005%; and



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- b. The permittee shall not exceed a TDS content of 2,878 ppm in the cooling water for this emissions unit.

[OAC rule 3745-77-07(A)(1) and PTI No. P0126470]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for this emissions unit each month:

- a. The permittee shall test and record the TDS content, in ppm, of the cooling water at least once per month. The TDS content shall be measured using test procedures that conform to regulation 40 CFR, Part 136, "Test Procedures For The Analysis of Pollutants" or an equivalent method approved by the Ohio EPA, Northwest District Office.

[OAC rule 3745-77-07(C)(1) and PTI No. P0126470]

- (2) Each month, the permittee shall calculate and record the PE, in lbs per hr. The PE shall be calculated as follows:

$$[(\text{gallons/minute}) \times (\text{ppm TDS}) \times (0.0002) \times (60 \text{ min/hr}) \times (0.0584)] / (7,000 \text{ grains/lb}) = \text{PE, in lbs/hr}$$

where:

gallons/minute = the maximum or actual water flow rate, as a monthly average basis;

ppm TDS = the TDS level, on a monthly average basis, if more than one measurement is taken in a month;

0.00006 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon; and

7,000 gr/lb = conversion factor for grains to pounds.

[OAC rule 3745-77-07(C)(1) and PTI No. P0126470]

- (3) Each month, the permittee shall calculate and record the PM10, in lbs/hr. The PM10 shall be calculated as follows:

$$[(\text{gallons/minute}) \times (\text{ppm TDS}) \times (0.00006) \times (60 \text{ min/hr}) \times (0.0584)] / (7,000 \text{ grains/lb}) \times 0.70 = \text{PM10, in lbs/hr}$$

where:



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gallons/minute = the maximum or actual water flow rate, as a monthly average basis;

ppm TDS = the TDS level, on a monthly average basis, if more than one measurement is taken in a month;

0.00006 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon;

7,000 gr/lb = conversion factor for grains to pounds; and

0.70 = PM10 is 70 percent of total PE, based on California Emissions Inventory Development and Reporting System

[OAC rule 3745-77-07(C)(1) and PTI No. P0126470]

- (4) Each month, the permittee shall calculate and record the PM2.5, in lbs per hr. The PM2.5 shall be calculated as follows:

$$[(\text{gallons/minute}) \times (\text{ppm TDS}) \times (0.00006) \times (60 \text{ min/hr}) \times (0.0584)] / (7,000 \text{ grains/lb}) \times 0.42 = \text{PM2.5, in lbs/hr}$$

where:

gallons/minute = the maximum or actual water flow rate, as a monthly average basis;

ppm TDS = the TDS level, on a monthly average basis, if more than one measurement is taken in a month;

0.00006 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon;

7,000 gr/lb = conversion factor for grains to pounds; and

0.42 = PM2.5 is 42 percent of total PE, based on California Emissions Inventory Development and Reporting System

[OAC rule 3745-77-07(C)(1) and PTI No. P0126470]

- (5) Each month, the permittee shall calculate and record the rolling, 12-month emissions of PE, PM10 and PM2.5, in tons.

[OAC rule 3745-77-07(C)(1) and PTI No. P0126470]

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- (6) The permittee shall comply with the applicable control requirements, emission limit and compliance demonstration methods under 40 CFR, Part 63, Subpart CC, including the following sections:

63.654(c)(1)	Monitoring requirements to identify leaks of total strippable VOC for the heat exchange system
63.654(c)(3) through c)(6)	Monitoring method for total strippable hydrocarbon concentration (in ppm), frequency and leak action level for existing sources and definition of a leak
63.654(d) through 63.654(g)	Reduce measured concentration of a leak to below applicable level within 45 days, return line monitoring provisions, Delay of Repair
63.655(i)(5)	Retain records for 5 years

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0124670]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation reports that identify all exceedances of the following:

- a. Any exceedances of the TDS content restriction of 2,878 ppm;
- b. Any exceedances of the allowable PE emission limitation;
- c. Any exceedances of the allowable PM10 emission limitation;
- d. Any exceedances of the allowable PM2.5 emission limitation; and
- e. Any exceedances of the allowable VOC emission limitations.

The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0126470]

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.655(e)(2) and 63.655(g)(9)(i) through (g)(9)(iv)	Heat Exchanger Provisions – Periodic Reporting Requirements
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63.655(e)(3) and 63.655(h)(7)	30-day notification prior to changing 63.654(c)(4) monitoring option
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0126470]

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:

35.64 lbs of PE/hr

Applicable Compliance Method:

Compliance shall be demonstrated by the monitoring and record keeping requirements specified in section d)(1) of these terms and conditions.

If required, the permittee shall conduct drift measurement testing to determine the drift factor for this cooling tower utilizing the "Isokinetic Drift Measurement Test Code for Water Cooling Towers", ATC-140(94), June, 1994 (or the most recent edition) from the Cooling Technology Institute.

[OAC rule 3745-77-07(C)(1) and PTI No. P0126470]

b. Emission Limitation:

2.52 lbs PE/hr and 11.04 tons of PE per rolling, 12-month period

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated by the monitoring and record keeping requirements specified in sections d)(1) and d)(2) of these terms and conditions.

If required, the permittee shall conduct drift measurement testing to determine the drift factor for this cooling tower utilizing the "Isokinetic Drift Measurement Test Code for Water Cooling Towers", ATC-140(94), June, 1994 (or the most recent edition) from the Cooling Technology Institute.

The rolling, 12-month emission limitation was established as follows:

$$[(35,000 \text{ gallons/minute}) \times (2,878 \text{ ppm TDS}) \times (0.00005) \times (60 \text{ min/hr}) \times (8,760 \text{ hours/year}) \times (0.0584)] / [(7,000 \text{ grains/lb}) \times (2,000 \text{ lbs/ton})] = \text{PE, in tons per rolling, 12-month period}$$

where:



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35,000 gallons/minute = the maximum water flow rate;

ppm TDS = the TDS level;

0.00005 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon; and

7,000 gr/lb = conversion factor for grains to pounds.

Therefore, provided compliance is shown with the TDS restriction, compliance with the annual limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0126470]

c. Emission Limitation:

1.77 lbs PM10/hr and 7.73 tons of PM10 per rolling, 12-month period

Applicable Compliance Method:

The annual emission limitation was established as follows:

$$[(35,000 \text{ gallons/minute}) \times (2,878 \text{ ppm TDS}) \times (0.00005) \times (60 \text{ min/hr}) \times (8,760 \text{ hours/year}) \times (0.0584)] / [(7,000 \text{ grains/lb}) \times (2,000 \text{ lbs/ton})] = \text{PE, in tons/yr}$$

where:

29,600 gallons/minute = the maximum water flow rate;

ppm TDS = the TDS level;

0.00005 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon; and

7,000 gr/lb = conversion factor for grains to pounds.

Therefore, provided compliance is shown with the TDS restriction, compliance with the annual limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0126470]

d. Emission Limitation:

1.06 lbs PM2.5/hr and 4.64 tons of PM2.5 per rolling, 12-month period



Effective Date: To be entered upon final issuance

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated by the monitoring and record keeping requirements specified in sections d)(1) and d)(4) of these terms and conditions.

If required, the permittee shall conduct drift measurement testing to determine the drift factor for this cooling tower utilizing the "Isokinetic Drift Measurement Test Code for Water Cooling Towers", ATC-140(94), June, 1994 (or the most recent edition) from the Cooling Technology Institute.

The rolling, 12-month emission limitation was established as follows:

$[(35,000 \text{ gallons/minute}) \times (2,878 \text{ ppm TDS}) \times (0.00005) \times (60 \text{ min/hr}) \times (8,760 \text{ hours/year}) \times (0.0584)] / [(7,000 \text{ grains/lb}) \times (2,000 \text{ lbs/ton})] \times 0.42 = \text{PM}_{2.5}$, in tons per rolling, 12-month period

where:

35,000 gallons/minute = the maximum water flow rate;

ppm TDS = the TDS level;

0.00005 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon; and

7,000 gr/lb = conversion factor for grains to pounds.

Therefore, provided compliance is shown with the TDS restriction, compliance with the annual limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P126470]

e. Emission Limitation:

1.47 lbs of VOC/hr and 6.44 tons of VOC per rolling, 12-month period

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly limitation by multiplying the appropriate VOC emission factor of 0.7 pound per million gallons of flow, from AP-42 Table 5.1-3 (dated 4/15), by the maximum flow of 1,776,000 gallons per hour.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.



[OAC rule 3745-77-07(C)(1) and PTI No. P0126470]

f. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0126470]

g) Miscellaneous Requirements

(1) None.

47. Emissions Unit Group - 325 HP diesel engine driven pumps: P057, P058

EU ID	Operations, Property and/or Equipment Description
P057	325 HP diesel engine driven pump (non-emergency) used at the boiler house water treatment plant (serial # RG6090U105392)
P058	325 HP diesel engine driven pump (non-emergency) used at the boiler house water treatment plant (serial # RG6090U105805)

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. and d)(5).

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)(a)(ii) (PTI No. P013174, issued 3/8/22)	Best Available Technology (BAT) requirements do not apply to the nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter less than 10 microns in size (PM10), particulate matter less than 2.5 microns in size (PM2.5) and sulfur dioxide (SO2) emissions from each air contaminant source since the uncontrolled potential to emit for NOx, CO, VOC, PM10, PM2.5 and SO2 are each less than 10 tons per year.
b.	OAC rule 3745-17-11(B)(5)(a)	Particulate emissions (PE) shall not exceed 0.310 lb/MMBtu of actual heat input
c.	OAC rule 3745-17-07(A)(1)	Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule
d.	OAC rule 3745-18-06(G)	See b)(2)a.
e.	OAC rule 3745-110-03(F)(3)	See b)(2)b.
f.	40 CFR, Part 63, Subpart ZZZZ [40 CFR 63.6580 – 63.6675]	See b)(2)c.
g.	40 CFR, Part 1039 40 CFR 1039.101(b) Tier 4 Emissions Standards	The exhaust emissions from each engine shall not exceed:



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[325 HP stationary non-emergency compression ignition (CI) internal combustion engine (ICE) with a displacement less than 30 liters/cylinder, Model Year 2022]	0.40 gram (g) NOx/kilowatt-hour (kW/hr) 3.5 g CO/kW-hr 0.02 g particulate matter (PM)/kW-hr 0.19 g non-methane hydrocarbons (NMHC)/kW-hr See b)(2)d.
h.	40 CFR, Part 60, Subpart IIII [40 CFR 60.4200 – 60.4219] 40 CFR 80.510(c) 40 CFR 89.113	20% opacity during the acceleration mode 15% opacity during the lugging mode 50% opacity during the peaks in either the acceleration or lugging modes See b)(2)e., b)(2)f. and b)(2)g.
i.	40 CFR 60. 1-19 [40 CFR 60.4218]	Table 8 to Subpart IIII of 40 CFR Part 60 – Applicability of General Provisions to Subpart IIII shows which parts of the General Provisions in 40 CFR 60.1-19 apply.
j.	ORC 3704.03(F) OAC rule 3745-114-01	See d)(5).

(2) Additional Terms and Conditions

- a. OAC rule 3745-18-06(B) exempts stationary internal combustion engines which have rated heat input capacities equal to, or less than, 10 MMBtu/hr from the SO₂ emission limit in OAC rule 3745-18-06(G). Each emissions unit has a rated heat input of less than 10 MMBtu/hr.
- b. Pursuant to OAC rule 3745-110-03(J)(3), each emissions unit is not subject to this rule because it has an energy output capacity of less than 2,000 horsepower.
- c. The new compression ignition (CI) reciprocating internal combustion engine(s) (RICE), located at a major source for hazardous air pollutants (HAPs), is subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, Part 63, Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c)(7), the new stationary CI RICE installed on or after 6/12/06, shall meet the requirements of Part 63, Subpart ZZZZ upon startup, through demonstration of compliance with the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines, Part 60, Subpart IIII.

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- d. Each stationary CI ICE has a model year of 2022 and is certified by the engine manufacturer, John Deere, to meet Tier 4 emissions standards. The applicable emissions standards are contained in 40 CFR 1039.101(b).
- e. Pursuant to 40 CFR 60.4206, the permittee shall operate and maintain each stationary CI ICE and any control device to achieve the emissions standards established in 40 CFR 60.4204(b) over the entire life of the engine.
- f. The opacity standards for operation of the engine during acceleration and lugging modes are contained in 40 CFR 89.113(a)(1) through (a)(3).
- g. The diesel fuel burned in each emissions unit shall meet the following specifications identified in 40 CFR 60.4207(b) and found in 40 CFR 80.510(b):
 - i. A maximum sulfur content of 15 ppm; and
 - ii. A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

Compliance with the above-mentioned specifications shall be determined by using the analytical results provided by the permittee or oil supplier for each shipment of oil.

c) **Operational Restrictions**

- (1) The permittee shall burn only diesel fuel in each emissions unit.

[OAC rule 3745-77-07(A)(1) and PTI No. P0131740]

- (2) \]If the stationary CI ICE is equipped with a diesel particulate filter to comply with the emissions standards in 40 CFR 60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the permittee when the high backpressure limit of the engine is approached.

[OAC rule 3745-17-11(B)(5)(a), 40 CFR, Part 60, Subpart IIII, and PTI P0131740]

d) **Monitoring and/or Recordkeeping Requirements**

- (1) For each day during which the permittee burns a fuel other than diesel fuel, the permittee shall maintain a record of the type and quantity of fuel burned in the emissions unit. The permittee shall also maintain documentation of the sulfur content of all fuels burned.

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

- (2) The permittee shall comply with the following requirements identified in 40 CFR 60.4211:
 - a. Each stationary CI ICE and any control device shall be installed, operated, and maintained according to the manufacturer's emission-related written instructions and specifications;

- b. The permittee shall only change those emission-related settings that are allowed by the manufacturer; and
- c. Each stationary CI ICE must also be installed and operated to meet the applicable requirements from 40 CFR, Part 89, Control of Emissions from New and In-use Non-road CI ICE; and Part 1068, the General Compliance Provisions for Engine Programs, as applicable.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart IIII; and PTI No. P0131740]

- (3) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 1039; and PTI No. P0131740]

- (4) Owners and operators of non-emergency stationary CI ICE that have a displacement of greater than or equal to 10 liters per cylinder shall keep records of the following information as required by 40 CFR 60.4214(a)(2):

- a. All notifications submitted to comply with this subpart and all documentation supporting any notification.
- b. Maintenance conducted on the engine.
- c. If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 1039.101(b); and PTI No. P0131740]

- (5) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified PTI prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[PTI No. P0131740]

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than diesel fuel was burned in any emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

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- (2) The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel containing greater than 0.5 weight percent sulfur was burned in any emissions unit. These deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

- (3) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 60, Subpart IIII, 40 CFR 60.4200 to 60.4219.

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

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:

PE shall not exceed 0.310 lb/MMBtu actual heat input

Applicable Compliance Method:

The emission factor found in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.3, Table 3.3-1(10/2006) is equivalent to the emission limitation of 0.310 lb/MMBtu actual heat input for PE. Therefore, provided compliance is shown with the emission factor, compliance with the emission limitation shall also be demonstrated. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

b. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule

Applicable Compliance Method:

If required, compliance with the visible PE limitation above shall be determined in accordance with the methods and procedures in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

c. Emissions Limitations:

The exhaust emissions from this engine shall not exceed:

0.40 g NO_x/kW-hr



3.5 g CO/kW-hr
0.02 g PM/kW-hr
0.19 g NMHC/kW-hr

Applicable Compliance Method:

Compliance with the emissions limitations above shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The g/kW-hr limits are the emissions limitations from 40 CFR 1039.101(b), Tier 4 Emissions Standards for diesel fuel fired engines rated greater than or equal to 130 kW and less than or equal to 560 kW.

If required, the permittee shall demonstrate compliance with the emissions limitations through performance tests conducted in accordance with the provisions in term f)(2) below.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 1039; and PTI No. P0131740]

d. Emissions Limitations:

The exhaust emissions from this engine shall not exceed:

20% opacity during the acceleration mode
15% opacity during the lugging mode
50% opacity during the peaks in either the acceleration or lugging modes

Applicable Compliance Method:

The permittee shall demonstrate compliance with the opacity standards of 40 CFR 89.113 based on the standard certification.

[The stationary CI ICE was certified to the opacity standards of 40 CFR 89.113.]

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60; and PTI No. P0131740]

(2) If it is determined by the Ohio EPA that a compliance demonstration is required through performance testing, it shall be conducted using one of the following test methods or procedures:

- a. In accordance with 40 CFR 60.4212, conduct the exhaust emissions testing using the in-use testing procedures found in 40 CFR Part 1039, Subpart F, measuring the emissions of the regulated pollutants as specified in 40 CFR 1065; or
- b. In accordance with 40 CFR 60.4213, conduct exhaust emissions testing using the test methods identified in Table 7 to Subpart IIII of Part 60.

If demonstrating compliance through the in-use testing procedures in 40 CFR part 1039, Subpart F, exhaust emissions from the stationary CI ICE shall not exceed the "not to exceed" (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112, determined from the following equation:



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NTE requirement for each pollutant = $1.25 \times \text{STD}$

Where:

STD = The standard specified for the pollutant in 40 CFR 89.112.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart IIII]

g) Miscellaneous Requirements

(1) None.

48. P059, West Zeolite Charge Pump

Operations, Property and/or Equipment Description:

580 HP diesel engine driven pump (non-emergency) used at the boiler house water treatment plant (serial # NF501445)

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. and d)(5).

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)(a)(ii) (PTI No. P0131740, issued 3/8/22)	Best Available Technology (BAT) requirements do not apply to the nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter less than 10 microns in size (PM10), particulate matter less than 2.5 microns in size (PM2.5) and sulfur dioxide (SO2) emissions from this air contaminant source since the uncontrolled potential to emit for CO, PM10, and SO2 are each less than 10 tons per year.
b.	OAC rule 3745-17-11(B)(5)(a)	Particulate emissions (PE) shall not exceed 0.310 lb/MMBtu of actual heat input
c.	OAC rule 3745-17-07(A)(1)	Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule
d.	OAC rule 3745-18-06(G)	See b)(2)a.
e.	OAC rule 3745-110-03(F)(3)	See b)(2)b.
f.	40 CFR, Part 63, Subpart ZZZZ [40 CFR 63.6580 – 63.6675]	See b)(2)c.
g.	40 CFR, Part 1039 40 CFR 1039.101(b) Tier 4 Emissions Standards [580 HP stationary non-emergency compression ignition (CI) internal combustion engine (ICE) with a	The exhaust emissions from this engine shall not exceed: 0.40 gram (g) NOx/kilowatt-hour (kW/hr) 3.5 g CO/kW-hr

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	displacement less than 30 liters/cylinder, Model Year 2018]	0.02 g particulate matter (PM)/kW-hr 0.19 g non-methane hydrocarbons (NMHC)/kW-hr See b)(2)d.
h.	40 CFR, Part 60, Subpart IIII [40 CFR 60.4200 – 60.4219] 40 CFR 80.510(c) 40 CFR 89.113	20% opacity during the acceleration mode 15% opacity during the lugging mode 50% opacity during the peaks in either the acceleration or lugging modes See b)(2)e., b)(2)f. and b)(2)g.
i.	40 CFR 60. 1-19 [40 CFR 60.4218]	Table 8 to Subpart IIII of 40 CFR Part 60 – Applicability of General Provisions to Subpart IIII shows which parts of the General Provisions in 40 CFR 60.1-19 apply.
j.	ORC 3704.03(F) OAC rule 3745-114-01	See d)(5)

(2) Additional Terms and Conditions

- a. OAC rule 3745-18-06(B) exempts stationary internal combustion engines which have rated heat input capacities equal to, or less than, 10 MMBtu/hr from the SO₂ emission limit in OAC rule 3745-18-06(G). This emissions unit has a rated heat input of less than 10 MMBtu/hr.
- b. Pursuant to OAC rule 3745-110-03(J)(3), this emissions unit is not subject to this rule because it has an energy output capacity of less than 2,000 horsepower.
- c. The new compression ignition (CI) reciprocating internal combustion engine(s) (RICE), located at a major source for hazardous air pollutants (HAPs), is subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, Part 63, Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c)(7), the new stationary CI RICE installed on or after 6/12/06, shall meet the requirements of Part 63, Subpart ZZZZ upon startup, through demonstration of compliance with the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines, Part 60, Subpart IIII.
- d. The stationary CI ICE has a model year of 2018 and is certified by the engine manufacturer, Caterpillar, to meet Tier 4 emissions standards. The applicable emissions standards are contained in 40 CFR 1039.101(b).

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- e. Pursuant to 40 CFR 60.4206, the permittee shall operate and maintain the stationary CI ICE and any control device to achieve the emissions standards established in 40 CFR 60.4204(b) over the entire life of the engine.
- f. The opacity standards for operation of the engine during acceleration and lugging modes are contained in 40 CFR 89.113(a)(1) through (a)(3).
- g. The diesel fuel burned in this emissions unit shall meet the following specifications identified in 40 CFR 60.4207(b) and found in 40 CFR 80.510(b):
 - i. A maximum sulfur content of 15 ppm; and
 - ii. A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

Compliance with the above-mentioned specifications shall be determined by using the analytical results provided by the permittee or oil supplier for each shipment of oil.

c) **Operational Restrictions**

- (1) The permittee shall burn only diesel fuel in this emissions unit.

[OAC rule 3745-77-07(A)(1) and PTI No. P0131740]

- (2) If the stationary CI ICE is equipped with a diesel particulate filter to comply with the emissions standards in 40 CFR 60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the permittee when the high backpressure limit of the engine is approached.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 60, Subpart IIII; and PTI No. P0131740]

d) **Monitoring and/or Recordkeeping Requirements**

- (1) For each day during which the permittee burns a fuel other than diesel fuel, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit. The permittee shall also maintain documentation of the sulfur content of all fuels burned.

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

- (2) The permittee shall comply with the following requirements identified in 40 CFR 60.4211:
 - a. The stationary CI ICE and any control device shall be installed, operated, and maintained according to the manufacturer's emission-related written instructions and specifications;
 - b. The permittee shall only change those emission-related settings that are allowed by the manufacturer; and
 - c. The stationary CI ICE must also be installed and operated to meet the applicable requirements from 40 CFR, Part 89, Control of Emissions from New and In-use

Non-road CI ICE; and Part 1068, the General Compliance Provisions for Engine Programs, as applicable.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart IIII; and PTI No. P0131740]

- (3) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 1039; and PTI No. P0131740]

- (4) Owners and operators of non-emergency stationary CI ICE that have a displacement of greater than or equal to 10 liters per cylinder shall keep records of the following information as required by 40 CFR 60.4214(a)(2):
- a. All notifications submitted to comply with this subpart and all documentation supporting any notification.
 - b. Maintenance conducted on the engine.
 - c. If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 1039.101(b); and PTI No. P0131740]

- (5) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified PTI prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[PTI No. P0131740]

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than diesel fuel was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel containing greater than 0.5 weight percent sulfur was burned in the emissions unit. These deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

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- (3) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 60, Subpart IIII, 40 CFR 60.4200 to 60.4219.

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

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:

PE shall not exceed 0.310 lb/MMBtu actual heat input

Applicable Compliance Method:

The emission factor found in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.3, Table 3.3-1(10/2006) is equivalent to the emission limitation of 0.310 lb/MMBtu actual heat input for PE. Therefore, provided compliance is shown with the emission factor, compliance with the emission limitation shall also be demonstrated. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

b. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule

Applicable Compliance Method:

If required, compliance with the visible PE limitation above shall be determined in accordance with the methods and procedures in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

c. Emissions Limitations:

The exhaust emissions from this engine shall not exceed:

0.40 g NO_x/kW-hr
3.5 g CO/kW-hr
0.02 g PM/kW-hr
0.19 g NMHC/kW-hr



Applicable Compliance Method:

Compliance with the emissions limitations above shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The g/kW-hr limits are the emissions limitations from 40 CFR 1039.101(b), Tier 4 Emissions Standards for diesel fuel fired engines rated greater than or equal to 130 kW and less than or equal to 560 kW.

If required, the permittee shall demonstrate compliance with the emissions limitations through performance tests conducted in accordance with the provisions in term f)(2) below.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 1039; and PTI No. P0131740]

d. Emissions Limitations:

The exhaust emissions from this engine shall not exceed:

20% opacity during the acceleration mode

15% opacity during the lugging mode

50% opacity during the peaks in either the acceleration or lugging modes

Applicable Compliance Method:

The permittee shall demonstrate compliance with the opacity standards of 40 CFR 89.113 based on the standard certification.

[The stationary CI ICE was certified to the opacity standards of 40 CFR 89.113.]

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60; and PTI No. P0131740]

(2) If it is determined by the Ohio EPA that a compliance demonstration is required through performance testing, it shall be conducted using one of the following test methods or procedures:

a. In accordance with 40 CFR 60.4212, conduct the exhaust emissions testing using the in-use testing procedures found in 40 CFR Part 1039, Subpart F, measuring the emissions of the regulated pollutants as specified in 40 CFR 1065; or

b. In accordance with 40 CFR 60.4213, conduct exhaust emissions testing using the test methods identified in Table 7 to Subpart IIII of Part 60.

If demonstrating compliance through the in-use testing procedures in 40 CFR part 1039, Subpart F, exhaust emissions from the stationary CI ICE shall not exceed the "not to exceed" (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112, determined from the following equation:

$$\text{NTE requirement for each pollutant} = 1.25 \times \text{STD}$$

Where:



STD = The standard specified for the pollutant in 40 CFR 89.112.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart IIII]

g) Miscellaneous Requirements

(1) None.

49. P063, Lime Filter Press Diesel Engine Driven Pump

Operations, Property and/or Equipment Description:

140 HP diesel engine driven pump (non-emergency) used at the advanced wastewater treatment plant (serial # PE4045U116254)

- 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)k. and d)(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.	OAC rule 3745-31-05(A)(3)(a)(ii) (PTI No. P0134272, issued 8/4/23)	Best Available Technology (BAT) requirements do not apply to the nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter less than 10 microns in size (PM10), particulate matter less than 2.5 microns in size (PM2.5) and sulfur dioxide (SO2) emissions from this air contaminant source since the uncontrolled potential to emit are each less than 10 tons per year.
b.	OAC rule 3745-17-11(B)(5)(a)	Particulate emissions (PE) shall not exceed 0.310 lb/MMBtu of actual heat input
c.	OAC rule 3745-17-07(A)(1)	Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
d.	OAC rule 3745-18-06(G)	See b)(2)a.
e.	OAC rule 3745-110-03(F)(3)	See b)(2)b.
f.	40 CFR, Part 63, Subpart ZZZZ [40 CFR 63.6580 – 63.6675]	See b)(2)c.
g.	40 CFR, Part 60, Subpart IIII 40 CFR 60.4204(b) 40 CFR 60.4201(a) Table 1 to 40 CFR 1039.101	The exhaust emissions from this engine shall not exceed: 0.40 gram (g) NOx/kilowatt-hour (kW/hr) 5.0 g CO/kW-hr



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[140 HP stationary non-emergency compression ignition (CI) reciprocating internal combustion engine (RICE) with a displacement less than 10 liters/cylinder, Model Year 2020]	0.02 g particulate matter (PM)/kW-hr 0.19 g non-methane hydrocarbons (NMHC)/kW-hr See b)(2)d. and b)(2)e.
h.	40 CFR 60.4207(b) 40 CFR 1090.305	The sulfur content of the diesel fuel burned in this emissions unit shall not exceed 15 ppm or 0.0015% sulfur by weight. See b)(2)f., c)(2), d)(1), and e)(2)a.
i.	40 CFR 1039.105 (certified by manufacturer)	20% opacity during the acceleration mode 15% opacity during the lugging mode 50% opacity during the peaks in either the acceleration or lugging modes
j.	40 CFR 60.1-19 [40 CFR 60.4218]	Table 8 to Subpart IIII of 40 CFR Part 60 – Applicability of General Provisions to Subpart IIII shows which parts of the General Provisions in 40 CFR 60.1-19 apply.
k.	ORC 3704.03(F) OAC rule 3745-114-01	See d)(3)

(2) Additional Terms and Conditions

- a. OAC rule 3745-18-06(B) exempts stationary internal combustion engines which have rated heat input capacities equal to, or less than, 10 MMBtu/hr from the SO₂ emission limit in OAC rule 3745-18-06(G). This emissions unit has a rated heat input of less than 10 MMBtu/hr.
- b. Pursuant to OAC rule 3745-110-03(K)(3), this emissions unit is not subject to this rule because it has an energy output capacity of less than 500 horsepower.
- c. The new CI RICE, located at a major source for hazardous air pollutants (HAPs), is subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, Part 63, Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c)(7), the new stationary CI RICE installed on or after 6/12/06, shall meet the requirements of Part 63, Subpart ZZZZ upon startup, through demonstration of compliance with the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines, Part 60, Subpart IIII.

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- d. The stationary CI RICE has been or shall be purchased certified by the manufacturer, for its useful life*, to emission standards as stringent as those identified in 40 CFR 60.4201(a) and found in 40 CFR 1039.101(b), Table 1, for engines greater than or equal to 75 horsepower (56 kilowatt) and less than 175 horsepower (130 kilowatt), and to the opacity standards found in 40 CFR 1039.105.

* "Useful life" defined in Miscellaneous Requirements section

- e. Pursuant to 40 CFR 60.4206, the permittee shall operate and maintain the stationary CI RICE and any control device to achieve the emissions standards established in 40 CFR 60.4204(b) over the entire life of the engine.
- f. The quality of the diesel fuel burned in this emissions unit shall meet the following specifications on an "as received" basis:
- i. a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 15 ppm sulfur or 0.0015% sulfur by weight; and
 - ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

Compliance with the above-mentioned specifications shall be determined by using the analytical results provided by the permittee or diesel fuel supplier for each shipment of diesel fuel.

c) Operational Restrictions

- (1) The stationary CI RICE and any control device shall be installed, operated, and maintained according to the manufacturer's emission-related written instructions and the permittee shall only change those emission-related settings that are allowed by the manufacturer. The CI RICE must also be installed and operated to meet the applicable requirements from 40 CFR Part 89, Control of Emissions from New and In-use Non-road CI RICE; 40 CFR 1039, Control of Emissions from New and In-Use Nonroad Compression Ignition Engines; 40 CFR Part 1068, the General Compliance Provisions for Engine Programs; and 40 CFR 1090, Regulation of Fuels, Fuel Additives, and Regulated Blendstocks. The permittee shall operate and maintain the stationary CI RICE to achieve the emissions standards established in 40 CFR 60.4204 over the entire life of the engine(s).

[OAC rule 3745-77-07(A)(1), 40 CFR, Part 60, Subpart IIII, and PTI No. P0134272]

- (2) Diesel fuel burned in the CI, RICE shall not exceed the limit for sulfur as specified by 40 CFR 1090.305, i.e., the maximum sulfur content of diesel fuel shall not exceed 15 ppm or 0.0015% sulfur by weight.

[OAC rule 3745-77-07(A)(1), 40 CFR, Part 60, Subpart IIII, and PTI No. P0134272]

d) Monitoring and/or Recordkeeping Requirements

- (1) For each shipment of diesel fuel received for burning in this emissions unit, the permittee shall maintain records of the total quantity of the diesel fuel received and the diesel fuel supplier's (or permittee's) analyses for sulfur content, in parts per million (40 CFR 1090.305) or percent by weight. The permittee shall perform or require the supplier to perform the analyses for sulfur content in accordance with 40 CFR 1090.1310, using the appropriate ASTM methods. These records shall be retained for a minimum of 5 years and shall be available for inspection by the Director or his/her representative.

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 60, Subpart IIII, and PTI No. P0134272]

- (2) The permittee shall maintain the manufacturer's certification, that demonstrates compliance with the emission standards in Table 1 of 40 CFR 1039.101 and the opacity standards in 40 CFR 1039.105, on site or at a central location for all facility CI RICE; and the certification shall be made available for review upon request. If the manufacturer's certification is not kept on site, the permittee shall maintain a log for the location of each CI RICE and it shall identify the agency-assigned emissions unit number, the manufacturer's identification number, and the certificate identification number. The manufacturer's operations manual and any written instructions or procedures developed by the permittee and approved by the manufacturer shall be maintained at the same location as the CI RICE.

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 60, Subpart IIII, and PTI No. P0134272]

- (3) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified PTI prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134272]

e) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify exceedances of the following:

- a. Any period of time (date and number of hours) that the quality of diesel fuel burned in this emissions unit did not meet the requirements established in 40 CFR



1090.305, based upon the required fuel records; and the amount of non-compliant fuel burned on each such occasion.

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

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:

PE shall not exceed 0.310 lb/MMBtu actual heat input

Applicable Compliance Method:

The emission factor found in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.3, Table 3.3-1(10/2006) is equivalent to the emission limitation of 0.310 lb/MMBtu actual heat input for PE. Therefore, provided compliance is shown with the emission factor, compliance with the emission limitation shall also be demonstrated. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

b. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitation above shall be determined in accordance with the methods and procedures in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0131740]

c. Emissions Limitations:

The exhaust emissions from this engine shall not exceed:

- 0.40 g NO_x/kW-hr
- 5.0 g CO/kW-hr
- 0.02 g PM/kW-hr
- 0.19 g NMHC/kW-hr



Applicable Compliance Method:

Compliance with the emissions limitations above shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The g/kW-hr limitations are the emissions limitations from Table 1 of 40 CFR 1039.101(b), Tier 4 Emissions Standards for diesel fuel fired engines rated greater than or equal to 56 kW and less than or equal to 130 kW.

If required, the permittee shall demonstrate compliance with the emissions limitations through performance tests conducted in accordance with the provisions in term f)(2) below.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 1039; and PTI No. P0131740]

d. Emissions Limitations:

The exhaust emissions from this engine shall not exceed:

20% opacity during the acceleration mode

15% opacity during the lugging mode

50% opacity during the peaks in either the acceleration or lugging modes

Applicable Compliance Method:

The CI RICE shall be purchased certified to the opacity standards of 40 CFR 1039.105.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60; and PTI No. P0131740]

(2) If it is determined by the Ohio EPA that a compliance demonstration is required through performance testing, it shall be conducted using one of the following test methods or procedures:

a. In accordance with 40 CFR 60.4212, conduct the exhaust emissions testing using the in-use testing procedures found in 40 CFR Part 1039, Subpart F, measuring the emissions of the regulated pollutants as specified in 40 CFR 1065; or

b. In accordance with 40 CFR 60.4212, conduct exhaust emissions testing using the test methods identified in Subpart IIII of 40 CFR Part 60.

If demonstrating compliance through the in-use testing procedures in 40 CFR Part 1039, Subpart F, exhaust emissions from the stationary CI RICE shall not exceed the "not to exceed" (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 1039.101, determined from the following equation:

NTE requirement for each pollutant = 1.25 x STD

Where:

STD = The standard specified for the pollutant in 40 CFR 1039.101.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart IIII]

g) Miscellaneous Requirements

- (1) *Useful life* means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for useful life for stationary CI RICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for useful life for stationary CI RICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart IIII]



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50. P801, Sewers

Operations, Property and/or Equipment Description:

Central, North, South Refinery Sewers

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 operations(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. 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.	None	None

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) None.

e) Reporting Requirements

(1) None.

f) Testing Requirements

(1) None.

g) Miscellaneous Requirements

(1) None.

51. P803, Piping Components

Operations, Property and/or Equipment Description:

Leak Detection and Repair (LDAR) Piping Components, connectors, flanges, pumps, compressors, valves, open ended lines and other affected equipment not associated with an existing 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) (PTI No. P0124354, issued 5/3/18)	See b)(2)b.
b.	OAC rule 3745-21-09(T)	Leaks from piping components [See b)(2)c. and Facility-Wide Term and Condition B.2]
d.	40 CFR, Part 60, Subpart GGGa [40 CFR 60.590a – 60.593a]	Leaks from piping components [See b)(2)c. and Facility-Wide Term and Condition B.2]
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source since the fugitive leak emissions are associated with petroleum refining process units' subject to this rule]	Leaks from piping components [See b)(2)c. and Facility-Wide Term and Condition B.2]

(2) Additional Terms and Conditions

a. Emissions unit P803 was part of a project addressed by PTI P0110510, issued November 21, 2012 to allow for the continued operation of refinery processes while maintenance was performed on facility heat exchangers to restore lost utilization ("heat exchanger utilization project"). PTI P0110510 established monitoring and recordkeeping requirements to ensure the project did not exceed any Prevention of Significant Deterioration thresholds. The monitoring and recordkeeping



requirement were reestablished as part of permit modification PTI P0118429, issued February 15, 2018 to allow for the update and replacement of existing LDAR components and the addition of new LDAR components part of the isocracker rebuild project.

The heat exchanger utilization project was never completed. As such, this PTI (PTI P0124354) is being issued as an administrative modification to remove the monitoring and recordkeeping requirements initially established in PTI P0110510 and included in PTI P0118429.

- b. The Best Available Technology (BAT) requirements for this emission unit have been determined to be equivalent to the requirements of 40 CFR, Part 63, Subpart CC.
- c. This emissions unit is subject to the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of OAC rule 3745-21-09(T) – Leaks from petroleum refinery equipment; 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); and 40 CFR, Part 63, Subpart CC (Petroleum Refinery MACT Standards).

The requirements of these rules are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to OAC rule 3745-21-09(T)(4) and 40 CFR, Part 63, Subpart CC. Terms and conditions for the alternative LDAR plan are listed in section B.2 of the Facility-Wide Terms and Conditions of the facility's Title V renewal permit which became effective on February 1, 2012.

- c) Operational Restrictions
 - (1) None.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) None.
- e) Reporting Requirements
 - (1) None.
- f) Testing Requirements
 - (1) None.
- g) Miscellaneous Requirements
 - (1) None.

52. T009, Tank 216

Operations, Property and/or Equipment Description:

above ground, internal floating roof organic liquids storage tank No. 216, with a capacity of 79,800 gallons (group 1 storage vessel)

- 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 operations(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. 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., b)(2)b., and d)(1)
b.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)f., d)(4) and e)(2)
c.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
d.	Storage Tank Emission Reduction Partnership Program – 65 Federal Register 19891 (April 13, 2000)	See b)(2)e. and d)(2)
e.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358] [In accordance with 40 CFR 61.340, this emissions unit is an affected source, since the storage tank includes a Group 1 wastewater stream per 40 CFR, Part 63, Subpart CC, with benzene containing waste.]	See b)(2)c., b)(2)d., d)(3) and e)(1)
f.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
g.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671]	See b)(2)b. and b)(2)c.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 40 CFR 63.640, this emissions unit is an affected source, since the storage tank includes a Group 1 wastewater stream, with benzene containing waste.]	
h.	40 CFR, Part 63, Subpart A [40 CFR 63.1 – 63.15]	<p>Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.</p> <p>Table 1A to 40 CFR, Part 63, Subpart G – Applicability of General Provisions to Subpart G shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.</p>

(2) Additional Terms and Conditions

- a. The fixed roof storage tank shall be equipped with an internal floating roof.
- b. 40 CFR, Part 63, Subpart CC regulations overlap with those of OAC rule 3745-21-09(L).
- c. Except as provided in paragraph (b) of 40 CFR 63.647, each permittee of a Group 1 wastewater stream shall comply with the requirements of 40 CFR 61.340 through 61.355 of 40 CFR, Part 61, Subpart FF for each process wastewater stream that meets the definition in 40 CFR 63.641. [40 CFR 63.647(a)]
- d. The permittee shall comply with the applicable internal floating roof storage vessel provisions under 40 CFR, Part 61, Subpart FF, including the following section:

61.351(a)	Alternative Standards for Tanks
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- e. In accordance with the Storage Tank Emission Reduction Partnership Program (STERPP) agreement executed by the United States Environmental Protection Agency (U.S. EPA) on February 2, 2001, the permittee installed a pole sleeve system on the slotted guidepole of this emissions unit on December 21, 2001.

The pole sleeve system shall meet the following requirements:

- i. Each opening through the deck of the floating roof for a slotted guidepole shall be equipped with a deck cover, a pole wiper and a pole sleeve.



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- ii. The deck cover shall be equipped with a gasket between the cover and the deck.
- iii. The sleeve shall extend into the stored liquid.
- f. The permittee shall comply with the applicable internal floating roof storage vessel provisions under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.112b(a)(1)(i)	through	Standards for VOC: Internal Floating Roof Must Rest on Liquid Surface, Closure Devices, Openings Must be Below Liquid Surface and Have Cover, Vents Must be Gasketed and Only Open When Roof not Floating, Ladder Must Have Fabric Sleeve, Vents Must be Gasketed and Closed, Rim Vents Must Have Gasket, Supports Columns Must Have Fabric Sleeve
60.112b(a)(1)(ix)		

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; and
 - 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 pound per square inch absolute.

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

- (2) In accordance with the STERPP agreement, the permittee shall meet the following:
 - a. The sliding cover shall be in place over the slotted-guidepole opening through the floating roof at all times except when the sliding cover must be removed for access.
 - b. If the control technology used includes a guidepole float, the float shall be floating within the guidepole at all times except when it must be removed for access to the stored liquid or when the tank is empty.
 - c. Visually inspect the deck fitting for the slotted guidepole at least once every 10 years and each time the vessel is emptied and degassed.
 - d. If the slotted guidepole deck fitting or control devices have defects, or if a gap of more than 0.32 centimeters (1/8 inch) exists between any gasket required for control of the slotted guidepole deck fitting and any surface that it is intended to

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seal, such items shall be repaired before filling or refilling the storage vessel with regulated material.

- e. Tanks taken out of hydrocarbon service, for any reason, do not have to have any controls in place during the time they are out of service.

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

- (3) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.356(a)	Maintain Records for On-Site for Two Years
61.356(k)	Comply with the Recordkeeping Requirements in 40 CFR 60.115b

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]

- (4) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(a)(1) through 60.113b(a)(4)	Internal Floating Roof Visual Inspections, Seal Inspections, Emptying and Degassing Requirements
60.116b(a) through 60.116b(c)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
60.116b(e)(1) through 60.116b(e)(3)	Monitoring of Operations: Determination of Temperature and Vapor Pressure of Product Stored

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

e) Reporting Requirements

- (1) The permittee shall comply with the reporting requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.357(e)	Reporting Requirements – Notification of Alternative Standard
61.357(f)	Reporting Requirements – Comply with 60.115b

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]



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- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(a)(5)	Internal Floating Roof: 30 Day Notification for Filling or Refilling
60.115b(a)(3) and 60.115b(a)(4)	Internal Floating Roof: Report Within 30 Days for Records of Inspection Defects and Repairs

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

- f) Testing Requirements
- (1) None.
- g) Miscellaneous Requirements
- (1) None.

53. T011, Tank 84

Operations, Property and/or Equipment Description:

above ground, fixed roof organic liquids storage tank No. 84 with a capacity of 88,128 gallons (tank storing group 1 wastewater)

- 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 operations(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. 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.
b.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358] [In accordance with 40 CFR 61.340, this emissions unit is an affected source, since the storage tank includes a Group 1 wastewater stream per 40 CFR, Part 63, Subpart CC, with benzene containing waste.]	See b)(2)b. through b)(2)d., d)(1) through d)(3), e)(1)
c.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
d.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source, since the storage tank includes a Group 1 wastewater stream, with benzene containing waste.]	See e)(2)
e.	40 CFR, Part 63, Subpart DD [40 CFR 63.680 – 63.698]	See b)(2)d.
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.



(2) Additional Terms and Conditions

- a. The requirements of this rule are less stringent than the requirements proposed to demonstrate compliance with 40 CFR, Part 61, Subpart FF. Compliance with the requirements of this rule is demonstrated by compliance with the requirements of 40 CFR, Part 61, Subpart FF.
- b. Except as provided in paragraph (b) of 40 CFR 63.647, each permittee of a Group 1 wastewater stream shall comply with the requirements of 40 CFR 61.340 through 61.355 of 40 CFR, Part 61, Subpart FF for each process wastewater stream that meets the definition in 40 CFR 63.641. [40 CFR 63.647(a)]

Compliance with this requirement is demonstrated by routing emissions to the closed NESHAP sewer (emissions unit P025), whose emissions are routed to the existing sulfur recovery unit fuel gas amine treater (“Compressor System”)

During all times when the vent from this emissions unit is routed to the Compressor System used to compress vapors from emissions unit P025, the gaseous stream is exempt from 40 CFR, Part 61, Subpart FF, per 40 CFR 61.340(d). In accordance with 40 CFR 61.340(d) during these times, no testing, monitoring, recordkeeping or reporting is required under this subpart for the vent stream from this emissions unit.

- c. The permittee shall comply with the applicable restrictions required under 40 CFR 61, Subpart FF, including the following sections:

61.343(a)(1)	Tank Requirements: Install a Fixed-Roof and Closed-Vent System to Route All Organic Vapors from Tank Waste Stream (Including Dewatering) to Compressor System
61.343(a)(1)(i)(A)	Fixed Roof Tank Requirements: Design Cover and All Openings to Operate with No Detectable Emissions (Less Than 500 ppmv)
61.343(a)(1)(i)(B)	Fixed Roof Tank Requirements: Openings Closed at All Times Except for Sampling, Inspections, Maintenance or Repair and Exemptions Listed in 61.343(a)(1)(i)(C)
61.343(d)	Tank Requirements: First Attempt at Repair within 45 Days
61.350	Delay of Repairs

- d. An off-site material management unit is exempted from the requirements in 40 CFR 63.683(b)(1) when the permittee meets one of the exemptions provided in



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paragraphs 63.683(b)(2)(i) through (b)(2)(iv) of this section as applicable to the unit. An off-site material management unit is exempted from the requirements in paragraph (b)(1) of this section if the off-site material management unit is also subject to another subpart under 40 CFR, Part 61 or 40 CFR, Part 63, and the permittee is controlling the HAPs listed in Table 1 of this subpart that are emitted from the unit in compliance with the provisions specified in the other applicable subpart under Part 61 or Part 63.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.343(c)	Tank Requirements: Quarterly Visual Inspections of Fixed Roof, Seal, Access Door and Other Openings
61.356(g)	Recordkeeping: Maintain Records of Visual Inspections That Detected a Problem
61.356(h)	Recordkeeping: Test Results of No Detectable Emissions

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]

e) Reporting Requirements

- (1) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.357(d)(6)	Quarterly Reports – Include Statement Certifying Required Inspection were Performed
61.357(d)(8)	Annual Report Summarizing Inspections with Detectable Emissions

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]

- (2) Each permittee subject to the wastewater provisions in 40 CFR 63.647 shall comply with the record keeping and reporting provisions in 40 CFR 61.356 and 61.357 of 40 CFR, Part 61, Subpart FF unless they are complying with the wastewater provisions specified in paragraph (o)(2)(ii) of 40 CFR 63.640. There are no additional reporting and record keeping requirements for wastewater under 40 CFR, Part 63, Subpart CC unless a wastewater stream is included in an emissions average. Record keeping and reporting for

emissions averages are specified in 40 CFR 63.653 and in paragraphs 40 CFR 63.655(f)(5) and (g)(8) of this section. [40 CFR 63.655(a)]

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

f) Testing Requirements

(1) The permittee shall conduct an annual test of the cover and all openings for no detectable emissions (less than 500 ppmv) using the following test methods and procedures:

a. The permittee shall test equipment for compliance with no detectable emissions as required in 40 CFR 61.343 of this subpart in accordance with the following requirements:

- i. Monitoring shall comply with Method 21 from Appendix A of 40 CFR, Part 60.
- ii. The detection instrument shall meet the performance criteria of Method 21.
- iii. The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21.
- iv. Calibration gases shall be:
 - (a) Zero air (less than 10 ppm of hydrocarbon in air); and
 - (b) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.
- v. The background level shall be determined as set forth in Method 21
- vi. The instrument probe shall be traversed around all potential leak interfaces as close as possible to the interface as described in Method 21.
- vii. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared to 500 ppm for determining compliance.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]

g) Miscellaneous Requirements

(1) None.

54. T220, Tank 77

Above ground, internal floating roof organic liquids storage tank No. 77 with a capacity of 79,800 gallons (tank storing group 1 wastewater)

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 operations(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. 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. through b)(2)d., d)(1) and e)(4)
b.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, these emissions units are affected sources consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)h., d)(3) and e)(2)
c.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
d.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358] [In accordance with 40 CFR 61.340, these emissions units are affected sources, since the storage tanks include a Group 1 wastewater stream per 40 CFR, Part 63, Subpart CC, with benzene containing waste.]	See b)(2)f., b)(2)g., d)(2) and e)(1)
e.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
f.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, these emissions units are affected sources, since the storage tanks include a Group 1 wastewater	See b)(2)f. and e)(3)



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	stream, with benzene containing waste.]	
g.	40 CFR, Part 63, Subpart DD [40 CFR 63.680 – 63.698]	See b)(2)i.
h.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 11.1 psia.
- b. The fixed roof storage tank shall be equipped with an internal floating roof.
- c. The automatic bleeder vents shall be closed at all times, except when the roof is floated off or landed on the roof leg supports; and the rim vents, if provided, shall be set to open when the roof is being floated off the roof leg supports or is at the manufacturer's recommended setting.
- d. All openings, except stub drains, shall be equipped with a cover, seal or lid, which is in the closed position at all times, except when in actual use for tank gauging or sampling.
- e. As an alternative to the standards for tanks specified in 40 CFR 61.343 of this subpart, the permittee has elected to comply with the following:
 - i. A fixed roof and internal floating roof meeting the requirements in 40 CFR 60.112b(a)(1);

If the permittee elects to comply with the provisions of 40 CFR 61.351(b), then the permittee is exempt from the provisions of 40 CFR 61.343 of this subpart applicable to the same facilities.

- f. Except as provided in paragraph (b) of 40 CFR 63.647, each permittee of a Group 1 wastewater stream shall comply with the requirements of 40 CFR 61.340 through 61.355 of 40 CFR, Part 61, Subpart FF for each process wastewater stream that meets the definition in 40 CFR 63.641. [40 CFR 63.647(a)]
- g. The permittee shall comply with the applicable internal floating roof storage vessel provisions under 40 CFR, Part 61, Subpart FF, including the following section:

61.351(a)	Alternative Standards for Tanks
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- h. Since the permittee has elected to comply with tank roof requirements as shown in section b)(2)e. for this emissions unit, this emissions unit is subject to NSPS standards in 40 CFR, Part 60, Subpart Kb.

The permittee shall comply with the applicable internal floating roof storage vessel provisions under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.112b(a)(1)(i) 60.112b(a)(1)(ix)	through	Standards for VOC: Internal Floating Roof Must Rest on Liquid Surface, Closure Devices, Openings Must be Below Liquid Surface and Have Cover, Vents Must be Gasketed and Only Open When Roof not Floating, Ladder Must Have Fabric Sleeve, Vents Must be Gasketed and Closed, Rim Vents Must Have Gasket, Supports Columns Must Have Fabric Sleeve
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- i. An off-site material management unit is exempted from the requirements in 40 CFR 63.683(b)(1) when the permittee meets one of the exemptions provided in paragraphs 63.683(b)(2)(i) through (b)(2)(iv) of this section as applicable to the unit. An off-site material management unit is exempted from the requirements in paragraph (b)(1) of this section if the off-site material management unit is also subject to another subpart under 40 CFR, Part 61 or 40 CFR, Part 63, and the permittee is controlling the HAPs listed in Table 1 of this subpart that are emitted from the unit in compliance with the provisions specified in the other applicable subpart under Part 61 or Part 63.

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; and
 - 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 pound per square inch absolute.

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

- (2) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

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61.356(a)	Maintain Records for On-Site for Two Years
61.356(k)	Comply with the Recordkeeping Requirements in 40 CFR 60.115b

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]

- (3) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(a)(1) through 60.113b(a)(4)	Internal Floating Roof Visual Inspections, Seal Inspections, Emptying and Degassing Requirements
60.116b(a) through 60.116b(c)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
60.116b(e)(1) through 60.116b(e)(3)	Monitoring of Operations: Determination of Temperature and Vapor Pressure of Product Stored

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

e) Reporting Requirements

- (1) The permittee shall comply with the reporting requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.357(e)	Reporting Requirements – Notification of Alternative Standard
61.357(f)	Reporting Requirements – Comply with 60.115b

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(a)(5)	Internal Floating Roof: 30 Day Notification for Filling or Refilling
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60.115b(a)(3) and 60.115b(a)(4)	Internal Floating Roof: Report Within 30 Days for Records of Inspection Defects and Repairs
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[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

- (3) Each permittee subject to the wastewater provisions in 40 CFR 63.647 shall comply with the record keeping and reporting provisions in 40 CFR 61.356 and 61.357 unless they are complying with the wastewater provisions specified in paragraph (o)(2)(ii) of 40 CFR 63.640. There are no additional reporting and record keeping requirements for wastewater under this subpart unless a wastewater stream is included in an emissions average. Record keeping and reporting for emissions averages are specified in 40 CFR 63.653 and in paragraphs (f)(5) and (g)(8) of this section.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

- (4) If the permittee places, stores, or holds in the internal floating roof tank any petroleum liquid with a true vapor pressure which is greater than 11.1 pounds per square inch absolute, and such tank does not comply with the requirements of OAC rule 3745-21-09(L), the permittee shall so notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

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

f) Testing Requirements

- (1) None.

g) Miscellaneous Requirements

- (1) None.

55. Emissions Unit Group – External Floating Roof Group 1 Vessels subject to 40 CFR, Part 63, Subpart CC: T017, T021, T025, T028, T029, T034, T037, T039, T042, T043, T044, T049, T205, T206, T207, T208

EU ID	Operations, Property and/or Equipment Description
T017	above ground, external floating roof organic liquids storage tank No. 96 with a capacity of 1,381,844 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T021	above ground, external floating roof organic liquids storage tank No. 202 with a capacity of 2,284,273 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T025	above ground, external floating roof organic liquids storage tank No. 206 with a capacity of 2,284,273 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T028	above ground, external floating roof organic liquids storage tank No. 209 with a capacity of 2,284,273 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T029	above ground, external floating roof organic liquids storage tank No. 210 with a capacity of 4,060,929 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T034	above ground, external floating roof organic liquids storage tank No. 220 with a capacity of 3,412,308 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T037	above ground, external floating roof organic liquids storage tank No. 227 with a capacity of 4,060,929 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T039	above ground, external floating roof organic liquids storage tank No. 231 with a capacity of 3,412,308 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T042	above ground, external floating roof organic liquids storage tank No. 239 with a capacity of 4,275,820 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T043	above ground, external floating roof organic liquids storage tank No. 244 with a capacity of 4,060,929 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T044	above ground, external floating roof organic liquids storage tank No. 245 with a capacity of 4,060,929 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T049	above ground, external floating roof organic liquids storage tank No. 223 with a capacity of 4,060,929 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T205	above ground, external floating roof petroleum liquids storage tank No. 320 with a capacity of 13,649,234 gallons (welded shell construction, liquid-mounted, resilient foam-filled primary seal, rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T206	above ground, external floating roof petroleum liquids storage tank No. 321 with a capacity of 13,649,234 gallons (welded shell construction, mechanical shoe primary seal, rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)

EU ID	Operations, Property and/or Equipment Description
T207	above ground, external floating roof petroleum liquids storage tank No. 322 with a capacity of 13,649,234 gallons (welded shell construction, liquid-mounted, resilient foam-filled primary seal, rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T208	above ground, external floating roof petroleum liquids storage tank No. 323 with a capacity of 13,649,234 gallons (welded shell construction, mechanical shoe primary seal, rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)

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 operations(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. 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. through b)(2)g., d)(1), d)(2), and e)(1)
b.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, these emissions units are affected sources consisting of storage vessels associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)h., d)(3) and e)(2)
c.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. Any welded external floating roof storage tank equipped with a liquid-mounted primary seal and rim-mounted secondary seal, a mechanical shoe primary seal and a rim-mounted secondary seal, a mechanical shoe primary seal and a shoe-mounted, secondary seal, and the shoe-mounted secondary seal was installed

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prior to 1/10/81, a vapor-mounted primary seal and a rim-mounted secondary seal, and the vapor-mounted primary seal was installed prior to 1/01/81, or a flexible wiper primary seal and a rim-mounted secondary seal, and the flexible wiper primary seal was installed prior to 1/01/81 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 Ohio EPA, Northwest District Office within 30 days after the change occurs.

- b. 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.
 - ii. A projection into the tank below the liquid surface.
- c. 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.
- d. 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.
- e. 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.
- f. Any stub drain shall be equipped with a projection into the tank below the liquid surface.
- g. 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.
- h. This emissions unit is subject to MACT standards in 40 CFR, Part 63, Subpart CC.

The permittee shall comply with the applicable external floating roof storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following sections:



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63.646(a)	Comply with 40 CFR 63.119 through 63.121 except as provided in 40 CFR 63.646(b) through (l)
63.646(b)(1) and (2)	Storage Vessel Provisions – Determination of HAP Weight Percent
63.646(c)	Storage Vessel Provisions – Non-applicable Paragraphs
63.646(d)	Storage Vessel Provisions – Replacement Language for Schedule and Compliance Dates
63.646(e)	Storage Vessel Provisions – Compliance for Gaskets, Slotted Membranes and Sleeve Seals Not Applicable
63.646(f)(1) through 63.646(f)(3)	Storage Vessel Provisions – Group 1 Storage Vessel Requirements

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The seal and seal fabric shall be inspected annually for visible holes, tears, or other openings.

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

(2) The permittee shall maintain records of the following information:

- a. the dates and results of any seal and seal fabric inspections and any seal gap measurements;
- b. the types of petroleum liquids stored in the tank;
- c. the annual throughput of any petroleum liquid stored in the tank; and
- d. 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 pound per square inch absolute.

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

(3) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(g)	Storage Vessel Provisions – Violation if Fail to Perform Inspections and Monitoring
63.655(i)(1)	Storage Vessel Provisions – Recordkeeping Requirements

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

e) Reporting Requirements

- (1) The permittee shall notify the Director (Ohio EPA, Northwest District Office) within 30 days of any seal and seal fabric inspection or any seal gap measurement which documents a violation of the applicable control equipment requirements. The notification shall also describe the corrective actions which have been or will be taken to achieve compliance.

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

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(l) and 63.655(h)(2)(i)(C) and 63.655(h)(2)(ii)	Storage Vessel Provisions – Waiver of Notification Requirements
63.655(e)(1), 63.655(f)(1)(i)(A)(1) through 63.655(f)(1)(i)(A)(3), 63.655(f)(6)	Storage Vessel Provisions – Notification of Compliance Status
63.655(e)(2), 63.655(g)(1), 63.655(g)(3)(i)(A) through 63.655(g)(3)(i)(C) and 63.655(g)(3)(ii)	Storage Vessel Provisions – Periodic Reporting Requirements and Request for Reporting Extension
63.655(e)(3), 63.655(h)(2)(i), 63.655(h)(2)(i)(A), 63.655(h)(2)(i)(B)	Storage Vessel Provisions – Reporting per Subpart A for Tank Refill Notifications and Unplanned Inspection Exceptions
63.655(h)(2)(ii)	Storage Vessel Provisions – Notification of Seal Gap Measurements
63.655(h)(6)(ii)	Storage Vessel Provisions – Notification of Variation in Use of Any Storage Vessel

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

f) Testing Requirements

- (1) None.



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g) Miscellaneous Requirements

- (1) None.

56. T020, Tank 100201

Operations, Property and/or Equipment Description:

Above ground, external floating roof organic liquids storage tank No. 100201 with a capacity of 2,284,273 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)

- 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 No. P0134346, issued 8/3/23)	BAT requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the volatile organic compound (VOC) emissions from this air contaminant source since the potential to emit is less than 10 tons per year, taking into account the federally enforceable requirement to employ an external floating roof under OAC rule 3745-21-09(Z) and 40 CFR, Part 60, Subpart Kb. See b)(2)a.
b.	OAC rule 3745-21-09(Z)	See b)(2)b.
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b]	See b)(2)c.
d..	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)c. and b)(2)d.
e.	40 CFR, Part 63, Subpart WW [40 CFR 63.1060 – 63.1067]	See b)(2)d. and b)(2)e.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR, Part 63, Subpart A	Table 6 of Subpart CC of 40 CFR Part 63 – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1-16 apply.

(2) Additional Terms and Conditions

- a. The potential to emit for this emissions unit is 9.70 tons of VOC/year and is based on a maximum annual throughput of 833,723,145 gallons of organic liquid (gasoline) and landing losses calculated in accordance with the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.
- b. The requirements of OAC rule 3745-21-09(Z) are equivalent to or less stringent than the requirements of 40 CFR, Part 63, Subpart CC and 40 CFR, Part 60, Subpart Kb.
- c. This emissions unit is a Group 1 storage vessel as defined in 40 CFR Part 63.641. After the compliance date specified in paragraph (h) of 40 CFR Part 63.640, a Group 1 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 either the requirements of 40 CFR, Part 60, Subpart Kb, except as provided in paragraph (n)(8) of 40 CFR 63.640 or 40 CFR, Part 63, Subpart CC. [40 CFR 63.640(n)(2)]
- d. Each owner or operator of a Group 1 storage vessel subject to 40 CFR, Part 63, Subpart CC shall comply with the requirements of 40 CFR, Part 63, Subpart WW according to the requirements in paragraphs (a) through (i) of 40 CFR 63.660. [40 CFR 63.660]
- e. The permittee shall comply with the applicable control requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1061	Definitions
63.1062	Storage vessel control requirements
63.1063(a)	Floating roof requirements: design requirements
63.1067	Implementation and enforcement

c) Operational Restrictions

- (1) The permittee shall not place, store, or hold in this tank any petroleum liquid which, as stored, has a true vapor pressure greater than or equal to 76.6 Kpa (11.11 psia).

[OAC rule 3745-77-07(A)(1) and PTI No. P0134346]

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- (2) The permittee shall comply with the applicable operational requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1063(b)	Floating roof requirements: operational requirements
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[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart WW; and PTI No. P0134346]

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 period of storage; and
- c. 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.

[OAC rule 3745-77-07(C)(1) and P0134346]

- (2) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR 63, Subpart WW
63.1063(c), (d), (e)	External floating roof inspection frequency, inspection procedures, and repair requirements
63.1065	Recordkeeping requirements for vessel dimensions and capacity, inspection results, and floating roof landings

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart WW; and P0134346]

e) Reporting Requirements

- (1) If the permittee places, stores, or holds in the external floating roof tank any petroleum liquid with a true vapor pressure greater than or equal to 76.6 Kpa (11.11 psia), the permittee shall notify the Director (the Ohio EPA Northwest District Office) within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1) and P0134346]



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- (2) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1066	Notification of initial startup and periodic reports

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart WW; and P0134346]

f) Testing Requirements

- (1) None.

g) Miscellaneous Requirements

- (1) None



57. T023, Tank 204

Operations, Property and/or Equipment Description:

above ground, external floating roof organic liquids storage tank No. 204 with a capacity of 424,482 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)

- 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 operations(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. 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. through b)(2)g., d)(1), d)(4), and e)(1)
b.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)h., d)(5) and e)(2)
d.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply. Table 1A to 40 CFR, Part 63, Subpart G – Applicability of General Provisions to Subpart G shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. Any welded external floating roof storage tank equipped with a liquid-mounted primary seal and rim-mounted secondary seal, a mechanical shoe primary seal and a rim-mounted secondary seal, a mechanical shoe primary seal and a shoe-mounted, secondary seal, and the shoe-mounted secondary seal was installed prior to 1/10/81, a vapor-mounted primary seal and a rim-mounted secondary seal, and the vapor-mounted primary seal was installed prior to 1/01/81, or a flexible wiper primary seal and a rim-mounted secondary seal, and the flexible wiper primary seal was installed prior to 1/01/81 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 Ohio EPA, Northwest District Office within 30 days after the change occurs.

- b. 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.
 - ii. A projection into the tank below the liquid surface.
- c. 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.
- d. 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.
- e. 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.
- f. Any stub drain shall be equipped with a projection into the tank below the liquid surface.
- g. 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.
- h. This emissions unit is subject to MACT standards in 40 CFR, Part 63, Subpart CC.



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The permittee shall comply with the applicable external floating roof storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(a)	Comply with 40 CFR 63.119 through 63.121 except as provided in 40 CFR 63.646(b) through (l)
63.646(b)	Storage Vessel Provisions – Determination of HAP Weight Percent
63.646(c)	Storage Vessel Provisions – Non-applicable Paragraphs
63.646(d)	Storage Vessel Provisions – Replacement Language for Schedule and Compliance Dates
63.646(e)	Storage Vessel Provisions – Compliance for Gaskets, Slotted Membranes and Sleeve Seals Not Applicable
63.646(f)(1) through 63.646(f)(3)	Storage Vessel Provisions – Group 1 Storage Vessel Requirements

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The seal and seal fabric shall be inspected annually for visible holes, tears, or other openings.

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

- (2) The secondary seal gap shall be measured annually in accordance with the methods specified in 40 CFR 63.120(b), which are equivalent to, or more stringent than OAC rule 3745-21-10.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart G]

- (3) The primary seal gap shall be measured at least once every 5 years, in accordance with the methods specified in 40 CFR 63.120(b), which are equivalent to, or more stringent than OAC rule 3745-21-10.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart G]

- (4) The permittee shall maintain records of the following information:



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- a. the dates and results of any seal and seal fabric inspections and any seal gap measurements;
- b. the types of petroleum liquids stored in the tank;
- c. the annual throughput of any petroleum liquid stored in the tank; and
- d. 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 pound per square inch absolute.

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

- (5) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(g)	Storage Vessel Provisions – Violation if Fail to Perform Inspections and Monitoring
63.655(i)(1)	Storage Vessel Provisions – Recordkeeping Requirements

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

- (6) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart G, including the following sections:

63.120(b)(1)(i) through 63.120(b)(1)(iv), 63.120(b)(2) through 63.120(b)(4), 63.120(b)(7), 63.120(b)(8), and 63.120(b)(10)(i)	Storage Vessels Provisions – Procedures to Determine Compliance: Seal Gap Measurements, Visual Inspections and Repair Provisions
63.123(a)	Storage Vessel Provisions – Recordkeeping for Dimensions and Capacity
63.123(d)	Storage Vessel Provisions – Seal Gap Measurement Records

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart G]

e) Reporting Requirements

- (1) The permittee shall notify the Director (Ohio EPA, Northwest District Office) within 30 days of any seal and seal fabric inspection or any seal gap measurement which documents a violation of the applicable control equipment requirements. The notification shall also describe the corrective actions which have been or will be taken to achieve compliance.

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



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- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(l) and 63.655(h)(2)(i)(C)	Storage Vessel Provisions – Waiver of Notification Requirements
63.655(e)(1), 63.655(f)(1)(i)(A)(1) through 63.655(f)(1)(i)(A)(3), 63.655(f)(6)	Storage Vessel Provisions – Notification of Compliance Status
63.655(e)(2), 63.655(g)(3)(i)(A) through 63.655(g)(3)(i)(C) and 63.655(g)(3)(ii)	Storage Vessel Provisions – Periodic Reporting Requirements and Request for Reporting Extension
63.655(e)(3), 63.655(h)(2)(i)(A), 63.655(h)(2)(i)(B)	Storage Vessel Provisions – Reporting per Subpart A for Tank Refill Notifications and Unplanned Inspection Exceptions
63.655(h)(2)(ii)	Storage Vessel Provisions – Notification of Seal Gap Measurements
63.655(h)(6)(ii)	Storage Vessel Provisions – Notification of Variation in Use of Any Storage Vessel

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

- (3) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart G, including the following sections:

63.120(b)(9), 63.120(b)(10)(ii) and 63.120(b)(10)(iii)	Storage Vessel Provisions – Procedures to Determine Compliance: Notification of Gap Measurements and Visual Inspections
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[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart G]

- f) Testing Requirements
 - (1) None.
- g) Miscellaneous Requirements
 - (1) None.

58. T027, Tank 208

Operations, Property and/or Equipment Description:

Above ground, external floating roof organic liquids storage tank No. 208 with a capacity of 2,284,273 gallons (welded shell construction with mechanical shoe primary seal and rim-mounted flexible wiper secondary seal)(group 1 storage vessel)

- 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(F) (PTI No. P0108089, modification issued 5/26/11)	9.72 tons volatile organic compounds (VOC)/yr See b)(2)b. and c)(1)
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01 (PTI No. P0108089, modification issued 5/26/11)	The BAT requirements under OAC rule 3745-31-05 (A)(3)(a) do not apply to the emissions of VOC since the potential to emit, taking into account the voluntary restriction on the gasoline throughput, is less than 10 tons per year.
c.	OAC rule 3745-21-09(Z)	See b)(2)c.
d.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)d., b)(2)e., d)(2) and e)(1)
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining]	See b)(2)f., d)(3) and e)(2)



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	process units, subject to the emission limitations/control measures specified in this section.]	
f.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
g.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. PTI P0108089, issued on 5/26/11 involved reconstruction of the external floating roof and storage tank floor, and replacement of the primary and secondary tank seals with the same types of seals.
- b. The legally and practically enforceable emissions limitations in b)(1)a. were established for the purpose of limiting potential to emit (PTE). The legally and practically enforceable emission limitation is a voluntary restriction established under OAC rule 3745-31-05(F) and is based on the material throughput restriction contained in c)(1):

- i. 9.72 tons VOC/yr.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- c. The storage tank requirements in OAC rule 3745-21-09(Z) are less stringent than the requirements listed in 40 CFR, Part 60, Subpart Kb.
- d. The permittee shall comply with the applicable external floating roof storage vessel provisions under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.112b(a)(2), 60.112b(a)(2)(i), 60.112b(a)(2)(i)(A), 60.112b(a)(2)(i)(B), 60.112b(a)(2)(ii), 60.112b(a)(2)(iii) and 60.113b(b)(6)(i)	Standards for VOC: External Floating Roof, Primary Seal, Secondary Seal, Roof Vents, Filling and Emptying Requirements; and Tank Inspection Procedures
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- e. A Group 1 or 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, except as required in paragraph (n)(8) of 40 CFR 63.640.
- f. This emissions unit is subject to MACT standards in 40 CFR, Part 63, Subpart CC.



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The permittee shall comply with the applicable external floating roof storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(a)	Comply with 40 CFR 63.119 through 63.121 except as provided in 40 CFR 63.646(b) through (l)
63.646(b)	Storage Vessel Provisions – Determination of HAP Weight Percent
63.646(c)	Storage Vessel Provisions – Non-applicable Paragraphs
63.646(d)	Storage Vessel Provisions – Replacement Language for Schedule and Compliance Dates
63.646(e)	Storage Vessel Provisions – Compliance for Gaskets, Slotted Membranes and Sleeve Seals Not Applicable
63.646(f)(1) through 63.646(f)(3)	Storage Vessel Provisions – Group 1 Storage Vessel Requirements

c) Operational Restrictions

(1) The following operation restriction has been included in this permit for the purpose of establishing the following legally and practically enforceable requirements which limit PTE [See b)(2)b.]:

a. The maximum material throughput for this emissions unit shall not exceed 755,769,000 gallons per year.

[OAC rule 3745-77-07(A)(1) and PTI No. P0108089]

(2) The permittee shall not place, store, or hold in this external floating roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 11.1 pounds per square inch absolute (psia).

[OAC rule 3745-77-07(A)(1) and PTI No. P0108089]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the amount (in gallons per month and total gallons, to date for the calendar year) of material throughput for this emission unit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108089]

(2) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:



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60.113b(b)(1), through 60.113b(b)(2)(i) through 60.113b(b)(2)(iii), 60.113b(b)(4)(i) and 60.113b(b)(4)(ii)	60.113b(b)(1)(i) through 60.113b(b)(1)(iii), through 60.113b(b)(3), 60.113b(b)(4)(ii)	External Floating Roof Visual Inspection and Seal Gap Measurement Procedures, Refill if Cease to Store Volatile Organic Liquid for One Year, and Seal Repair Requirements
60.115b(b)(3)		Recordkeeping Requirements for Seal Gap Measurements
60.116b(a) through 60.116b(c)		Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
60.116b(e)(1) through 60.116b(e)(3)		Monitoring of Operations: Determination of Temperature and Vapor Pressure of Product Stored

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb; and PTI No. P0108089]

- (3) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(g)	Storage Vessel Provisions – Violation if Fail to Perform Inspections and Monitoring
63.655(i)(1)	Storage Vessel Provisions – Recordkeeping Requirements

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0108089]

e) Reporting Requirements

- (1) The permittee shall comply with the reporting requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(b)(4)(iii)	Extension Request Procedure for External Floating Roof Failure Detected
60.113b(b)(5)	External Floating Roof – Notification of Seal Gap Measurements
60.113b(b)(6)(ii)	External Floating Roof – Notification for Inspections
60.115b(b)(1)	External Floating Roof – Notification of Control Equipment



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60.115b(b)(2) and 60.115b(b)(4)	External Floating Roof – Reporting of Seal Gap Measurements and Seal Gap Measurement Exceedances
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb; and PTI No. P0108089]

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(l) and 63.655(h)(2)(i)(C)	Storage Vessel Provisions – Waiver of Notification Requirements
63.655(e)(1), 63.655(f)(1)(i)(A)(1) through 63.655(f)(1)(i)(A)(3), 63.655(f)(6)	63.655(f), through Storage Vessel Provisions – Notification of Compliance Status
63.655(e)(2), 63.655(g)(3)(i)(A) through 63.655(g)(3)(i)(C) and 63.655(g)(3)(ii)	63.655(g)(1), through Storage Vessel Provisions – Periodic Reporting Requirements and Request for Reporting Extension
63.655(e)(3), 63.655(h)(2)(i)(A)	63.655(h)(2)(i), Storage Vessel Provisions – Reporting per Subpart A of Startup, Shutdown and Malfunction Plan
63.655(h)(2)(i)(B)	Storage Vessel Provisions – Exceptions for Internal Inspections
63.655(h)(2)(ii)	Storage Vessel Provisions – Notification of Seal Gap Measurements
63.655(h)(6)(ii)	Storage Vessel Provisions – Notification of Variation in Use of Any Storage Vessel

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0108089]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

- a. exceedances of the maximum annual material throughput rate of 755,769,000 gallons.

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0108089]

- f) Testing Requirements

- (1) None.



a. Emission Limitation:

9.72 tons VOC/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108089]

g) Miscellaneous Requirements

(1) None.

59. Emissions Unit Group – External Floating Roof Group 1 Vessels subject to 40 CFR, Part 63, Subpart CC; and Storage Tank Emission Reduction Partnership Program 65 Federal Register 19891 (April 13, 2000): T026, T030, T036, T038, T040

EU ID	Operations, Property and/or Equipment Description
T026	above ground, external floating roof organic liquids storage tank No. 207 with a capacity of 2,284,273 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T030	above ground, external floating roof organic liquids storage tank No. 212 with a capacity of 4,060,929 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T036	above ground, external floating roof organic liquids storage tank No. 226 with a capacity of 4,060,929 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T038	above ground, external floating roof organic liquids storage tank No. 228 with a capacity of 4,060,929 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)
T040	above ground, external floating roof organic liquids storage tank No. 233 with a capacity of 3,412,308 gallons (welded shell construction, mechanical shoe primary seal rim-mounted, flexible wiper secondary seal)(group 1 storage vessel)

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 operations(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. 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. through b)(2)g., d)(1), d)(2), and e)(1)
b.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, these emissions units are affected sources consisting of storage vessels associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)h., d)(3) and e)(2)



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	Storage Tank Emission Reduction Partnership Program 65 Federal Register 19891 (April 13, 2000)	See b)(2)i. and d)(4)
d.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. Any welded external floating roof storage tank equipped with a liquid-mounted primary seal and rim-mounted secondary seal, a mechanical shoe primary seal and a rim-mounted secondary seal, a mechanical shoe primary seal and a shoe-mounted, secondary seal, and the shoe-mounted secondary seal was installed prior to 1/10/81, a vapor-mounted primary seal and a rim-mounted secondary seal, and the vapor-mounted primary seal was installed prior to 1/01/81, or a flexible wiper primary seal and a rim-mounted secondary seal, and the flexible wiper primary seal was installed prior to 1/01/81 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 Ohio EPA, Northwest District Office within 30 days after the change occurs.

b. 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.
- ii. A projection into the tank below the liquid surface.

c. 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.

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- d. 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.
- e. 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.
- f. Any stub drain shall be equipped with a projection into the tank below the liquid surface.
- g. 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.
- h. The permittee shall comply with the applicable external floating roof storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(a)	Comply with 40 CFR 63.119 through 63.121 except as provided in 40 CFR 63.646(b) through (l)
63.646(b)	Storage Vessel Provisions – Determination of HAP Weight Percent
63.646(c)	Storage Vessel Provisions – Non-applicable Paragraphs
63.646(d)	Storage Vessel Provisions – Replacement Language for Schedule and Compliance Dates
63.646(e)	Storage Vessel Provisions – Compliance for Gaskets, Slotted Membranes and Sleeve Seals Not Applicable
63.646(f)(1) through 63.646(f)(3)	Storage Vessel Provisions – Group 1 Storage Vessel Requirements

- i. In accordance with the Storage Tank Emission Reduction Partnership Program (STERPP) agreement executed by the United States Environmental Protection Agency (U.S. EPA) on February 2, 2001, the permittee installed a pole sleeve system on the slotted guidepole of this emissions unit on December 21, 2001.
 - i. The pole sleeve system shall meet the following requirements:
 - ii. Each opening through the deck of the floating roof for a slotted guidepole shall be equipped with a deck cover, a pole wiper and a pole sleeve.
 - iii. The deck cover shall be equipped with a gasket between the cover and the deck.



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iv. The sleeve shall extend into the stored liquid.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The seal and seal fabric shall be inspected annually for visible holes, tears, or other openings.

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

(2) The permittee shall maintain records of the following information:

- a. the dates and results of any seal and seal fabric inspections and any seal gap measurements;
- b. the types of petroleum liquids stored in the tank;
- c. the annual throughput of any petroleum liquid stored in the tank; and
- d. 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 pound per square inch absolute.

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

(3) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(g)	Storage Vessel Provisions – Violation if Fail to Perform Inspections and Monitoring
63.655(i)(1)	Storage Vessel Provisions – Recordkeeping Requirements
63.655(i)(5)	Retain Records for 5 Years

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

(4) In accordance with the STERPP agreement, the permittee shall meet the following:

- a. The sliding cover shall be in place over the slotted-guidepole opening through the floating roof at all times except when the sliding cover must be removed for access.
- b. If the control technology used includes a guidepole float, the float shall be floating within the guidepole at all times except when it must be removed for access to the stored liquid or when the tank is empty.



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- c. Visually inspect the deck fitting for the slotted guidepole at least once every 10 years and each time the vessel is emptied and degassed.
- d. If the slotted guidepole deck fitting or control devices have defects, or if a gap of more than 0.32 centimeters (1/8 inch) exists between any gasket required for control of the slotted guidepole deck fitting and any surface that it is intended to seal, such items shall be repaired before filling or refilling the storage vessel with regulated material.
- e. Tanks taken out of hydrocarbon service, for any reason, do not have to have any controls in place during the time they are out of service.

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

e) Reporting Requirements

- (1) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) within 30 days of any seal and seal fabric inspection or any seal gap measurement which documents a violation of the applicable control equipment requirements. The notification shall also describe the corrective actions which have been or will be taken to achieve compliance.

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

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(l) and 63.655(h)(2)(i)(C)	Storage Vessel Provisions – Waiver of Notification Requirements
63.655(e)(1), 63.655(f)(1)(i)(A)(1) through 63.655(f)(1)(i)(A)(3), 63.655(f)(6)	Storage Vessel Provisions – Notification of Compliance Status
63.655(e)(2), 63.655(g)(3)(i)(A) through 63.655(g)(3)(i)(C) and 63.655(g)(3)(ii)	Storage Vessel Provisions – Periodic Reporting Requirements and Request for Reporting Extension
63.655(e)(3), 63.655(h)(2)(i)(A), 63.655(h)(2)(i)(B)	Storage Vessel Provisions – Reporting per Subpart A for Tank Refill Notifications and Unplanned Inspection Exceptions
63.655(h)(2)(ii)	Storage Vessel Provisions – Notification of Seal Gap Measurements
63.655(h)(6)(ii)	Storage Vessel Provisions – Notification of Variation in Use of Any Storage Vessel

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]



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- f) Testing Requirements
 - (1) None.

- g) Miscellaneous Requirements
 - (1) None.



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60. Emissions Unit Group – Internal Floating Roof Group 1 Vessels subject to 40 CFR, Part 63, Subpart CC: T031, T032, T041

EU ID	Operations, Property and/or Equipment Description
T031	above ground, internal floating roof organic liquids storage tank No. 213 with a capacity of 3,412,308 gallons (group 1 storage vessel)
T032	above ground, internal floating roof organic liquids storage tank No. 214 with a capacity of 3,412,308 gallons (group 1 storage vessel)
T041	above ground, internal floating roof organic liquids storage tank No. 238 with a capacity of 4,060,929 gallons (group 1 storage vessel)

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 operations(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. 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. through b)(2)d., d)(1) and e)(3)
b.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, these emissions units are affected sources consisting of storage vessels associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)e., d)(2) and e)(1)
c.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply. Table 1A to 40 CFR, Part 63, Subpart G – Applicability of General Provisions to Subpart G shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.



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(2) Additional Terms and Conditions

- a. The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 11.1 psia.
- b. The fixed roof storage tank shall be equipped with an internal floating roof.
- c. The automatic bleeder vents shall be closed at all times, except when the roof is floated off or landed on the roof leg supports; and the rim vents, if provided, shall be set to open when the roof is being floated off the roof leg supports or is at the manufacturer's recommended setting.
- d. All openings, except stub drains, shall be equipped with a cover, seal or lid, which is in the closed position at all times, except when in actual use for tank gauging or sampling.
- e. This emissions unit is subject to MACT standards in 40 CFR, Part 63, Subpart CC.

The permittee shall comply with the applicable internal floating roof storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(a)	Comply with 40 CFR 63.119 through 63.121 except as provided in 40 CFR 63.646(b) through (l)
63.646(b)	Storage Vessel Provisions – Determination of HAP Weight Percent
63.646(c)	Storage Vessel Provisions – Non-applicable Paragraphs
63.646(d)	Storage Vessel Provisions – Replacement Language for Schedule and Compliance Dates
63.646(f)(1) through 63.646(f)(3)	Storage Vessel Provisions – Group 1 Storage Vessel Requirements

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; and



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- 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 pound per square inch absolute.

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

- (2) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(g)	Storage Vessel Provisions – Violation if Fail to Perform Inspections and Monitoring
63.655(i)(1)	Storage Vessel Provisions – Recordkeeping Requirements
63.655(i)(5)	Retain Records for 5 Years

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

e) Reporting Requirements

- (1) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(l) and 63.655(h)(2)(i)(C)	Storage Vessel Provisions – Waiver of Notification Requirements
63.655(e)	Storage Vessel Provisions – Reporting Requirements
63.655(e)(1), 63.655(f), 63.655(f)(1)(i)(A) and 63.655(f)(6)	Storage Vessel Provisions – Notification of Compliance Status
63.655(e)(2), 63.655(g)(1), 63.655(g)(2)(i), 63.655(g)(2)(i)(A), 63.655(g)(2)(i)(B) and 63.655(g)(2)(ii)	Storage Vessel Provisions – Periodic Reporting Requirements
63.655(g)(2)(i)(C)	Storage Vessel Provisions – Request for Reporting Extension
63.655(e)(3), 63.655(h)(2)(i), 63.655(h)(2)(i)(A), 63.655(h)(2)(i)(B)	Storage Vessel Provisions – Reporting per Subpart A for Tank Refill Notifications and Unplanned Inspection Exceptions
63.655(h)(6)(ii)	Storage Vessel Provisions – Notification of Variation in Use of Any Storage Vessel

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]



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- (2) If the permittee places, stores, or holds in the internal floating roof tank any petroleum liquid with a true vapor pressure which is greater than 11.1 pounds per square inch absolute, and such tank does not comply with the requirements of OAC rule 3745-21-09(L), the permittee shall so notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

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

f) Testing Requirements

- (1) None.

g) Miscellaneous Requirements

- (1) None.

61. T033, Tank 215

Operations, Property and/or Equipment Description:

Above ground, external floating roof organic liquids storage tank No. 215 with a capacity of 3,412,308 gallons (welded shell construction with mechanical shoe primary seal and rim-mounted flexible wiper secondary seal)(group 1 storage vessel)

- 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 No. P0108126, modification issued 6/2/11)	11.54 tons volatile organic compounds (VOC) per rolling, 12-month period See b)(2)b.
b.	OAC rule 3745-31-05(F) (PTI No. P0108126, modification issued 6/2/11)	See b)(2)c. and c)(1)
c.	OAC rule 3745-21-09(Z)	See b)(2)d.
d.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)e., b)(2)f., d)(2) and e)(1)
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)g., d)(3) and e)(2)



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
g.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. This permit involves reconstruction of the external floating roof and storage tank floor, and replacement of the primary and secondary tank seals with the same types of seals.
- b. The Best Available Technology (BAT) requirements under ORC 3704.03(T) have been determined to be the compliance with the rolling 12-month VOC limitation.
- c. The legally and practically enforceable operational restriction was established for the purpose of limiting potential to emit (PTE). The legally and practically enforceable operational restriction is a voluntary restriction established under OAC rule 3745-31-05(F) and is based on the material throughput restriction contained in c)(1).
- d. The storage tank requirements in OAC rule 3745-21-09(Z) are less stringent than the requirements listed in 40 CFR, Part 60, Subpart Kb.
- e. The permittee shall comply with the applicable external floating roof storage vessel provisions under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.112b(a)(2), 60.112b(a)(2)(i), 60.112b(a)(2)(i)(A), 60.112b(a)(2)(i)(B), 60.112b(a)(2)(ii), 60.112b(a)(2)(iii) and 60.113b(b)(6)(i)	Standards for VOC: External Floating Roof, Primary Seal, Secondary Seal, Roof Vents, Filling and Emptying Requirements; and Tank Inspection Procedures
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- f. A Group 1 or 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, except as required in paragraph (n)(8) of 40 CFR 63.640.
- g. This emissions unit is subject to MACT standards in 40 CFR, Part 63, Subpart CC.

The permittee shall comply with the applicable external floating roof storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following sections:



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63.646(a)	Comply with 40 CFR 63.119 through 63.121 except as provided in 40 CFR 63.646(b) through (l)
63.646(b)	Storage Vessel Provisions – Determination of HAP Weight Percent
63.646(c)	Storage Vessel Provisions – Non-applicable Paragraphs
63.646(d)	Storage Vessel Provisions – Replacement Language for Schedule and Compliance Dates
63.646(e)	Storage Vessel Provisions – Compliance for Gaskets, Slotted Membranes and Sleeve Seals Not Applicable
63.646(f)(1) through 63.646(f)(3)	Storage Vessel Provisions – Group 1 Storage Vessel Requirements

c) Operational Restrictions

(1) The following operation restriction has been included in this permit for the purpose of establishing the following legally and practically enforceable requirements which limit PTE [See b)(2)c.]:

a. The maximum material throughput for this emissions unit shall not exceed 1,106,826,000 gallons per year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108126]

(2) The permittee shall not place, store, or hold in this external floating roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 11.1 pounds per square inch absolute (psia).

[OAC rule 3745-77-07(C)(1) and PTI No. P0108126]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the amount (in gallons per month and total gallons, to date for each rolling, 12-month period) of material throughput for this emission unit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108126]

(2) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

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60.113b(b)(1), 60.113b(b)(1)(i) through 60.113b(b)(1)(iii), 60.113b(b)(2)(i) through 60.113b(b)(2)(iii), 60.113b(b)(3), 60.113b(b)(4)(i) and 60.113b(b)(4)(ii)	External Floating Roof Visual Inspection and Seal Gap Measurement Procedures, Refill if Cease to Store Volatile Organic Liquid for One Year, and Seal Repair Requirements
60.115b(b)(3)	Recordkeeping Requirements for Seal Gap Measurements
60.116b(a) through 60.116b(c)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
60.116b(e)(1) through 60.116b(e)(3)	Monitoring of Operations: Determination of Temperature and Vapor Pressure of Product Stored

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb; and PTI No. P0108126]

- (3) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(g)	Storage Vessel Provisions – Violation if Fail to Perform Inspections and Monitoring
63.655(i)(1)	Storage Vessel Provisions – Recordkeeping Requirements

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0108126]

e) Reporting Requirements

- (1) The permittee shall comply with the reporting requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(b)(4)(iii)	Extension Request Procedure for External Floating Roof Failure Detected
60.113b(b)(5)	External Floating Roof – Notification of Seal Gap Measurements
60.113b(b)(6)(ii)	External Floating Roof – Notification for Inspections
60.115b(b)(1)	External Floating Roof – Notification of Control Equipment



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60.115b(b)(2) and 60.115b(b)(4)	External Floating Roof – Reporting of Seal Gap Measurements and Seal Gap Measurement Exceedances
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb; and PTI No. P0108126]

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(l) and 63.655(h)(2)(i)(C)	Storage Vessel Provisions – Waiver of Notification Requirements
63.655(e)(1), 63.655(f)(1)(i)(A)(1) 63.655(f)(1)(i)(A)(3), 63.655(f)(6)	63.655(f), through Storage Vessel Provisions – Notification of Compliance Status
63.655(e)(2), 63.655(g)(3)(i)(A) 63.655(g)(3)(i)(C) and 63.655(g)(3)(ii)	63.655(g)(1), through Storage Vessel Provisions – Periodic Reporting Requirements and Request for Reporting Extension
63.655(e)(3), 63.655(h)(2)(i)(A)	63.655(h)(2)(i), Storage Vessel Provisions – Reporting per Subpart A of Startup, Shutdown and Malfunction Plan
63.655(h)(2)(i)(B)	Storage Vessel Provisions – Exceptions for Internal Inspections
63.655(h)(2)(ii)	Storage Vessel Provisions – Notification of Seal Gap Measurements
63.655(h)(6)(ii)	Storage Vessel Provisions – Notification of Variation in Use of Any Storage Vessel

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. P0108126]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

- a. exceedances of the rolling, 12-month maximum material throughput rate of 1,106,826,000 gallons.

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0108126]



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:

11.54 tons VOC per rolling, 12-month period

Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108126]

g) Miscellaneous Requirements

(1) None.

62. T045, Tank 248

Operations, Property and/or Equipment Description:

above ground, fixed roof diesel product storage tank No. 248 with a capacity of 4,060,929 gallons storing organic liquid with a vapor pressure less than 0.754 psia [5.20 kPa]

- 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 No. P0115043, issued 8/22/13)	36.1 tons volatile organic compounds (VOC) per rolling, 12-month period See b)(2)a.
b.	ORC rule 3704.03(T) (PTI No. P0115043, issued 8/22/13)	See b)(2)b.
c.	OAC rule 3745-21-09(L)	See b)(2)c.
d.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] 40 CFR 60.116b(a) – (d) [In accordance with 40 CFR 60.110b, these emissions units are affected sources consisting of organic liquids storage tanks, subject to the emission limitations/control measures specified in this section.]	See b)(2)d. and d)(2)
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, these emissions units are affected sources consisting of storage vessels associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)d.



(2) Additional Terms and Conditions

- a. The federally-enforceable emissions limitation in b)(1)a. was established to represent the potential to emit (PTE) for this emissions unit. The federally enforceable emission limitation is based on the operational restriction contained in c)(1).
- b. In accordance with ORC 3704.03(T), Best Available Technology (BAT) requirements for this emission unit have been determined to be compliance with 40 CFR, Part 63, Subpart CC.
- c. The requirements of OAC rule 3745-21-09(L) are equivalent to or less stringent than the requirements of 40 CFR, Part 63, Subpart CC; 40 CFR, and Part 60, Subpart Kb.
- d. This emissions unit is exempt from the control requirements specified in 40 CFR, Part 60, Subpart Kb because the maximum true vapor pressure of the stored organic liquid is less than 5.2 kPa (0.754 psia).

This emissions unit is a Group 2 storage vessel as defined in 40 CFR Part 63.641. 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, except as provided in paragraph (n)(8) of 40 CFR 63.640. [40 CFR 63.640(n)(1)]

c) Operational Restrictions

- (1) The maximum rolling, 12-month quantity of material throughput for this emissions unit is limited by the following equation:

$$\sum_{M=1}^{12} \sum_{i=1}^n [(STE_i) \div 2000] \leq 36.1$$

Where:

M = the increment of the rolling 12-month period

n = the total number of unique petroleum liquids stored in emissions unit T045

STE_i = VOC emissions in pounds from each material i stored, determined by U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(A)(1) and PTI No. P0115043]

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- (2) To ensure federal enforceability during the first 12 calendar months of operation under the provisions of this permit, material throughput for emissions unit T045 is limited by the following:

Maximum Allowable Material Throughput

MONTH(S)	$\left\{ \sum [(STE_i) \div 2000] \right\}$ is less than or equal to
1-1	7.2
1-2	14.4
1-3	21.6
1-4	28.8
1-12	36.1

After the first 12 calendar months of operation under the provisions of this permit, compliance with the material throughput restriction shall be based upon a rolling 12-month summation.

[OAC rule 3745-77-07(A)(1) and PTI No. P0115043]

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall collect and record the following information each month for this emissions unit T045:
- a. name and identification for each material stored;
 - b. the throughput of each material stored, in gallons;
 - c. the calculated VOC emissions from each material stored, in tons, determined by U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods;
 - d. the total VOC emission rate from all materials stored, in tons/month, calculated as follows:

$$E_M = (E_1 + E_2 + E_3 + \dots + E_n)$$

where:

 E_M = Monthly VOC emissions, in tons/month; and
 E_n = VOC from individual materials stored, in tons;
 - e. the rolling, 12-month total VOC emission rate calculated as follows:



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$$E_T = (E_{M1} + E_{M2} + E_{M3} + \dots + E_{M12})$$

where:

E_T = Annual VOC emissions (tons) as summed from the previous 12 months of monthly VOC emissions;

E_M = Monthly OC emissions from all individual materials stored (tons/month).

[OAC rule 3745-77-07(C)(1) and PTI No. P0115043]

- (2) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.116b(a) through 60.116b(d)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
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[OAC rule 3745-77-07(C)(1), 40 CFR 60.116b(d) and PTI No. P0115043]

- (3) The owner or operator shall maintain records of the following information in a readily accessible location for at least 5 years and shall make copies of the records available to the Northwest District Office upon verbal or written request:
- 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0115043]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of:
- a. the rolling, 12-month VOC emission limitation; and
 - b. any exceedances of the maximum allowable cumulative material throughput for the first 12 months of operation as specified in c)(2).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the Northwest District Office).



[OAC rule 3745-77-07(C)(1) and PTI No. P0115043]

- (2) If the permittee places, stores, or holds in a fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 0.754 pound per square inch absolute, the permittee shall so notify the director within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb and PTI No. P0115043]

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:

36.1 tons VOC per rolling, 12-month period

- Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0115043]

g) Miscellaneous Requirements

- (1) None.

63. Emissions Unit Group – Fixed Roof Group 2 Vessels subject to 40 CFR, Part 63, Subpart CC: T053, T054, T057, T058, T059, T060, T061, T065, T066, T067, T068, T123, T164, T177, T178, T195

EU ID	Operations, Property and/or Equipment Description
T053	above ground, fixed roof organic liquids storage tank No. 229 with a capacity of 3,412,308 gallons (group 2 storage vessel)
T054	above ground, fixed roof organic liquids storage tank No. 230 with a capacity of 3,412,308 gallons (group 2 storage vessel)
T057	above ground, fixed roof organic liquids storage tank No. 235 with a capacity of 3,412,308 gallons (group 2 storage vessel)
T058	above ground, fixed roof organic liquids storage tank No. 236 with a capacity of 3,412,308 gallons (group 2 storage vessel)
T059	above ground, fixed roof organic liquids storage tank No. 246 with a capacity of 4,060,929 gallons (group 2 storage vessel)
T060	above ground, fixed roof organic liquids storage tank No. 247 with a capacity of 4,060,929 gallons (group 2 storage vessel)
T061	above ground, fixed roof organic liquids storage tank No. 249 with a capacity of 4,060,929 gallons (group 2 storage vessel)
T065	above ground, fixed roof organic liquids storage tank No. 264 with a capacity of 2,284,273 gallons (group 2 storage vessel)
T066	above ground, fixed roof organic liquids storage tank No. 324 with a capacity of 4,235,399 gallons (group 2 storage vessel)
T067	above ground, fixed roof organic liquids storage tank No. 325 with a capacity of 4,235,399 gallons (group 2 storage vessel)
T068	above ground, fixed roof organic liquids storage tank No. 326 with a capacity of 4,235,399 gallons (group 2 storage vessel)
T123	above ground, fixed roof organic liquids storage tank No. 22 with a capacity of 1,381,844 gallons (group 2 storage vessel)
T164	above ground, fixed roof organic liquids storage tank No. 298 with a capacity of 4,060,929 gallons (group 2 storage vessel)
T177	above ground, fixed roof organic liquids storage tank No. 458 with a capacity of 705,022 gallons (group 2 storage vessel)
T178	above ground, fixed roof organic liquids storage tank No. 459 with a capacity of 705,022 gallons (group 2 storage vessel)
T195	above ground, fixed roof organic liquids storage tank No. 460 with a capacity of 338,411 gallons (group 2 storage vessel)

- 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 operations(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. Emissions from each unit shall not exceed the listed



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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. See c)(1) and e)(1)
b.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, these emissions units are affected sources consisting of storage vessels associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See d)(1) and e)(2)
c.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. The requirements in OAC rule 3745-21-09(L) are less stringent than the requirements in 40 CFR, Part 63, Subpart CC.

c) Operational Restrictions

(1) The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 1.52 pounds per square inch absolute (psia).

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

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following section:

63.655(i)(1)(iv)	If a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent for existing sources or 2 percent for new sources, a record of any data, assumptions, and
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	procedures used to make this determination shall be retained.
63.655(i)(5)	Retain Records for 5 Years

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

e) Reporting Requirements

- (1) If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 psia, the permittee shall notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

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

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.640(l)(3)(i) through 63.640(l)(3)(vii)	Applicability of Reporting Requirements and Notification of Compliance Status if a Process Change Occurs for Existing Source
63.655(e)(1), 63.655(f), 63.655(f)(1)(i)(A)	Notification of Compliance Status Reporting Requirements
63.655(h)(6)(ii)	Storage Vessel Provisions – Notification of Variation in Use of Any Storage Vessel

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

f) Testing Requirements

- (1) None.

g) Miscellaneous Requirements

- (1) None.

64. T055, Tank 232

Operations, Property and/or Equipment Description:

above ground, fixed roof organic liquids storage tank No. 232 with a capacity of 2,820,090 gallons (group 2 storage vessel)

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 operations(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. 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)(a) (PTI No. P0104760, issued 10/8/10)	5.59 tons of volatile organic compounds (VOC)/yr
b.	OAC rule 3745-21-09(L)	See c)(1), d)(3), and e)(1)
c.	40 CFR, Part 60, Subpart Ka [40 CFR 60.110a – 60.115a]	See b)(2)a.
d.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of storage vessels associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)b., d)(1) and e)(2)
e.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. A Group 2 storage vessel that is also subject to 40 CFR, Part 60, Subpart Ka, but not the control requirements of Subpart Ka, is required to comply only with the requirements of 40 CFR, Part 63, Subpart CC. [40 CFR 63.640(n)(7)]



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- b. This emissions unit is subject to MACT standards in 40 CFR, Part 63, Subpart CC.

The permittee shall comply with the applicable storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following section:

63.640(l), 63.640(l)(2), 63.640(l)(2)(ii), Table 11	63.640(l)(1), 63.640(l)(2)(i), 63.640(m) and	Applicability and Compliance Dates if a Process Change Causes Group 2 Emission Point(s) to Become Group 1 Emission Point(s)
63.640(n)(7)		Applicability and Overlap Provisions for 40 CFR, Part 60, Subparts K and Ka

c) Operational Restrictions

- (1) The permittee shall not place, store, or hold in each fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 1.52 pounds per square inch absolute (psia).

[OAC rule 3745-77-07(A)(1) and PTI No. P0104760]

- (2) The maximum throughput for each tank shall not exceed 735,840,000 gallons per year.

[OAC rule 3745-77-07(A)(1) and PTI No. P0104760]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following section:

63.655(i)(1)(iv)	If a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent for existing sources or 2 percent for new sources, a record of any data, assumptions, and procedures used to make this determination shall be retained.
63.655(i)(5)	Retain Records for 5 Years

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

- (2) The permittee shall maintain monthly records of the amount of material throughput for each emissions unit, in gallons per month and total gallons, to date, for the calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0104760]

- (3) The permit shall maintain records of the following information:



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- 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 that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

[OAC rule 3745-77-07(C)(1) and PTI No. P0104760]

e) Reporting Requirements

- (1) If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 psia, the permittee shall notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1) and PTI No. P0104760]

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.640(l)(3)(i) through 63.640(l)(3)(vii)	Applicability of Reporting Requirements and Notification of Compliance Status if a Process Change Occurs for Existing Source
63.655(e)(1), 63.655(f), 63.655(f)(1)(i)(A),	Notification of Compliance Status Reporting Requirements
63.655(h)(6)(ii)	Storage Vessel Provisions – Notification of Variation in Use of Any Storage Vessel

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

- (3) The permittee shall submit annual reports that summarize the total annual material throughput, in gallons, for each emissions unit. These reports shall be submitted electronically through Ohio EPA Air Services by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0104760]

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. Emissions Limitations:

5.59 tons of VOC/yr from T055



Draft Title V Permit
Lima Refining Company
Permit Number: P0133998
Facility ID: 0302020012

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Applicable Compliance Method:

The permittee shall demonstrate compliance through working and breathing loss calculations as determined by U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0104760]

g) Miscellaneous Requirements

(1) None.

65. T064, Tank 263

Operations, Property and/or Equipment Description:

Above ground, internal floating roof organic liquids storage tank No. 263 with a capacity of 2,284,128 gallons (group 1 storage vessel)

- 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)(a)(ii) (PTI No. P0133093, issued 11/17/22)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the emissions of volatile organic compounds (VOC) from this air contaminant source since the potential to emit is less than 10 tons per year taking into account the federally enforceable requirement to employ an internal floating roof under OAC rule 3745-21-09(L) and 40 CFR, Part 63, Subpart CC.
b.	OAC rule 3745-21-09(L)	See c)(1), c)(2), d)(1), d)(2), e)(1) and e)(2)
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)b.
d.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel]	See b)(2)b., b)(2)c., c)(3), d)(3) and e)(3)



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	
f.	40 CFR, Part 63, Subpart WW [40 CFR 63.1060 – 63.1067] [In accordance with 40 CFR 63.1060, the provisions of this subpart apply to the control of air emissions from storage vessels for which another subpart references the use of this subpart for such air emission control.]	See b)(2)c., c)(3), d)(3) and e)(3)
g.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. It should be noted that the potential to emit for this emissions unit is 2.29 tons VOC/year, based upon refinery operations resulting in the tank experiencing one turnover per day equating to an annual maximum throughput of 833,706,720 gallons.
- b. This emissions unit is a group 1 storage vessel (as defined in 40 CFR 63.641) that is part of an existing source and is also subject to the provisions of 40 CFR, Part 60, Subpart Kb. In accordance with 40 CFR 63.640(n)(2), this emissions unit is required to comply only with the requirements of 40 CFR, Part 63, Subpart CC.
- c. The permittee shall comply with the applicable internal floating roof storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following section:

63.660	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1060	Applicability
63.1061	Definitions
63.1064	Alternative means of emission limitation
63.1067	Implementation and Enforcement

c) Operational Restrictions

- (1) The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 11.1 pound per square inch absolute (psia).

[OAC rule 3745-77-07(A)(1) and PTI No. P0133093]

- (2) The permittee shall install the following control equipment and shall maintain tank vents, seals, and or covers as follows:

- a. The fixed roof storage tank shall be equipped with an internal floating roof.
- b. The automatic bleeder vents shall be closed at all times except when the roof is floated off or landed on the roof leg supports.
- c. The rim vents, if present, shall be set to open or at the manufacturer's recommended setting when the roof is being floated off the roof leg supports.
- d. 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.

[OAC rule 3745-77-07(A)(1) and PTI No. P0133093]

- (3) The permittee shall comply with the applicable internal floating roof storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following section:

63.660	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1062	Storage vessel control requirements
63.1063(a) and (b)	Floating roof requirements – Design requirements, operational requirements

[OAC Rule 3745-77-07(A)(1); and 40 CFR, Part 63, Subpart CC; and PTI No. P0133093]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain records of the following information for the tank:
- a. The types of petroleum liquids stored in the tank; and
 - b. The maximum true vapor pressure (in psia), as stored, of each petroleum 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.

[OAC rule 3745-77-07(C)(1) and P0133093]



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- (2) The permittee shall maintain a record of any period of time in which the automatic bleeder vents, rim vents, and all openings other than stub drains were not maintained as required in this permit and per the rules.

[OAC rule 3745-77-07(C)(1) and P0133093]

- (3) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart CC, including the following section:

63.660	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1063(c), (d) and (e)	Internal Floating Roof inspection frequency, inspection procedures, and repair requirements
63.1065	Recordkeeping requirements for vessel dimensions and capacity, inspection results, and floating roof landings

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and P0133093]

e) Reporting Requirements

- (1) The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days of the occurrence, of any period of time in which the automatic bleeder vents, rim vents, and all openings other than stub drains were not maintained as required in this permit.

[OAC rule 3745-77-07(C)(1) and P0133093]

- (2) If the permittee places, stores, or holds in the internal floating roof tank any petroleum liquid with a true vapor pressure which is greater than 11.1 pounds per square inch absolute, and such tank does not comply with the requirements of OAC rule 3745-21-09(L), the permittee shall so notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1) and P0133093]

- (3) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.660	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1066	Notification of initial startup and periodic reports

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and P0133093]



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- f) Testing Requirements
 - (1) None.

- g) Miscellaneous Requirements
 - (1) None.

66. T071, Tank 100026

Operations, Property and/or Equipment Description:

above ground, internal floating roof organic liquids storage tank No. 26 with a capacity of 177,194 gallons (group 1 storage tank)

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)(a) (PTI No. P0134346, issued 8/3/23)	5.25 tons of volatile organic compounds (VOC)/yr
b.	OAC rule 3745-21-09(L)	See b)(2)a. and d)(2)
c.	Storage Tank Emission Reduction Partnership Program 65 Federal Register 19891 (April 13, 2000)	See b)(2)b. and d)(3)
d.	40 CFR, Part 60, Subpart Ka [40 CFR 60.110a – 60.115a] [In accordance with 40 CFR 60.110a, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)c.
e.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)c.
f.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358]	See b)(2)c.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 40 CFR 61.340, this emissions unit is an affected source, since the storage tank may store benzene containing waste.]	
g.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)c. and b)(2)d.
h.	40 CFR, Part 63, Subpart WW [40 CFR 63.1060 – 63.1067]	See b)(2)d. and b)(2)e.
i.	40 CFR, Part 60, Subpart QQQ [40 CFR 60.690 – 60.699]	See b)(2)f.
j.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The requirements of OAC rule 3745-21-09(L) are equivalent to or less stringent than the requirements of 40 CFR, Part 63, Subpart CC.
- b. In accordance with the Storage Tank Emission Reduction Partnership Program (STERPP) agreement executed by the United States Environmental Protection Agency (U.S. EPA) on February 2, 2001, the permittee installed a pole sleeve system on the slotted guidepole of each emissions unit on December 21, 2001. Because this tank is equipped with a guidepole-ladder combination, a ladder sleeve is considered to be a part of this pole sleeve system.

The pole sleeve system shall meet the following requirements:

- i. Each opening through the deck of the floating roof for a slotted guidepole shall be equipped with a deck cover, a pole wiper, and a pole sleeve. Because this tank is equipped with a guide-pole ladder combination, a ladder sleeve is considered to be a part of this pole sleeve system.
- ii. The deck cover shall be equipped with a gasket between the cover and the deck.
- iii. The sleeve shall extend into the stored liquid.

- c. This term summarizes the interrelationship and overlap between the applicable storage tank requirements of 40 CFR, Part 60, Subpart Ka; 40 CFR, Part 61, Subpart FF; and 40 CFR, Part 63, Subpart CC:
 - i. 40 CFR, Part 61, Subpart FF:

This storage tank is applicable to the requirements under 40 CFR 61.351 – Alternative standards for tanks. The alternative standard allows for compliance to be achieved by complying with the internal floating roof standards provided in 40 CFR 60.112b(a)(1) of 40 CFR, Part 60, Subpart Kb.
 - ii. 40 CFR, Part 63, Subpart CC:

Since the tank is subject to the requirements of 40 CFR, Part 60, Subpart Kb via the alternative standard under 40 CFR 61.351 the following overlap language from 40 CFR, Part 63, Subpart CC would apply:

After the compliance dates specified in paragraph (h) of 40 CFR 63.640, a Group 1 or 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 either the requirements of 40 CFR, Part 60, Subpart Kb, except as provided in paragraph (n)(8) of 40 CFR 63.640 or 40 CFR, Part 63, Subpart CC. [40 CFR 63.640(n)(2)]
 - iii. 40 CFR, Part 60, Subpart Ka:

This emissions unit is a Group 1 storage vessel as defined in 40 CFR Part 63.641. After the compliance date specified in paragraph (h) of 40 CFR Part 63.640 a Group 1 storage vessel that is also subject to the provisions of 40 CFR Subpart Ka is required to only comply with the provisions of 40 CFR, Part 63, Subpart CC.
- d. Each owner or operator of a Group 1 storage vessel subject to 40 CFR, Part 63, Subpart CC shall comply with the requirements of 40 CFR, Part 63, Subpart WW according to the requirements in paragraphs (a) through (i) of 40 CFR 63.660. [40 CFR 63.660]
- e. The permittee shall comply with the applicable control requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1061	Definitions
63.1062	Storage vessel control requirements
63.1063(a)	Floating roof requirements: design requirements
63.1067	Implementation and enforcement



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f. Storage vessels that are subject to the standards in 60.112, 60.112a, and 60.112b and associated requirements in 40 CFR, Part 60, Subparts K, Ka, or Kb are not subject to the requirements of 40 CFR, Part 60, Subpart QQQ. [40 CFR 60.692-3(d)]

c) Operational Restrictions

(1) The maximum throughput for this tank shall not exceed 64,675,810 gallons per year.

[OAC rule 3745-77-07(A)(1) and PTI No. P0134346]

(2) The permittee shall comply with the applicable operational requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1063(b)	Floating roof requirements: operational requirements
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[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart WW;and PTI No. P0134346]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the amount of material throughput for each emissions unit, in gallons per month and total gallons, to date, for the calendar year.

[OAC rule 3745-77-07(C)(1) and P0134346]

(2) The permit shall maintain records of the following information:

- a. The types of petroleum liquids stored in each 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 pound per square inch absolute.

[OAC rule 3745-77-07(C)(1) and P0134346]

(3) In accordance with the STERRP agreement, the permittee shall meet the following requirements:

- a. The sliding cover shall be in place over the slotted guidepole-ladder opening through the floating roof at all times except when the sliding cover must be removed for access.
- b. If the control technology used includes a guidepole float, the float shall be floating within the guidepole at all times except when it must be removed for access to the stored liquid or when the tank is empty.
- c. Visually inspect the deck fitting for the slotted guidepole-ladder at least once every 10 years and each time the vessel is emptied and degassed.



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- d. If the slotted guidepole-ladder deck fitting or control devices have defects, or it a gap of more than 0.32 centimeter (1/8 inch) exists between any gasket required for control of the slotted guidepole-ladder deck fitting and any surface that it is intended to seal, such items shall be repaired before filling or refilling the storage vessel with regulated material.
- e. Tanks taken out of hydrocarbon service, for any reason, do not have to have any controls in place during the time they are out of service.

[OAC rule 3745-77-07(C)(1) and P0134346]

- (4) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.356(a)	Maintain records for on-site for two years
61.356(k)	Comply with the recordkeeping requirements in 40 CFR 60.115b

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart FF; and PTI No. P0134346]

- (5) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1063(c), (d), (e)	Internal floating roof inspection frequency, inspection procedures, and repair requirements
63.1065	Recordkeeping requirements for vessel dimensions and capacity, inspection results, and floating roof landings

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart WW;and PTI No. P0134346]

e) Reporting Requirements

- (1) The permittee shall submit annual reports that summarize the total annual material throughput, in gallons, for this emissions unit. These reports shall be submitted electronically through Ohio EPA Air Services by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134346]



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- (2) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1066	Notification of initial startup and periodic reports

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart WW; and P0134346]

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. Emissions Limitation:

5.25 tons VOC/year

- Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and P0134346]

g) Miscellaneous Requirements

- (1) None.



67. T072, Tank 100028

Operations, Property and/or Equipment Description:

above ground, internal floating roof organic liquids storage tank No. 28 with a capacity of 177,194 gallons (group 1 storage tank)

- 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 operations(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. 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)(a) (PTI No. P0134347, issued 8/3/23)	6.14 tons of volatile organic compounds (VOC)/year
b.	OAC rule 3745-21-09(L)	See b)(2)a and d)(2).
c.	Storage Tank Emission Reduction Partnership Program 65 Federal Register 19891 (April 13, 2000)	See b)(2)b. and d)(3)
d.	40 CFR, Part 60, Subpart Ka [40 CFR 60.110a – 60.115a] [In accordance with 40 CFR 60.110a, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)c.
e.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)c.
f.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358]	See b)(2)c.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 40 CFR 61.340, this emissions unit is an affected source, since the storage tanks may store benzene containing waste.]	
g.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)c. and b)(2)d.
h.	40 CFR, Part 63, Subpart WW [40 CFR 63.1060 – 63.1067]	See b)(2)d. and b)(2)e.
i.	40 CFR, Part 60, Subpart QQQ [40 CFR 60.690 – 60.699]	See b)(2)f.
j.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The requirements of OAC rule 3745-21-09(L) are equivalent to or less stringent than the requirements of 40 CFR, Part 63, Subpart CC.
- b. In accordance with the Storage Tank Emission Reduction Partnership Program (STERPP) agreement executed by the United States Environmental Protection Agency (U.S. EPA) on February 2, 2001, the permittee installed a pole sleeve system on the slotted guidepole of this emissions unit on December 21, 2001. Because this tank is equipped with a guidepole-ladder combination, a ladder sleeve is considered to be a part of this pole sleeve system.

The pole sleeve system shall meet the following requirements:

- i. Each opening through the deck of the floating roof for a slotted guidepole shall be equipped with a deck cover, a pole wiper, and a pole sleeve. Because this tank is equipped with a guidepole-ladder combination, a ladder sleeve is considered to be a part of this pole sleeve system.
- ii. The deck cover shall be equipped with a gasket between the cover and the deck.
- iii. The sleeve shall extend into the stored liquid.

Effective Date: To be entered upon final issuance

- c. This term summarizes the interrelationship and overlap between the applicable storage tank requirements of 40 CFR, Part 60, Subpart Ka; 40 CFR, Part 61, Subpart FF; and 40 CFR, Part 63, Subpart CC:
 - i. 40 CFR, Part 61, Subpart FF:

This storage tank is applicable to the requirements under 40 CFR 61.351 – Alternative standards for tanks. The alternative standard allows for compliance to be achieved by complying with the internal floating roof standards provided in 40 CFR 60.112b(a)(1) of 40 CFR, Part 60, Subpart Kb.
 - ii. 40 CFR, Part 63, Subpart CC:

Since the tank is subject to the requirements of 40 CFR, Part 60, Subpart Kb via the alternative standard under 40 CFR 61.351 the following overlap language from 40 CFR, Part 63, Subpart CC would apply:

After the compliance dates specified in paragraph (h) of 40 CFR 63.640, a Group 1 or 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, except as provided in paragraph (n)(8) of 40 CFR 63.640 or 40 CFR, Part 63, Subpart CC.
 - iii. 40 CFR, Part 60, Subpart Ka:

This emissions unit is a Group 1 storage vessel as defined in 40 CFR Part 63.641. After the compliance date specified in paragraph (h) of 40 CFR Part 63.640 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.
- d. Each owner or operator of a Group 1 storage vessel subject to 40 CFR, Part 63, Subpart CC shall comply with the requirements of 40 CFR, Part 63, Subpart WW according to the requirements in paragraphs (a) through (i) of 40 CFR 63.660. [40 CFR 63.660]
- e. The permittee shall comply with the applicable control requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1061	Definitions
63.1062	Storage vessel control requirements
63.1063(a)	Floating roof requirements: design requirements
63.1067	Implementation and enforcement



Effective Date: To be entered upon final issuance

f. Storage vessels that are subject to the standards in 60.112, 60.112a, and 60.112b and associated requirements in 40 CFR, Part 60, Subparts K, Ka, or Kb are not subject to the requirements of 40 CFR, Part 60, Subpart QQQ. [40 CFR 60.692-3(d)]

c) Operational Restrictions

(1) The maximum throughput for this tank shall not exceed 64,675,810 gallons per year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

(2) The permittee shall comply with the applicable operational requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1063(b)	Floating roof requirements: operational requirements
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart WW; and PTI No. P0134347]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the amount of material throughput for this emissions unit, in gallons per month and total gallons, to date, for the calendar year.

[OAC rule 3745-77-07(C)(1) and P0134347]

(2) The permit 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 pound per square inch absolute.

[OAC rule 3745-77-07(C)(1) and P0134347]

(3) In accordance with the STERPP agreement, the permittee shall meet the following requirements:

- a. The sliding cover shall be in place over the slotted guidepole-ladder opening through the floating roof at all times except when the sliding cover must be removed for access.
- b. If the control technology used includes a guidepole float, the float shall be floating within the guidepole at all times except when it must be removed for access to the stored liquid or when the tank is empty.
- c. Visually inspect the deck fitting for the slotted guidepole-ladder at least once every 10 years and each time the vessel is emptied and degassed.



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- d. If the slotted guidepole-ladder deck fitting or control devices have defects, or it a gap of more than 0.32 centimeter (1/8 inch) exists between any gasket required for control of the slotted guidepole-ladder deck fitting and any surface that it is intended to seal, such items shall be repaired before filling or refilling the storage vessel with regulated material.
- e. Tanks taken out of hydrocarbon service, for any reason, do not have to have any controls in place during the time they are out of service.

[OAC rule 3745-77-07(C)(1) and P0134347]

- (4) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.356(a)	Maintain records for on-site for two years
61.356(k)	Comply with the recordkeeping requirements in 40 CFR 60.115b

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart FF; and PTI No. P0134347]

- (5) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1063(c), (d), (e)	Internal floating roof inspection frequency, inspection procedures, and repair requirements
63.1065	Recordkeeping requirements for vessel dimensions and capacity, inspection results, and floating roof landings

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart WW; and PTI No. P0134347]

e) Reporting Requirements

- (1) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
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63.1066	Notification of initial startup and periodic reports
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[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart WW; and PTI No. P0134347]

- (2) The permittee shall submit annual reports that summarize the total annual material throughput, in gallons, for this emissions unit. These reports shall be submitted electronically through Ohio EPA Air Services by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

f) Testing Requirements

- (1) Compliance with the emission limitation in section b)(1) of these terms and conditions shall be determined in accordance with the following method:

- a. Emission Limitation
6.14 tons of VOC/year

Applicable Compliance Method

The permittee shall demonstrate compliance through working and breathing loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

g) Miscellaneous Requirements

- (1) None

68. T073, Tank 256

Operations, Property and/or Equipment Description

230,307 Gallon Storage Tank with Internal Floating Roof

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 operations(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. 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)(a) (PTI No. P0132200, issued 6/30/22)	7.51 tons of volatile organic compounds (VOC)/year
b.	OAC rule 3745-21-09(L)	See b)(2)a. and d)(2)
c.	40 CFR Part 60 Subpart Ka	See b)(2)e.iii
d.	40 CFR Part 63 Subpart CC	<u>Storage Tank Provisions</u> See b)(2)e.ii
e.	40 CFR Part 61 Subpart FF	See b)(2)e.i.
f.	40 CFR Part 60 Subpart QQQ	See b)(2)b.

(2) Additional Terms and Conditions

a. The requirements of OAC rule 3745-21-09(L) are equivalent to or less stringent than the requirements of 40 CFR Part 63 Subpart CC.

b. Storage vessels that are subject to the standards in 60.112, 60.112a, and 60.112b and associated requirements in 40 CFR Part 60, Subparts K, Ka, or Kb are not subject to the requirements of 40 CFR Part 60, Subpart QQQ. [40 CFR 60.692-3]

c. In accordance with the Storage Tank Emission Reduction Partnership Program (STERPP) agreement executed by the United States Environmental Protection Agency (U.S. EPA) on February 2, 2001, the permittee installed a pole sleeve system on the slotted guidepole of this emissions unit on December 21, 2001. Because this tank is equipped with a guide-pole ladder combination, a ladder sleeve is considered to be a part of this pole sleeve system.

The pole sleeve system shall meet the following requirements:

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- i. Each opening through the deck of the floating roof for a slotted guidepole shall be equipped with a deck cover, a pole wiper, and a pole sleeve. Because this tank is equipped with a guide-pole ladder combination, a ladder sleeve is considered to be a part of this pole sleeve system.
- ii. The deck cover shall be equipped with a gasket between the cover and the deck.
- iii. The sleeve shall extend into the stored liquid.
- d. Refer to Part II – Specific Facility Terms and Conditions, section A.10, of the Title V permit issued on 11/28/05 for the requirements of 40 CFR Part 63, Subpart A – National Emission Standards for Hazardous Air Pollutants – General Provisions.
- e. This term summarizes the interrelationship and overlap between the applicable storage tank requirements of 40 CFR Part 60 Subpart Ka, 40 CFR Part 61 Subpart FF, and 40 CFR Part 63 Subpart CC:

- i. 40 CFR Part 61 Subpart FF:

This storage tank is applicable to the requirements under 40 CFR 61.351 – Alternative standards for tanks. The alternative standard allows for compliance to be achieved by complying with the internal floating roof standards provided in 40 CFR 60.112b(a)(1) of 40 CFR Part 60 Subpart Kb.

- ii. 40 CFR Part 63 Subpart CC:

Since the tank is subject to the requirements of 40 CFR Subpart Kb via the alternative standard under 40 CFR 61.351 the following overlap language from 40 CFR Part 63 Subpart CC would apply:

After the compliance dates specified in paragraph (h) of 40 CFR 63.640, a Group 1 storage vessel that is also subject to 40 CFR Part 60 Subpart Kb, is required to comply only with either 40 CFR Part 60 Subpart Kb, except as provided in paragraph (n)(8) of 40 CFR 63.640 or 40 CFR Part 63 Subpart CC.

- iii. 40 CFR Part 60 Subpart Ka:

This emissions unit is a Group 1 storage vessel as defined in 40 CFR Part 63.641. After the compliance date specified in paragraph (h) of 40 CFR Part 63.640 a Group 1 storage vessel that is also subject to the provisions of 40 CFR Subpart Ka is required to only comply with the provisions of 40 CFR Part 63 Subpart CC.

c) Operational Restrictions

- (1) The maximum throughput for this tank shall not exceed 153,300,000 gallons per year.

[OAC rule 3745-77-07(A)(1) and PTI No. P0132200]

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall maintain monthly records of the amount of material throughput for this emissions unit, in gallons per month and total gallons, to date, for the calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0132200]

- (2) The permit 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 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0132200]

- (3) In accordance with the STERRP agreement, the permittee shall meet the following requirements:

- a. The sliding cover shall be in place over the slotted guidepole-ladder opening through the floating roof at all times except when the sliding cover must be removed for access.
- b. If the control technology used includes a guidepole float, the float shall be floating within the guidepole at all times except when it must be removed for access to the stored liquid or when the tank is empty.
- c. Visually inspect the deck fitting for the slotted guidepole-ladder at least once every 10 years and each time the vessel is emptied and degassed.
- d. If the slotted guidepole-ladder deck fitting or control devices have defects, or if a gap of more than 0.32 centimeter (1/8 inch) exists between any gasket required for control of the slotted guidepole-ladder deck fitting and any surface that it is intended to seal, such items shall be repaired before filling or refilling the storage vessel with regulated material.
- e. Tanks taken out of hydrocarbon service, for any reason, do not have to have any controls in place during the time they are out of service.

[OAC rule 3745-77-07(C)(1) and PTI No. P0132200]

e) **Reporting Requirements**

- (1) Each owner or operator subject to 40 CFR Part 60 Subpart CC shall submit the following reports as required in 63.654(e)(1) – (4) except as provided in 63.654(h)(5), and shall keep records as described in section 63.654(i):



- a. A Notification of Compliance Status report as described in paragraph (f) of 40 CFR 63.654.
 - b. Periodic reports as described in paragraph (g) of 40 CFR 63.654; and
 - c. Other reports as described in paragraph (h) of 40 CFR 63.654. [40 CFR 63.654(e)]
- (2) The permittee shall submit annual reports that summarize the total annual material throughput, in gallons, for this emissions unit. These reports shall be submitted electronically through Ohio EPA Air Services by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0132200]

f) Testing Requirements

- (1) Compliance with the emission limitation in section b)(1) of these terms and conditions shall be determined in accordance with the following method:

a. Emission Limitation

7.51 tons of volatile organic compounds (VOC)/year

Applicable Compliance Method

The permittee shall demonstrate compliance through working and breathing loss calculations as determined by U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0132200]

g) Miscellaneous Requirements

- (1) None

69. T074, Tank 253

Operations, Property and/or Equipment Description

above ground, internal floating roof organic liquids storage tank No. 253 with a capacity of 475,890 gallons (tank storing group 1 wastewater)

- 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 operations(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. 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 3745-31-03(A)(3)(a) (PTI No. P0104760, issued 10/8/10)	12.04 tons of volatile organic compounds (VOC)/yr.
b.	OAC rule 3745-21-09(L)	See b)(2)b. and d)(2)
c.	40 CFR, Part 60, Subpart Ka [40 CFR 60.110a – 60.115a] [In accordance with 40 CFR 60.110a, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)f.ii
d.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)a. and b)(2)f.ii.
e.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358] [In accordance with 40 CFR 61.340, this emissions unit is an affected source, since the storage tank include a Group 1 wastewater stream	See b)(2)f.i.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	per 40 CFR, Part 63, Subpart CC, with benzene containing waste.]	
f.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
g.	Storage Tank Emission Reduction Partnership Program 65 Federal Register 19891 (April 13, 2000)	See b)(2)d. and d)(3)
h.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source, since the storage tank include a Group 1 wastewater stream, with benzene containing waste.]	<u>Wastewater Provisions</u> See b)(2)e. and e)(1)
i.	40 CFR, Part 60, Subpart QQQ [40 CFR 60.690 – 60.699]	See b)(2)c.
j.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The permittee shall comply with the applicable internal floating roof storage vessel provisions under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.112b(a)(1)(i) through 60.112b(a)(1)(ix)	Standards for VOC: Internal Floating Roof Must Rest on Liquid Surface, Closure Devices, Openings Must be Below Liquid Surface and Have Cover, Vents Must be Gasketed and Only Open When Roof not Floating, Ladder Must Have Fabric Sleeve, Vents Must be Gasketed and Closed, Rim Vents Must Have Gasket, Supports Columns Must Have Fabric Sleeve
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- b. The requirements of OAC rule 3745-21-09(L) are equivalent to or less stringent than the requirements of 40 CFR, Part 63, Subpart CC.
- c. Storage vessels that are subject to the standards in 60.112, 60.112a, and 60.112b and associated requirements in 40 CFR, Part 60, Subparts K, Ka, or Kb are not subject to the requirements of 40 CFR, Part 60, Subpart QQQ. [40 CFR 60.692-3]

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- d. In accordance with the Storage Tank Emission Reduction Partnership Program (STERPP) agreement executed by the United States Environmental Protection Agency (U.S. EPA) on February 2, 2001, the permittee installed a pole sleeve system on the slotted guidepole of each emissions unit on December 21, 2001.

The pole sleeve system shall meet the following requirements:

- i. Each opening through the deck of the floating roof for a slotted guidepole shall be equipped with a deck cover, a pole wiper, and a pole sleeve.
- ii. The deck cover shall be equipped with a gasket between the cover and the deck.
- iii. The sleeve shall extend into the stored liquid.

- e. Except as provided in paragraph (b) of 40 CFR 63.647, each permittee of a Group 1 wastewater stream shall comply with the requirements of 61.340 through 61.355 of 40 CFR, Part 61, Subpart FF for each process wastewater stream that meets the definition in 40 CFR 63.641. [40 CFR 63.647(a)]

- f. This term summarizes the interrelationship and overlap between the applicable storage tank requirements of 40 CFR, Part 60, Subpart Ka; 40 CFR, Part 61, Subpart FF; and 40 CFR, Part 63, Subpart CC:

- i. 40 CFR, Part 61, Subpart FF:

This storage tank is applicable to the requirements under 40 CFR 61.351 – Alternative standards for tanks. The alternative standard allows for compliance to be achieved by complying with the internal floating roof standards provided in 40 CFR 60.112b(a)(1) of 40 CFR, Part 60, Subpart Kb.

- ii. The requirements of 40 CFR, Part 60, Subpart Kb are more stringent than the requirements of 40 CFR, Part 60, Subpart Ka, since these emissions units are regulated as wastewater units, not as storage tanks.

c) Operational Restrictions

- (1) The maximum throughput for this tank shall not exceed 316,766,671 gallons per year.

[OAC rule 3745-77-07(A)(1) and PTI No. P0104760]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the amount of material throughput for this emissions unit, in gallons per month and total gallons, to date, for the calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0104760]

- (2) The permit shall maintain records of the following information:



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- 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 pound per square inch absolute.

[OAC rule 3745-77-07(C)(1) and PTI No. P0104760]

(3) In accordance with the STERRP agreement, the permittee shall meet the following requirements:

- a. The sliding cover shall be in place over the slotted guidepole opening through the floating roof at all times except when the sliding cover must be removed for access.
- b. If the control technology used includes a guidepole float, the float shall be floating within the guidepole at all times except when it must be removed for access to the stored liquid or when the tank is empty.
- c. Visually inspect the deck fitting for the slotted guidepole at least once every 10 years and each time the vessel is emptied and degassed.
- d. If the slotted guidepole deck fitting or control devices have defects, or if a gap of more than 0.32 centimeter (1/8 inch) exists between any gasket required for control of the slotted guidepole deck fitting and any surface that it is intended to seal, such items shall be repaired before filling or refilling the storage vessel with regulated material.
- e. Tanks taken out of hydrocarbon service, for any reason, do not have to have any controls in place during the time they are out of service.

[OAC rule 3745-77-07(C)(1) and PTI No. P0104760]

(4) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(a)(1) through 60.113b(a)(4)	Internal Floating Roof Visual Inspections, Seal Inspections and Degassing Requirements
60.116b(a) through 60.116b(c)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
60.116b(e)(1) through 60.116b(e)(3)	Monitoring of Operations: Determination of Temperature and Vapor Pressure of Product Stored

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

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- (5) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.356(a)	Maintain Records for On-Site for Two Years
61.356(k)	Comply with the Recordkeeping Requirements in 40 CFR 60.115b

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]

e) Reporting Requirements

- (1) Each permittee subject to the wastewater provisions in 40 CFR 63.647 shall comply with the recordkeeping and reporting provisions in 40 CFR 61.356 and 61.357 of 40 CFR, Part 61, Subpart FF unless they are complying with the wastewater provisions specified in paragraph (o)(2)(ii) of 40 CFR 63.640. There are no additional reporting and recordkeeping requirements for wastewater under this subpart unless a wastewater stream is included in an emissions average. Recordkeeping and reporting for emissions averages are specified in 40 CFR 63.653 and in paragraphs (f)(5) and (g)(8) of 40 CFR 63.655. [40 CFR 63.655(a)]

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 63, Subpart CC and PTI No. P0104760]

- (2) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

40 CFR 63.655(e) through 63.655(i)*	Reporting Requirements
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*except as specified in 63.655(h)(5), which is not applicable

[OAC rule 3745-77-07(C)(1) and PTI No. P0104760]

- (3) The permittee shall submit annual reports that summarize the total annual material throughput, in gallons, for this emissions unit. These reports shall be submitted electronically through Ohio EPA Air Services by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0104760]

- (4) The permittee shall comply with the reporting requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(a)(5)	Internal Floating Roof: 30 Day Notification for Filling or Refilling
60.115b(a)(3) and 60.115b(a)(4)	Internal Floating Roof: Report Within 30 Days for Records of Inspection Defects and Repairs



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[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

- (5) The permittee shall comply with the reporting requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.357(e)	Reporting Requirements – Notification of Alternative Standard
61.357(f)	Reporting Requirements – Comply with 60.115b

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]

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. Emissions Limitation:

12.04 tons of VOC/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance through working and breathing loss calculations as determined by U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0104760]

g) Miscellaneous Requirements

- (1) None.



70. T075, T075-255

Operations, Property and/or Equipment Description:

above ground, internal floating roof organic liquids storage tank No. 255 with a capacity of 475,890 gallons (group 1 storage tank)

- 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 operations(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. 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)(a) (PTI No. P0134347, issued 8/3/23)	12.04 tons of volatile organic compounds (VOC)/year
b.	OAC rule 3745-21-09(L)	See b)(2)b. and d)(2)
c.	Storage Tank Emission Reduction Partnership Program 65 Federal Register 19891 (April 13, 2000)	See b)(2)b. and d)(3)
d.	40 CFR, Part 60, Subpart Ka [40 CFR 60.110a – 60.115a] [In accordance with 40 CFR 60.110a, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)c.
e.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)c.
f.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358]	See b)(2)c.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 40 CFR 61.340, this emissions unit is an affected source, since the storage tank may store benzene containing waste.]	
g.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)c. and b)(2)d.
h.	40 CFR, Part 63, Subpart WW [40 CFR 63.1060 – 63.1067]	See b)(2)d. and b)(2)e.
i.	40 CFR, Part 60, Subpart QQQ [40 CFR 60.690 – 60.699]	See b)(2)f.
j.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The requirements of OAC rule 3745-21-09(L) are equivalent to or less stringent than the requirements of 40 CFR, Part 63, Subpart CC.
- b. In accordance with the Storage Tank Emission Reduction Partnership Program (STERPP) agreement executed by the United States Environmental Protection Agency (U.S. EPA) on February 2, 2001, the permittee installed a pole sleeve system on the slotted guidepole of each emissions unit on December 21, 2001. Because this tank is equipped with a guidepole-ladder combination, a ladder sleeve is considered to be a part of this pole sleeve system.

The pole sleeve system shall meet the following requirements:

- i. Each opening through the deck of the floating roof for a slotted guidepole shall be equipped with a deck cover, a pole wiper, and a pole sleeve. Because this tank is equipped with a guide-pole ladder combination, a ladder sleeve is considered to be a part of this pole sleeve system.
- ii. The deck cover shall be equipped with a gasket between the cover and the deck.
- iii. The sleeve shall extend into the stored liquid.

b. This term summarizes the interrelationship and overlap between the applicable storage tank requirements of 40 CFR, Part 60, Subpart Ka; 40 CFR, Part 61, Subpart FF; and 40 CFR, Part 63, Subpart CC:

i. 40 CFR, Part 61, Subpart FF:

This storage tank is applicable to the requirements under 40 CFR 61.351 – Alternative standards for tanks. The alternative standard allows for compliance to be achieved by complying with the internal floating roof standards provided in 40 CFR 60.112b(a)(1) of 40 CFR, Part 60, Subpart Kb.

ii. 40 CFR, Part 63, Subpart CC:

Since the tank is subject to the requirements of 40 CFR, Part 60, Subpart Kb via the alternative standard under 40 CFR 61.351 the following overlap language from 40 CFR, Part 63, Subpart CC would apply:

After the compliance dates specified in paragraph (h) of 40 CFR 63.640, a Group 1 or 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 either the requirements of 40 CFR, Part 60, Subpart Kb, except as provided in paragraph (n)(8) of 40 CFR 63.640 or 40 CFR, Part 63, Subpart CC. [40 CFR 63.640(n)(2)]

iii. 40 CFR, Part 60, Subpart Ka:

This emissions unit is a Group 1 storage vessel as defined in 40 CFR Part 63.641. After the compliance date specified in paragraph (h) of 40 CFR Part 63.640 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.

c. Each owner or operator of a Group 1 storage vessel subject to 40 CFR, Part 63, Subpart CC shall comply with the requirements of 40 CFR, Part 63, Subpart WW according to the requirements in paragraphs (a) through (i) of 40 CFR 63.660. [40 CFR 63.660]

d. The permittee shall comply with the applicable control requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1061	Definitions
63.1062	Storage vessel control requirements
63.1063(a)	Floating roof requirements: design requirements
63.1067	Implementation and enforcement



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- e. Storage vessels that are subject to the standards in 60.112, 60.112a, and 60.112b and associated requirements in 40 CFR, Part 60, Subparts K, Ka, or Kb are not subject to the requirements of 40 CFR, Part 60, Subpart QQQ. [40 CFR 60.692-3(d)]

c) Operational Restrictions

- (1) The maximum throughput for this tank shall not exceed 316,766,671 gallons per year.
- (2) The permittee shall comply with the applicable operational requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1063(b)	Floating roof requirements: operational requirements
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d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the amount of material throughput for each emissions unit, in gallons per month and total gallons, to date, for the calendar year.
- (2) The permit shall maintain records of the following information:
 - a. The types of petroleum liquids stored in each 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 pound per square inch absolute.
- (3) In accordance with the STERPP agreement, the permittee shall meet the following requirements:
 - a. The sliding cover shall be in place over the slotted guidepole-ladder opening through the floating roof at all times except when the sliding cover must be removed for access.
 - b. If the control technology used includes a guidepole float, the float shall be floating within the guidepole at all times except when it must be removed for access to the stored liquid or when the tank is empty.
 - c. Visually inspect the deck fitting for the slotted guidepole-ladder at least once every 10 years and each time the vessel is emptied and degassed.
 - d. If the slotted guidepole-ladder deck fitting or control devices have defects, or if a gap of more than 0.32 centimeter (1/8 inch) exists between any gasket required for control of the slotted guidepole-ladder deck fitting and any surface that it is intended to seal, such items shall be repaired before filling or refilling the storage vessel with regulated material.
 - e. Tanks taken out of hydrocarbon service, for any reason, do not have to have any controls in place during the time they are out of service.



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- (4) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.356(a)	Maintain records for on-site for two years
61.356(k)	Comply with the recordkeeping requirements in 40 CFR 60.115b

- (5) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1063(c), (d), (e)	Internal floating roof inspection frequency, inspection procedures, and repair requirements
63.1065	Recordkeeping requirements for vessel dimensions and capacity, inspection results, and floating roof landings

e) Reporting Requirements

- (1) The permittee shall submit annual reports that summarize the total annual material throughput, in gallons, for this emissions unit. These reports shall be submitted electronically through Ohio EPA Air Services by January 31 of each year and shall cover the previous calendar year.
- (2) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1066	Notification of initial startup and periodic reports

f) Testing Requirements

- (1) Compliance with the emission limitation in section b)(1) of these terms and conditions shall be determined in accordance with the following method:
- a. Emission Limitation
12.04 tons of VOC/year



Draft Title V Permit
Lima Refining Company
Permit Number: P0133998
Facility ID: 0302020012

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Applicable Compliance Method

The permittee shall demonstrate compliance through working and breathing loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

g) Miscellaneous Requirements

- (1) None.



Effective Date: To be entered upon final issuance

71. T076, Tank 219

Operations, Property and/or Equipment Description:

above ground, fixed roof organic liquids storage tank No. 219 with a capacity of 2,820,090 gallons (group 2 storage vessel)

- 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 operations(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. 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 No. 03-1102, issued 9/30/81)	See b)(2)a.
b.	OAC rule 3745-21-09(L)	See b)(2)d., c)(1) and e)(2)
c.	40 CFR, Part 60, Subpart Ka [40 CFR 60.110a – 60.115a] [In accordance with 40 CFR 60.110a, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)b.
d.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)c., b)(2)d., d)(1) and e)(1)
e.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. No limits, pursuant to OAC rule 3745-31-05, were established in PTI No. 03-1102 for this emissions unit.
- b. A Group 2 storage vessel that is also subject to the provisions of 40 CFR, Part 60, Subpart Ka, but not to the control requirements of 40 CFR, Part 60, Subpart Ka, is required to comply only with the provisions of 40 CFR, Part 63, Subpart CC. [40 CFR 63.640(n)(7)]
- c. The permittee shall comply with the applicable storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following sections:

63.640(n)(7)	Applicability and Overlap Provisions for 40 CFR, Part 60, Subpart Ka
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- d. The requirements in OAC rule 3745-21-09(L) are less stringent than the requirements in 40 CFR, Part 63, Subpart CC.

c) Operational Restrictions

- (1) The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 1.52 pounds per square inch absolute (psia).

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

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following section:

63.655(i)(1)(iv)	If a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent for existing sources or 2 percent for new sources, a record of any data, assumptions, and procedures used to make this determination shall be retained.
63.655(i)(5)	Retain Records for 5 Years

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

e) Reporting Requirements

- (1) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:



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63.655(e)(1), 63.655(f)(1)(i)(A)	63.655(f),	Notification of Compliance Status Reporting Requirements
63.655(h)(6)(ii)		Storage Vessel Provisions – Notification of Variation in Use of Any Storage Vessel

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

- (2) If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 psia, and such tank does not comply with the requirements of OAC rule 3745-21-09(L), the permittee shall so notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

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

- f) Testing Requirements
 - (1) None.
- g) Miscellaneous Requirements
 - (1) None.

72. T083, Tank 164559

Operations, Property and/or Equipment Description:

above ground, fixed roof organic liquids storage tank No. 164559 with a capacity of 203,258 gallons (group 2 storage vessel)

- 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 operations(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. 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)c., c)(1), d)(1) and e)(2)
b.	40 CFR, Part 60, Subpart Ka [40 CFR 60.110a – 60.115a] [In accordance with 40 CFR 60.110a, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)a.
c.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)b., d)(2) and e)(1)
d.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.



Effective Date: To be entered upon final issuance

(2) Additional Terms and Conditions

- a. A Group 2 storage vessel that is also subject to the provisions of 40 CFR, Part 60, Subpart Ka, but not to the control requirements of 40 CFR, Part 60, Subpart Ka, is required to comply only with the provisions of 40 CFR, Part 63, Subpart CC. [40 CFR 63.640(n)(7)]
- b. The permittee shall comply with the applicable storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following sections:

63.640(l), 63.640(l)(1), 63.640(l)(2), 63.640(l)(2)(i), 63.640(l)(2)(ii), 63.640(m) and Table 11	Applicability and Compliance Dates if a Process Change Causes Group 2 Emission Point(s) to Become Group 1 Emission Point(s)
63.640(n)(7)	Applicability and Overlap Provisions for 40 CFR, Part 60, Subparts K and Ka

- c. The requirements in OAC rule 3745-21-09(L) are less stringent than the requirements in 40 CFR, Part 63, Subpart CC.

c) Operational Restrictions

- (1) The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 1.52 pounds per square inch absolute (psia).

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

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; and
 - 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 pound per square inch absolute.

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

- (2) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following section:

63.655(i)(1)(iv)	If a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent for existing sources or 2 percent for new sources, a record of any data, assumptions, and
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	procedures used to make this determination shall be retained.
63.655(i)(5)	Retain Records for 5 Years

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

e) Reporting Requirements

- (1) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.640(l)(3)(i) through 63.640(l)(3)(vii)	Applicability of Reporting Requirements and Notification of Compliance Status if a Process Change Occurs for Existing Source
63.655(e)(1), 63.655(f), 63.655(f)(1)(i)(A)	Notification of Compliance Status Reporting Requirements
63.655(h)(6)(ii)	Storage Vessel Provisions – Notification of Variation in Use of Any Storage Vessel

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

- (2) If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 psia, and such tank does not comply with the requirements of OAC rule 3745-21-09(L), the permittee shall so notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

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

f) Testing Requirements

- (1) None.

g) Miscellaneous Requirements

- (1) None.



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73. Emissions Unit Group – Internal Floating Roof Group 1 Vessels subject to 40 CFR, Part 60, Subpart Ka; 40 CFR, Part 61, Subpart Y; and 40 CFR, Part 63, Subparts CC and G: T084, T085, T087

EU ID	Operations, Property and/or Equipment Description
T084	above ground, internal floating roof organic liquids storage tank No. 166 with a capacity of 452,096 gallons (group 1 storage vessel)
T085	above ground, internal floating roof organic liquids storage tank No. 167 with a capacity of 452,096 gallons (group 1 storage vessel)
T087	above ground, internal floating roof organic liquids storage tank No. 165 with a capacity of 3,696,667 gallons (group 1 storage vessel)

- 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 operations(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. 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. through b)(2)d.
b.	40 CFR, Part 60, Subpart Ka [40 CFR 60.110a – 60.115a] [In accordance with 40 CFR 60.110a, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)e.
c.	40 CFR, Part 61, Subpart Y [40 CFR 61.270 – 61.277] [In accordance with 40 CFR 61.270, these emissions units are affected sources consisting of storage vessels storing benzene having a specific gravity within the range of specific gravities specified in ASTM D836–84 for Industrial Grade Benzene, ASTM	See b)(2)f., b)(2)g., d)(1) and e)(1)



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	D835–85 for Refined Benzene-485, ASTM D2359–85a or 93 for Refined Benzene-535, and ASTM D4734–87 or 96 for Refined Benzene-545, subject to the emission limitations/control measures specified in this section.]	
d.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671]	See b)(2)f.

(2) Additional Terms and Conditions

- a. The fixed roof storage tank shall be equipped with an internal floating roof.
- b. The automatic bleeder vents shall be closed at all times, except when the roof is floated off or landed on the roof leg supports; and the rim vents, if provided, shall be set to open when the roof is being floated off the roof leg supports or is at the manufacturer's recommended setting.
- c. All openings, except stub drains, shall be equipped with a cover, seal or lid, which is in the closed position at all times, except when in actual use for tank gauging or sampling.
- d. 40 CFR, Part 63, Subpart CC regulations overlap with those of OAC rule 3745-21-09(L).
- e. The requirements of 40 CFR, Part 60, Subpart Ka are less stringent than the requirements of 40 CFR, Part 61, Subpart Y.
- f. This emissions unit is subject to NESHAPS standards in 40 CFR, Part 61, Subpart Y. Since the requirements in 40 CFR, Part 61, Subpart Y are more stringent than 40 CFR, Part 60, Subpart Ka; and 40 CFR, Part 63, Subpart CC, the permittee is only required to comply with 40 CFR, Part 61, Subpart Y.
- g. The permittee shall comply with the applicable internal floating roof emission standards under 40 CFR, Part 61, Subpart Y, including the following sections:

61.270(f)	Applicability and Overlap Provisions for 40 CFR, Part 60, Subpart Ka
61.271(a)(1)	Emission Standards: Internal Floating Roof Requirement to Rest on Liquid Surface



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61.271(a)(2)(ii) and (iii)	Emission Standards: Internal Floating Roof Double-Seal and Metallic Shoe Seal Closure Device Requirements
61.271(a)(3) through (a)(6)	Emission Standards: Internal Floating Roof Must Rest on Liquid Surface, Closure Devices, Openings Must be Below Liquid Surface and Have Cover, Vents Must be Gasketed and Only Open When Roof not Floating, Ladder Must Have Fabric Sleeve, Vents Must be Gasketed and Closed, Rim Vents Must Have Gasket, Supports Columns Must Have Fabric Sleeve

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 61, Subpart Y, including the following sections:

61.272(a)(1) through 61.272(a)(3)(ii)	Compliance Provisions – Internal Floating Roof Visual Inspections, Seal Inspections, Emptying and Degassing, and Repair Requirements
61.272(a)(4)	Compliance Provisions – Internal Floating Roof Visual Inspection of Double-Seal Requirements
61.276(a)	Retain Records for Two Years
61.276(b)	Recordkeeping – Retention of Records showing Dimensions and Capacity

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart Y]

e) Reporting Requirements

- (1) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 61, Subpart Y, including the following sections:



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61.272(a)(3)(i)	Compliance Provisions – Internal Floating Roof, 30 Day Notification for Filling or Refilling Internal Floating Roof: Report Within 30 Days for Records of Inspection Defects and Repairs
61.275(a) and 61.275(b)	Periodic Reporting Requirements – Inspection Results, Tank Defect Results, Extension Request, Timeline for Report Submittal, Date Tank Emptied and Nature of Repairs

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart Y]

- f) Testing Requirements
 - (1) None.
- g) Miscellaneous Requirements
 - (1) None.

74. T088, Tank 169

Operations, Property and/or Equipment Description:

above ground, external floating roof organic liquids storage tank No. 169 with a capacity of 1,479,936 gallons; welded shell construction, with a mechanical shoe primary seal, and a rim-mounted, flexible wiper secondary seal (group 1 storage vessel)

- 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 operations(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. 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. through b)(2)g., d)(1) through d)(4) and e)(1)
b.	40 CFR, Part 60, Subpart Ka [40 CFR 60.110a – 60.115a] [In accordance with 40 CFR 60.110a, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)h.
c.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)i., d)(5) and e)(2)
d.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Table 1A to 40 CFR, Part 63, Subpart G – Applicability of General Provisions to Subpart G shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. Any welded external floating roof storage tank equipped with a liquid-mounted primary seal and rim-mounted secondary seal, a mechanical shoe primary seal and a rim-mounted secondary seal, a mechanical shoe primary seal and a shoe-mounted, secondary seal, and the shoe-mounted secondary seal was installed prior to 1/10/81, a vapor-mounted primary seal and a rim-mounted secondary seal, and the vapor-mounted primary seal was installed prior to 1/01/81, or a flexible wiper primary seal and a rim-mounted secondary seal, and the flexible wiper primary seal was installed prior to 1/01/81 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 Ohio EPA, Northwest District Office within 30 days after the change occurs.

b. 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.
- ii. A projection into the tank below the liquid surface.

c. 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.

d. 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.



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- e. 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.
- f. Any stub drain shall be equipped with a projection into the tank below the liquid surface.
- g. 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.
- h. A Group 1 storage vessel that is also subject to the provisions of 40 CFR, Part 60, Subparts K or Ka is required to only comply with the provisions of 40 CFR, Part 63, Subpart CC. [40 CFR 63.640(n)(7)]
- i. The permittee shall comply with the applicable external floating roof storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following sections:

63.640(n)(5)	Applicability and Overlap Provisions for 40 CFR, Part 60, Subparts K and Ka – Only Comply with 40 CFR, Part 63, Subpart CC
63.646(a)	Comply with 40 CFR 63.119 through 63.121 except as in provided in 40 CFR 63.646(b) through (l)
63.646(b)	Storage Vessel Provisions – Determination of HAP Weight Percent
63.646(c)	Storage Vessel Provisions – Non-applicable Paragraphs
63.646(d)	Storage Vessel Provisions – Replacement Language for Schedule and Compliance Dates
63.646(e)	Storage Vessel Provisions – Compliance for Gaskets, Slotted Membranes and Sleeve Seals Not Applicable
63.646(f)(1) through 63.646(f)(3)	Storage Vessel Provisions – Group 1 Storage Vessel Requirements

- c) Operational Restrictions
 - (1) None.



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d) Monitoring and/or Recordkeeping Requirements

- (1) The seal and seal fabric shall be inspected annually for visible holes, tears, or other openings.

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

- (2) The secondary seal gap shall be measured annually in accordance with the methods specified in 40 CFR 63.120(b), which are equivalent to, or more stringent than OAC rule 3745-21-10.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart G]

- (3) The primary seal gap shall be measured at least once every 5 years, in accordance with the methods specified in 40 CFR 63.120(b), which are equivalent to, or more stringent than OAC rule 3745-21-10

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart G]

- (4) The permittee shall maintain records of the following information:

- a. the dates and results of any seal and seal fabric inspections and any seal gap measurements;
- b. the types of petroleum liquids stored in the tank;
- c. the annual throughput of any petroleum liquid stored in the tank; and
- d. 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 pound per square inch absolute.

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

- (5) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(g)	Storage Vessel Provisions – Violation if Fail to Perform Inspections and Monitoring
63.655(i)(1)	Storage Vessel Provisions – Recordkeeping Requirements
63.655(i)(5)	Retain Records for 5 Years

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

e) Reporting Requirements

- (1) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) within 30 days of any seal and seal fabric inspection or any seal gap measurement which documents a violation of the applicable control equipment requirements. The notification shall also describe the corrective actions which have been or will be taken to achieve compliance.

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

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.646(l) and 63.655(h)(2)(i)(C)	Storage Vessel Provisions – Waiver of Notification Requirements
63.655(e)(1), 63.655(f)(1)(i)(A)(1) through 63.655(f)(1)(i)(A)(3), 63.655(f)(6)	Storage Vessel Provisions – Notification of Compliance Status
63.655(e)(2), 63.655(g)(3)(i)(A) through 63.655(g)(3)(i)(C) and 63.655(g)(3)(ii)	Storage Vessel Provisions – Periodic Reporting Requirements and Request for Reporting Extension
63.655(e)(3), 63.655(h)(2)(i)(A), 63.655(h)(2)(i)(B)	Storage Vessel Provisions – Reporting per Subpart A for Tank Refill Notifications and Unplanned Inspection Exceptions
63.655(h)(2)(ii)	Storage Vessel Provisions – Notification of Seal Gap Measurements
63.655(h)(6)(ii)	Storage Vessel Provisions – Notification of Variation in Use of Any Storage Vessel

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

f) Testing Requirements

- (1) None.

g) Miscellaneous Requirements

- (1) None.

75. Emissions Unit Group – Internal Floating Roof Group 1 Vessels subject to 40 CFR, Part 60, Subpart Kb; 40 CFR, Part 61, Subpart FF; 40 CFR, Part 63, Subpart CC; and Storage Tank Emission Reduction Partnership Program, 65 Federal Register 19891 (April 13, 2000): T090, T091

EU ID	Operations, Property and/or Equipment Description
T090	above ground, fixed roof organic liquids storage tank No. 79 with a capacity of 56,402 gallons (tank storing group 1 wastewater)
T091	above ground, fixed roof organic liquids storage tank No. 78 with a capacity of 56,402 gallons (tank storing group 1 wastewater)

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 operations(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. 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. through b)(2)d., d)(4) and e)(4)
b.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)h., b)(2)i., d)(3) and e)(2)
c.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
d.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358] [In accordance with 40 CFR 61.340, this emissions unit is an affected source, since the storage tank includes a Group 1 wastewater stream per 40 CFR, Part 63, Subpart CC, with benzene containing waste.]	See b)(2)e., b)(2)f., d)(2) and e)(1)
e.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
f.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671]	See b)(2)e., b)(2)g. and e)(3)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 40 CFR 63.640, this emissions unit is an affected source, since the storage tank includes a Group 1 wastewater stream, with benzene containing waste.]	
g.	Storage Tank Emission Reduction Partnership Program 65 Federal Register 19891 (April 13, 2000)	See b)(2)j. and d)(1)
h.	40 CFR, Part 63, Subpart DD [40 CFR 63.680 – 63.698]	See b)(2)k.
i.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 11.1 psia. Since the maximum true vapor pressure of material stored in this storage tank is greater than 1.52 psia, compliance with OAC rule 3745-21-09(L) is demonstrated by maintaining an internal floating roof.

Also, by maintaining the maximum true vapor pressure so as not to exceed 11.1 psia, additional control requirements in 40 CFR 60.112b(b) are not applicable.
- b. The fixed roof storage tank shall be equipped with an internal floating roof.
- c. The automatic bleeder vents shall be closed at all times, except when the roof is floated off or landed on the roof leg supports; and the rim vents, if provided, shall be set to open when the roof is being floated off the roof leg supports or is at the manufacturer's recommended setting.
- d. All openings, except stub drains, shall be equipped with a cover, seal or lid, which is in the closed position at all times, except when in actual use for tank gauging or sampling.
- e. Except as provided in paragraph (b) of 40 CFR 63.647, each permittee of a Group 1 wastewater stream shall comply with the requirements of 40 CFR 61.340 through 61.355 of 40 CFR, Part 61, Subpart FF for each process wastewater stream that meets the definition in 40 CFR 63.641. [40 CFR 63.647(a)]
- f. The permittee shall comply with the applicable internal floating roof storage vessel provisions under 40 CFR, Part 61, Subpart FF, including the following section:



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61.351(a)	Alternative Standards for Tanks
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- g. A Group 1 or 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, except as provided in paragraph (n)(8) of 40 CFR 63.640. [40 CFR 63.647(a)]
- h. As an alternative to the standards for tanks specified in 40 CFR 61.343 of this subpart, the permittee has elected to comply with the following:
 - i. A fixed roof and internal floating roof meeting the requirements in 40 CFR 60.112b(a)(1).

If the permittee elects to comply with the provisions of 40 CFR 61.351(b) then the permittee is exempt from the provisions of 40 CFR 61.343 of this subpart applicable to the same facilities.

- i. The permittee shall comply with the applicable internal floating roof storage vessel provisions under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.112b(a)(1)(i) 60.112b(a)(1)(ix)	through	Standards for VOC: Internal Floating Roof Must Rest on Liquid Surface, Closure Devices, Openings Must be Below Liquid Surface and Have Cover, Vents Must be Gasketed and Only Open When Roof not Floating, Ladder Must Have Fabric Sleeve, Vents Must be Gasketed and Closed, Rim Vents Must Have Gasket, Supports Columns Must Have Fabric Sleeve
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- j. In accordance with the Storage Tank Emission Reduction Partnership Program (STERPP) agreement executed by the United States Environmental Protection Agency (U.S. EPA) on February 2, 2001, the permittee installed a pole sleeve system on the slotted guidepole of this emissions unit on December 21, 2001.

The pole sleeve system shall meet the following requirements:

- i. Each opening through the deck of the floating roof for a slotted guidepole shall be equipped with a deck cover, a pole wiper and a pole sleeve.
- ii. The deck cover shall be equipped with a gasket between the cover and the deck.
- iii. The sleeve shall extend into the stored liquid.
- k. An off-site material management unit is exempted from the requirements in 40 CFR 63.683(b)(1) when the permittee meets one of the exemptions provided in



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paragraphs 63.683(b)(2)(i) through (b)(2)(iv) of this section as applicable to the unit. An off-site material management unit is exempted from the requirements in paragraph (b)(1) of this section if the off-site material management unit is also subject to another subpart under 40 CFR, Part 61 or 40 CFR, Part 63, and the permittee is controlling the HAPs listed in Table 1 of this subpart that are emitted from the unit in compliance with the provisions specified in the other applicable subpart under Part 61 or Part 63.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) In accordance with the STERPP agreement, the permittee shall meet the following:

- a. The sliding cover shall be in place over the slotted-guidepole opening through the floating roof at all times except when the sliding cover must be removed for access.
- b. If the control technology used includes a guidepole float, the float shall be floating within the guidepole at all times except when it must be removed for access to the stored liquid or when the tank is empty.
- c. Visually inspect the deck fitting for the slotted guidepole at least once every 10 years and each time the vessel is emptied and degassed.
- d. If the slotted guidepole deck fitting or control devices have defects, or if a gap of more than 0.32 centimeters (1/8 inch) exists between any gasket required for control of the slotted guidepole deck fitting and any surface that it is intended to seal, such items shall be repaired before filling or refilling the storage vessel with regulated material.
- e. Tanks taken out of hydrocarbon service, for any reason, do not have to have any controls in place during the time they are out of service.

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

(2) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.356(a)	Maintain Records for On-Site for Two Years
61.356(k)	Comply with the Recordkeeping Requirements in 40 CFR 60.115b

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]

(3) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:



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60.113b(a)(1) through 60.113b(a)(4)	Internal Floating Roof Visual Inspections, Seal Inspections, Emptying and Degassing Requirements
60.116b(a) through 60.116b(c)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
60.116b(e)(1) through 60.116b(e)(3)	Monitoring of Operations: Determination of Temperature and Vapor Pressure of Product Stored

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

- (4) The permittee shall maintain records of the following information:
- 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 that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

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

e) Reporting Requirements

- (1) The permittee shall comply with the reporting requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.357(e)	Reporting Requirements – Notification of Alternative Standard
61.357(f)	Reporting Requirements – Comply with 60.115b

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(a)(5)	Internal Floating Roof: 30 Day Notification for Filling or Refilling
60.115b(a)(3) and 60.115b(a)(4)	Internal Floating Roof: Report Within 30 Days for Records of Inspection Defects and Repairs

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

- (3) Each permittee subject to the wastewater provisions in 40 CFR 63.647 shall comply with the record keeping and reporting provisions in 40 CFR 61.356 and 61.357 of 40 CFR, Part 61, Subpart FF unless they are complying with the wastewater provisions specified in paragraph (o)(2)(ii) of 40 CFR 63.640. There are no additional reporting and record keeping requirements for wastewater under this subpart unless a wastewater stream is included in an emissions average. Record keeping and reporting for emissions averages are specified in 40 CFR 63.653 and in paragraphs (f)(5) and (g)(8) of this section.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

- (4) If the permittee places, stores, or holds in the internal floating roof tank any petroleum liquid with a true vapor pressure which is greater than 11.1 pounds per square inch absolute, and such tank does not comply with the requirements of OAC rule 3745-21-09(L), the permittee shall so notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

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

f) Testing Requirements

- (1) None.

g) Miscellaneous Requirements

- (1) None.

76. T121, Tank 391

Operations, Property and/or Equipment Description:

above ground, internal floating roof organic liquids storage tank No. 391 with a capacity of 1,381,844 gallons (group 1 storage vessel)

- 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 operations(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. 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 No. P0134347, modification issued 8/30/23)	11.02 tons of volatile organic compounds (VOC)/yr
b.	OAC rule 3745-21-09(L)	See b)(2)a. through b)(2)d.
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)e.
d.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)e. and b)(2)f.
e.	40 CFR, Part 63, Subpart WW [40 CFR 63.1060 – 63.1067]	See b)(2)f. and b)(2)g.
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 11.1 psia.
- b. The fixed roof storage tank shall be equipped with an internal floating roof.
- c. The automatic bleeder vents shall be closed at all times, except when the roof is floated off or landed on the roof leg supports; and the rim vents, if provided, shall be set to open when the roof is being floated off the roof leg supports or is at the manufacturer's recommended setting.
- d. All openings, except stub drains, shall be equipped with a cover, seal or lid, which is in the closed position at all times, except when in actual use for tank gauging or sampling.
- e. Emissions unit T121 is a group 1 storage vessel (as defined in 40 CFR 63.641) that is part of an existing source and is also subject to the provisions of 40 CFR, Part 60, Subpart Kb. In accordance with 40 CFR 63.640(n)(1), emissions unit T121 is required to comply only with the requirements of 40 CFR, Part 60, Subpart Kb.
- f. Each owner or operator of a Group 1 storage vessel subject to 40 CFR, Part 63, Subpart CC shall comply with the requirements of 40 CFR, Part 63, Subpart WW according to the requirements in paragraphs (a) through (i) of 40 CFR 63.660. [40 CFR 63.660]
- g. The permittee shall comply with the applicable control requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1061	Definitions
63.1062	Storage vessel control requirements
63.1063(a)	Floating roof requirements: design requirements
63.1067	Implementation and enforcement

c) Operational Restrictions

- (1) The permittee shall comply with the applicable operational requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1063(b)	Floating roof requirements: operational requirements
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[OAC rule 3745-77-07(A)(1) and PTI No. P0134347]

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; and
- 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 pound per square inch absolute.

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

(2) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1063(c), (d), (e)	Internal floating roof inspection frequency, inspection procedures, and repair requirements
63.1065	Recordkeeping requirements for vessel dimensions and capacity, inspection results, and floating roof landings

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC and Subpart WW]

e) Reporting Requirements

(1) If the permittee places, stores, or holds in the internal floating roof tank any petroleum liquid with a true vapor pressure which is greater than 11.1 pounds per square inch absolute, and such tank does not comply with the requirements of OAC rule 3745-21-09(L), the permittee shall so notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

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

(2) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:



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63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1066	Notification of initial startup and periodic reports

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC and Subpart WW]

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:

11.02 tons of VOC/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

g) Miscellaneous Requirements

(1) None.

77. T161, Tank 57

Operations, Property and/or Equipment Description:

Above ground, fixed roof vacuum bottoms storage tank No. 57 with a capacity of 4,060,929 Gallon gallons Fixed Roof Vacuum Bottoms Storage Tank (storing organic liquid with a vapor pressure less than 0.754 psia)

- 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 rule 3704.03(T) (PTI No. P0106608, issued 8/5/10)	39.81 tons of volatile organic compounds (VOC) per rolling 12-month period See b)(2)a.
b.	OAC rule 3745-21-09(L)	See b)(2)b., c)(2), d)(3), and e)(2)
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] 40 CFR 60.116b(a) – (d) [In accordance with 40 CFR 60.110b, these emissions units are affected sources consisting of organic liquids storage tanks, subject to the emission limitations/control measures specified in this section.]	See b)(2)c. and d)(2)
d.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)d.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirement for this emissions unit has been determined to be an emission limitation of 39.81 tons of VOC per rolling 12-month period.
- b. The requirements of OAC rule 3745-21-09(L) are equivalent to or less stringent than the requirements of 40 CFR, Part 63, Subpart CC and 40 CFR, Part 60, Subpart Kb.
- c. This emissions unit is exempt from the control requirements specified in 40 CFR, Part 60, Subpart Kb because the maximum true vapor pressure of the stored organic liquid is less than 5.2 kPa (0.754 psia).
- d. This emissions unit is a Group 2 storage vessel as defined in 40 CFR Part 63.641. 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, except as provided in paragraph (n)(8) of 40 CFR 63.640. [40 CFR 63.640(n)(1)]

c) Operational Restrictions

- (1) No person shall place, store, or hold in a fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute unless such tank is designed or equipped in accordance with OAC rule 3745-21-09(L)(1)(a) – (d).

[OAC rule 3745-77-07(A)(1) and PTI No. P0106608]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain the following records each month for this emissions unit:
 - a. the amount of material throughput, in gallons per month;
 - b. the VOC emissions, in tons per month, as calculated using U.S EPA’s AP-42 calculation methods and/or currently accepted best engineering calculation methods.
 - c. the rolling 12-month emissions of VOC, in tons [summation of d)(1)b.].

[OAC rule 3745-77-07(C)(1) and PTI No. P0106608]



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- (2) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.116b(a) through 60.116b(d)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
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[OAC rule 3745-77-07(C)(1), PTI No. P0106608 and 40 CFR, Part 60, Subpart Kb]

- (3) The permittee shall maintain records of the following information in a readily accessible location for at least 5 years and shall make copies of the records available to the Northwest District Office upon verbal or written request:

- 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 pound per square inch absolute.

[OAC rule 3745-77-07(C)(1) and PTI No. P0106608]

e) Reporting Requirements

- (1) The permittee shall submit annual reports that summarize the total annual material throughput, in gallons, for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0106608]

- (2) If the permittee places, stores, or holds in a fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute and such tank does not comply with the requirements of OAC rule 3745-21-09(L)(1), the permittee shall so notify the director within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-09(L)(4)]

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:

39.81 tons of VOC per rolling 12-month period



Draft Title V Permit
Lima Refining Company
Permit Number: P0133998
Facility ID: 0302020012

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Applicable Compliance Method:

Compliance with the annual VOC limit is based on a maximum annual throughput of 129,933,728 gallons of vacuum bottoms, U.S EPA's AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0106608]

g) Miscellaneous Requirements

(1) None



78. T190, Tank 44

Operations, Property and/or Equipment Description:

above ground, internal floating roof organic liquids storage tank No. 44 with a capacity of 230,331 gallons (group 1 storage vessel)

- 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 operations(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. 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 (PTI No. 03-5614, issued 6/19/91)	0.67 lb of volatile organic compounds (VOC)/hr and 2.93 tons of VOC/yr 0.04 lb of benzene/hr and 0.18 ton of benzene/yr
b.	OAC rule 3745-21-09(L)	See b)(2)a. through b)(2)d., d)(1) and e)(1)
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)e., b)(2)f., d)(2) and e)(2)
d.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section	See b)(2)e., b)(2)g., d)(3) and e)(3)



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 11.1 psia.
- b. The fixed roof storage tank shall be equipped with an internal floating roof.
- c. The automatic bleeder vents shall be closed at all times, except when the roof is floated off or landed on the roof leg supports; and the rim vents, if provided, shall be set to open when the roof is being floated off the roof leg supports or is at the manufacturer's recommended setting.
- d. All openings, except stub drains, shall be equipped with a cover, seal or lid, which is in the closed position at all times, except when in actual use for tank gauging or sampling.
- e. Emissions unit T190 is a group 1 storage vessel (as defined in 40 CFR 63.641) that is part of an existing source and is also subject to the provisions of 40 CFR, Part 60, Subpart Kb. In accordance with 40 CFR 63.640(n)(1), emissions unit T190 is required to comply only with the requirements of 40 CFR, Part 60, Subpart Kb.
- f. The permittee shall comply with the applicable internal floating roof storage vessel provisions under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.112b(a)(1)(i) 60.112b(a)(1)(ix)	through	Standards for VOC: Internal Floating Roof Must Rest on Liquid Surface, Closure Devices, Openings Must be Below Liquid Surface and Have Cover, Vents Must be Gasketed and Only Open When Roof not Floating, Ladder Must Have Fabric Sleeve, Vents Must be Gasketed and Closed, Rim Vents Must Have Gasket, Supports Columns Must Have Fabric Sleeve
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- g. The permittee shall comply with the applicable internal floating roof storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following section:

63.640(n)(8)(ii)	Applicability and Overlap Provisions for 40 CFR, Part 60, Subpart Kb – Exemption for
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	Seal Requirements and Alternative if Tank Roof is Unsafe
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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; and
 - 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 pound per square inch absolute.

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

- (2) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(a)(1) through 60.113b(a)(4)	Internal Floating Roof Visual Inspections, Seal Inspections, Emptying and Degassing Requirements
60.116b(a) through 60.116b(c)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
60.116b(e)(1) through 60.116b(e)(3)	Monitoring of Operations: Determination of Temperature and Vapor Pressure of Product Stored

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

- (3) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart CC, including the following section:

63.640(n)(8)(iii)	Extensions of Repair Deadline
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[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

e) Reporting Requirements

- (1) If the permittee places, stores, or holds in the internal floating roof tank any petroleum liquid with a true vapor pressure which is greater than 11.1 pounds per square inch



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absolute, and such tank does not comply with the requirements of OAC rule 3745-21-09(L), the permittee shall so notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

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

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(a)(5)	Internal Floating Roof: 30 Day Notification for Filling or Refilling
60.115b(a)(3) and 60.115b(a)(4)	Internal Floating Roof: Report Within 30 Days for Records of Inspection Defects and Repairs

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

- (3) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.640(n)(8)(iv) and 63.640(n)(8)(v)	Reporting for Extensions of Repair Deadline; and Alternative Reporting for Tanks Subject to 40 CFR, Part 60, Subpart Kb
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[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

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:

0.67 lb of VOC/hr

Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA's AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-5614]

b. Emission Limitation:

2.93 tons of VOC/yr



Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-5614]

c. Emission Limitation:

0.04 lb of benzene/hr

Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-5614]

d. Emission Limitation:

0.18 ton of benzene/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-5614]

g) **Miscellaneous Requirements**

(1) None.



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79. Emissions Unit Group – Internal Floating Roof Group 1 vessels subject to 40 CFR, Part 60, Subpart Kb; 40 CFR, Part 61, Subpart FF; and 40 CFR, Part 63, Subpart CC (PTI No. 03-13794): T191, T192

EU ID	Operations, Property and/or Equipment Description
T191	above ground, internal floating roof organic liquids storage tank No. 172 with a capacity of 2,284,273 gallons (tank storing group 1 wastewater)
T192	above ground, internal floating roof organic liquids storage tank No. 173 with a capacity of 2,284,273 gallons (tank storing group 1 wastewater)

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 operations(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. 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 No. 03-13794, modification issued 5/29/08)	5.19 tons of volatile organic compounds (VOC)/yr, from each emissions unit individually The requirements of this rule also include compliance with the requirements of 40 CFR, Part 60, Subpart Kb; 40 CFR, Part 61, Subpart FF; 40 CFR, Part 63, Subpart CC; and OAC rule 3745-21-09(L). See b)(2)f.
b.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] 40 CFR 60.112b 40 CFR 60.113b 40 CFR 60.115b 40 CFR 60.116b [In accordance with 40 CFR 60.110b, these emissions units are affected sources consisting of organic liquids storage tanks, subject to the emission	See Subpart Kb sections below: See b)(2)e. See d)(2) and e)(1) See d)(2) and e)(1) See d)(2) and e)(1)



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	limitations/control measures specified in this section.]	
c.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
d.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358]	The control requirements, monitoring and/or record keeping requirements and reporting requirements are satisfied by the requirements in 40 CFR, Part 60, Subpart Kb.
e.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
f.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section	See b)(2)h.
g.	OAC rule 3745-21-09(L)	See b)(2)a. through b)(2)d., d)(1)., and e)(2)
h.	40 CFR, Part 63, Subpart DD [40 CFR 63.680 – 63.698]	See b)(2)g.

(2) Additional Terms and Conditions

- a. The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 11.1 psia.
- b. The fixed roof storage tank shall be equipped with an internal floating roof.
- c. The automatic bleeder vents shall be closed at all times, except when the roof is floated off or landed on the roof leg supports; and the rim vents, if provided, shall be set to open when the roof is being floated off the roof leg supports or is at the manufacturer's recommended setting.
- d. All openings, except stub drains, shall be equipped with a cover, seal or lid, which is in the closed position at all times, except when in actual use for tank gauging or sampling.
- e. The permittee shall comply with the applicable internal floating roof storage vessel provisions under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.112b(a)(1)(i) through 60.112b(a)(1)(ix)	Standards for VOC: Internal Floating Roof Must Rest on Liquid Surface, Closure Devices, Openings Must be Below Liquid
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	Surface and Have Cover, Vents Must be Gasketed and Only Open When Roof not Floating, Ladder Must Have Fabric Sleeve, Vents Must be Gasketed and Closed, Rim Vents Must Have Gasket, Supports Columns Must Have Fabric Sleeve
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- f. Best available technology (BAT) control requirements for this emissions unit have also been determined to include the use of submerged fill.
- g. An off-site material management unit is exempted from the requirements in 40 CFR 63.683(b)(1) when the permittee meets one of the exemptions provided in paragraphs 63.683(b)(2)(i) through (b)(2)(iv) of this section as applicable to the unit. An off-site material management unit is exempted from the requirements in paragraph (b)(1) of this section if the off-site material management unit is also subject to another subpart under 40 CFR, Part 61 or 40 CFR, Part 63, and the permittee is controlling the HAPs listed in Table 1 of this subpart that are emitted from the unit in compliance with the provisions specified in the other applicable subpart under Part 61 or Part 63.
- h. The permittee shall comply with the applicable storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following section:

63.640(n)(8)	Applicability and Overlap Provisions for 40 CFR, Part 60, Subpart Kb
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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 pound per square inch absolute; and
 - c. The annual throughput of any petroleum liquid stored in the tank.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13794]

- (2) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:



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60.113b(a)(1) through 60.113b(a)(4)	Internal Floating Roof Visual Inspections, Seal Inspections, Emptying and Degassing Requirements
60.115b, 60.115b(a)(2), 60.116b(a) and 60.116b(b)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
60.116b(e)(1) through 60.116b(e)(3)	Monitoring of Operations: Determination of Temperature and Vapor Pressure of Product Stored
60.116b(f)	Monitoring of Operations: Requirements for Storing Waste Mixture of Indeterminate or Variable Composition

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb; and PTI No. 03-13794]

e) Reporting Requirements

- (1) The permittee shall comply with the reporting requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(a)(5)	Internal Floating Roof: 30 Day Notification for Filling or Refilling
60.115b(a)(3) and 60.115b(a)(4)	Internal Floating Roof: Report Within 30 Days for Records of Inspection Defects and Repairs

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb; and PTI No. 03-13794]

- (2) If the permittee places, stores, or holds in the internal floating roof tank any petroleum liquid with a true vapor pressure which is greater than 11.1 pounds per square inch absolute, and such tank does not comply with the requirements of OAC rule 3745-21-09(L), the permittee shall so notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

[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:

5.19 tons of VOC/yr, from each emissions unit individually

Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13794]

g) Miscellaneous Requirements

(1) None.

80. T196, Tank 6

Operations, Property and/or Equipment Description:

above ground, internal floating roof organic liquids storage tank No. 6 with a capacity of 1,265,938 gallons (group 1 storage vessel)

- 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 operations(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. 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 No. P0134347, modification issued 8/30/23)	3.44 tons organic compounds (OC)/yr Control requirements [See b)(2)a.] See b)(2)b.
b.	OAC rule 3745-21-09(L)	See b)(2)c. through b)(2)e.
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, these emissions units are affected sources consisting of organic liquids storage tanks, subject to the emission limitations/control measures specified in this section.]	See b)(2)f.
d.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)f. and b)(2)g.
e.	40 CFR, Part 63, Subpart WW [40 CFR 63.1060 – 63.1067]	See b)(2)g. and b)(2)h.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirement for this emissions unit has been determined to be the use of a submerged fill pipe and an internal floating roof and compliance with OAC rule 3745-21-09(L) and 40 CFR, Part 60, Subpart Kb.
- b. The requirements of this rule include compliance with the requirements of OAC rule 3745-21-09(L) and 40 CFR, Part 63, Subpart CC.
- c. The fixed roof storage tank shall be equipped with an internal floating roof.
- d. The automatic bleeder vents shall be closed at all times except when the roof is floated off or landed on the roof leg supports, and the rim vents, if provided, shall be set to open when the roof is being floated off the roof leg supports or is at the manufacturer’s recommended setting.
- e. 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.
- f. Emissions unit T196 is a group 1 storage vessel (as defined in 40 CFR 63.641) that is part of an existing source and is also subject to the provisions of 40 CFR, Part 60, Subpart Kb. In accordance with 40 CFR 63.640(n)(2), emissions unit T196 is required to comply only with the requirements of 40 CFR, Part 60, Subpart Kb or 40 CFR, Part 63, Subpart CC.
- g. Each owner or operator of a Group 1 storage vessel subject to 40 CFR, Part 63, Subpart CC shall comply with the requirements of 40 CFR, Part 63, Subpart WW according to the requirements in paragraphs (a) through (i) of 40 CFR 63.660. [40 CFR 63.660]
- h. The permittee shall comply with the applicable control requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1061	Definitions
63.1062	Storage vessel control requirements
63.1063(a)	Floating roof requirements: design requirements



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63.1067	Implementation and enforcement
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c) Operational Restrictions

- (1) The permittee shall not exceed an annual material throughput rate of 74,994,026 gallons.
[OAC rule 3745-77-07(A)(1) and PTI No. P0134347]
- (2) The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 11.1 psia.
[OAC rule 3745-77-07(A)(1) and PTI No. P0134347]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the amount of material throughput for each emissions unit, in gallons per month and total gallons, to date, for the calendar year.
[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]
- (2) 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 pound per square inch absolute. Available data on the storage temperature may be used to determine the maximum true vapor pressure as in the following:

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

- (3) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1063(c), (d), (e)	Internal floating roof inspection frequency, inspection procedures, and repair requirements
63.1065	Recordkeeping requirements for vessel dimensions and capacity, inspection results, and floating roof landings

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC and Subpart WW; and PTI No. P0134347]



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e) Reporting Requirements

- (1) The permittee shall submit annual reports that summarize the total annual material throughput, in gallons, for this emissions unit. These reports shall be submitted electronically through Ohio EPA Air Services by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

- (2) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1066	Notification of initial startup and periodic reports

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC and Subpart WW]

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:

3.44 tons OC/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance by rim seal loss, withdrawal loss and deck fitting loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods with a maximum annual material throughput of 74,994,026 gallons.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

g) Miscellaneous Requirements

- (1) None.

81. T197, Tank 5

Operations, Property and/or Equipment Description:

above ground, fixed roof organic liquid storage tank No. 5 with a capacity of 3,828,272 gallons (group 2 storage vessel) intermediate diesel fuel storage tank

- 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 operations(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. 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 No. 03-6335, modification issued 1/6/04)	25.2 tons volatile organic compounds (VOC)/yr
b.	OAC rule 3745-21-09(L)	See d)(1) and e)(1)
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	Record keeping and Reporting Requirements [See c)(1) and d)(2)]
d.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, these emissions units are affected sources consisting of storage vessels associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	Applicability and overlap provisions - See b)(2)a.
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. A Group 1 or 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, except as provided in paragraph (n)(8) of 40 CFR 63.640. [40 CFR 63.640(n)(1)]

c) Operational Restrictions

- (1) The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than or equal to 5.2 kPa (0.75 psia).

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 60, Subpart Kb]

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; and
- b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

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

- (2) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.116b(a) through 60.116b(c)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
60.116b(e)(1) through 60.116b(e)(3)	Monitoring of Operations: Determination of Temperature and Vapor Pressure of Product Stored

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

e) Reporting Requirements

- (1) If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is equal to or greater than 0.75 pounds per square inch



absolute, the permittee shall notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

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:

25.2 tons VOC/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-6335]

g) Miscellaneous Requirements

(1) None.

82. T200, Tank 164788

Operations, Property and/or Equipment Description:

above ground, fixed roof organic liquids storage tank No. 164788 with a capacity of 18,213 gallons (group 2 storage vessel)

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 operations(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. 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)(2)(a)	Exempt [See b)(2)a.]
b.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, these emissions units are affected sources consisting of storage vessels associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.] 40 CFR 63.655(i)(1)(iv) and 40 CFR 63.655(i)(5)	See d)(1)
c.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. This emissions unit is exempt from the requirements of OAC rule 3745-21-09(L)(1) because it is a fixed roof storage tank with a capacity less than 40,000 gallons.



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c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following section:

63.655(i)(1)(iv)	If a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent for existing sources or 2 percent for new sources, a record of any data, assumptions, and procedures used to make this determination shall be retained.
63.655(i)(5)	Retain Records for 5 Years

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

e) Reporting Requirements

(1) None.

f) Testing Requirements

(1) None.

g) Miscellaneous Requirements

(1) None.



83. T201, Tank 38 (“G-Tank”)

Operations, Property and/or Equipment Description:

above ground, external floating roof organic liquids storage tank No. 38 with a capacity of 8,000,000 gallons, concrete shell construction, a mechanical shoe primary seal, and a rim-mounted secondary seal (group 1 storage vessel) (“G-Tank”)

- 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 operations(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. 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) (PTI No. 03-13794, modification issued 5/29/08)	52.48 tons volatile organic compounds (VOC)/yr The requirements of this rule also include compliance with the requirements of 40 CFR, Part 60, Subpart Kb; 40 CFR, Part 63, Subpart CC; and OAC rule 3745-21-09(Z). See b)(2)i.
b.	OAC rule 3745-21-09(Z)	See b)(2)a. through b)(2)g., d)(1) through d)(3), d)(4)b., d)(4)., and e)(1)
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] 40 CFR 60.112b(a)(2) 40 CFR 60.113b(b) 40 CFR 60.115b 40 CFR 60.116b [In accordance with 40 CFR 60.110b, these emissions units are affected sources consisting of organic liquids storage tanks, subject to the emission limitations/control measures specified in this section.]	See 40 CFR, Part 60, Subpart Kb sections below: See b)(2)h. and c)(1) See b)(2)h. d)(5) and e)(2) See d)(5) and e)(2) See d)(5) and e)(2)
d.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)j, b)(2)k., d)(6) and e)(3)
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. Any external floating roof storage tank equipped with either a 1) liquid-mounted primary seal and rim-mounted secondary seal; or a 2) mechanical shoe primary seal and a rim-mounted secondary seal; or a 3) mechanical shoe primary seal and a shoe-mounted, secondary seal, provided the shoe-mounted secondary seal was installed prior to 1/10/81; or a 4) vapor-mounted primary seal and a rim mounted secondary seal; or a 5) flexible wiper primary seal and a 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 (equivalent of 10.0 square inches for every 3.14 linear feet of tank circumference); and
- iii. for the secondary seal, the total seal gap area shall not exceed 1.0 square inch per foot of tank diameter (equivalent of 1.0 square inch for every 3.14 linear feet of tank circumference).

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 Ohio EPA, Northwest District Office within 30 days after the change occurs.

b. 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:



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- 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.
- c. 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.
- d. Any rim vent shall be set to open only at the manufacturer's recommended setting, except when the external floating roof is being floated off the roof leg supports.
- e. 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.
- f. Any stub drain shall be equipped with a projection into the tank below the liquid surface.
- g. 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.
- h. The permittee shall comply with the applicable external floating roof storage vessel provisions under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.112b(a)(2), 60.112b(a)(2)(i), 60.112b(a)(2)(i)(A), 60.112b(a)(2)(i)(B), 60.112b(a)(2)(ii), 60.112b(a)(2)(iii) and 60.113b(b)(6)	Standards for VOC: External Floating Roof, Primary Seal, Secondary Seal, Roof Vents, Filling and Emptying Requirements, and Tank Inspection Procedures
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- i. Best available technology (BAT) control requirements for this emissions unit have been determined to include the use of submerged fill.
- j. If the emissions unit is subject to the provisions of 40 CFR, Part 60, Subpart Kb, the permittee is required to comply only with the requirements of 40 CFR, Part 60, Subpart Kb. [40 CFR 63.640(n)(1)]
- k. The permittee shall comply with the applicable external floating roof storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following sections:

63.640(n)(8)(i) and 63.640(n)(8)(ii)	Applicability and Overlap Provisions for 40 CFR, Part 60, Subpart Kb – Exemption for Seal Requirements and Alternative if Tank Roof is Unsafe
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c) Operational Restrictions

- (1) The permittee shall comply with the applicable external floating roof storage vessel provisions under 40 CFR, Part 60, Subpart Kb, including the following sections:



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60.112b(a)	Vapor Pressure of Stored Liquid Cannot Exceed 76.6 kPa (11.1 psia)
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[OAC rule 3745-77-07(A)(1); 40 CFR, Part 60, Subpart Kb; and PTI No. 03-13794]

d) Monitoring and/or Recordkeeping Requirements

- (1) The seal and seal fabric shall be inspected annually for visible holes, tears, or other openings.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13794]

- (2) The secondary seal gap shall be measured annually in accordance with the methods specified in 40 CFR, Part 60, Subpart Kb, which are equivalent to or more stringent than OAC rule 3745-21-10.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13794]

- (3) The primary seal gap shall be measured at least once every 5 years, in accordance with the methods specified in 40 CFR, Part 60, Subpart Kb, which are equivalent to or more stringent than OAC rule 3745-21-10.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13794]

- (4) The permittee shall maintain records of the following information:
 - a. the types of petroleum liquids stored in the tank;
 - b. the annual throughput of any petroleum liquid stored in the tank; and
 - c. 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 pound per square inch absolute.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13794]

- (5) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(b)(1), 60.113b(b)(1)(i) through 60.113b(b)(1)(iii), 60.113b(b)(2)(i) through 60.113b(b)(2)(iii), 60.113b(b)(3), 60.113b(b)(4)(i) and 60.113b(b)(4)(ii)	External Floating Roof Visual Inspection and Seal Gap Measurement Procedures, Refill if Cease to Store Volatile Organic Liquid for One Year, and Seal Repair Requirements
60.115b(b)(3)	Recordkeeping Requirements for Seal Gap Measurements



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60.116b(a) and 60.116b(b)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records
60.116b(e)(1) through 60.116b(e)(3)	Monitoring of Operations: Determination of Temperature and Vapor Pressure of Product Stored
60.116b(f)	Monitoring of Operations: Requirements for Storing Waste Mixture of Indeterminate or Variable Composition

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb; and PTI No. 03-13794]

- (6) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following section:

63.640(n)(8)(iii)	Extensions of Repair Deadline
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[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

e) Reporting Requirements

- (1) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) within 30 days of any seal and seal fabric inspection or any seal gap measurement which documents a violation of the applicable control equipment requirements. The notification shall also describe the corrective actions which have been or will be taken to achieve compliance.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13794]

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(b)(4)(iii)	Extension Request Procedure for External Floating Roof Failure Detected
60.113b(b)(5)	External Floating Roof – Notification of Seal Gap Measurements
60.113b(b)(6)(ii)	External Floating Roof – Notification for Inspections
60.115b(b)(1)	External Floating Roof – Notification of Control Equipment



Effective Date: To be entered upon final issuance

60.115b(b)(2) and 60.115b(b)(4)	External Floating Roof – Reporting of Seal Gap Measurements and Seal Gap Measurement Exceedances
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb; and PTI No. 03-13794]

- (3) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.640(n)(8)(iv) through 63.640(n)(8)(vi)	Reporting for Extensions of Repair Deadline; Alternative Reporting for Tanks Subject to 40 CFR, Part 60, Subpart Kb; and Applicability and Overlap Provisions for 40 CFR, Part 60, Subpart Kb Reports of Rim Seal Measurements
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[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

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:

52.48 tons VOC/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA determined by U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13794]

g) Miscellaneous Requirements

- (1) None.

84. Emissions Unit Group – Fixed Roof Group 1 Vessels subject to 40 CFR, Part 60, Subpart Kb; 40 CFR, Part 61, Subpart FF; and 40 CFR, Part 63, Subpart CC: T202, T203, T204

EU ID	Operations, Property and/or Equipment Description
T202	above ground, fixed roof organic liquids storage tank No. 37 with a capacity of 9,996 gallons (tank storing group 1 wastewater)
T203	above ground, fixed roof organic liquids storage tank No. 36 with a capacity of 14,500 gallons (tank storing group 1 wastewater)
T204	above ground, fixed roof organic liquids storage tank No. 32 with a capacity of 14,500 gallons (tank storing group 1 wastewater)

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 operations(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. 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 No. 03-7545, modification issued 6/3/08)	See b)(2)d. and b)(2)f.
b.	OAC rule 3745-21-09(L)	Exempt [See b)(2)a.]
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b]	Exempt [See b)(2)b.]
d.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, these emissions unit is an affected source, since the storage tank includes a Group 1 wastewater stream, with benzene containing waste.]	See b)(2)e., d)(1) and e)(1)
e.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 - 61.359] [In accordance with 40 CFR 63.647(a) and 40 CFR 61.340, these emissions units are affected sources consisting of storage vessels at a	See b)(2)c., d)(2) and f)(1)



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	petroleum refinery used for wastewater storage classified as a hazardous waste treatment, storage, and disposal facility that treats, stores, or disposes of hazardous waste generated by the facility, subject to the emission limitations/control measures specified in this section.]	
f.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
g.	40 CFR, Part 63, Subpart DD [40 CFR 63.680 – 63.698]	Exempt [See b)(2)g.]
h.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. This emissions unit is exempt from the requirements of OAC rule 3745-21-09(L)(1), since it is a fixed roof tank with a capacity less than 40,000 gallons. The requirements of OAC rule 3745-21-09(L)(3) and 3745-21-09(L)(4) are also not applicable since the tank is exempted under OAC rule 3745-21-09(L)(2).
- b. This emissions unit is exempt from the requirements of 40 CFR, Part 60, Subpart Kb, since the tank capacity is less than 75 cubic meters (19,815 gallons).
- c. This emissions unit is subject to NESHAPS standards in 40 CFR, Part 61, Subpart FF.

During all times when the vent from this emissions unit is routed to the Compressor System used to compress vapors from emissions unit P025, the gaseous stream is exempt from 40 CFR, Part 61, Subpart FF, per 40 CFR 61.340(d). In accordance with 40 CFR 61.340(d), during these times, no testing, monitoring, recordkeeping or reporting is required under this subpart for the vent stream from this emissions unit.

The permittee shall comply with the applicable storage vessel provisions under 40 CFR, Part 61, Subpart FF, including the following sections:

61.343(d)	Tank Requirements: First Attempt at Repair within 45 Days
61.350	Delay of Repairs



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61.340(c) and 61.340(d)	Exempted Streams
61.343(a)(1)	Tank Requirements: Install a Fixed-Roof and Closed-Vent System to Route All Organic Vapors from Tank Waste Stream (Including Dewatering) to Compressor System
61.343(a)(1)(i)(A)	Fixed Roof Tank Requirements: Design Cover and All Openings to Operate with No Detectable Emissions (Less Than 500 ppmv)
61.343(a)(1)(i)(B)	Fixed Roof Tank Requirements: Openings Closed at All Times Except for Sampling, Inspections, Maintenance or Repair and Exemptions Listed in 61.343(a)(1)(i)(C)
61.349(a)(1)(i), 61.349(a)(1)(iv) and 61.349(b)	Closed Vent System Design and Operation Requirements

- d. The vent from this emissions unit is routed to the Compressor System used to compress vapors from emissions unit P025. Therefore, additional terms and conditions applicable to operation of the Compressor System are shown in the terms and conditions for emissions unit P025.
- e. Except as provided in paragraph (b) of 40 CFR 63.647, each permittee of a Group 1 wastewater stream shall comply with the requirements of 40 CFR 61.340 through 61.355 of 40 CFR, Part 61, Subpart FF for each process wastewater stream that meets the definition in 40 CFR 63.641. [40 CFR 63.647(a)]
- f. PTI No. 03-07545 modification was issued for installation of a new compressor. This installation was completed by the due date of April 1, 2008.

The permittee shall operate and maintain a compressor system to route all vapors from this emissions unit to the existing sulfur recovery unit fuel gas amine treater ("Compressor System").

- g. An off-site material management unit is exempted from the requirements in 40 CFR 63.683(b)(1) when the permittee meets one of the exemptions provided in paragraphs 63.683(b)(2)(i) through (b)(2)(iv) of this section as applicable to the unit. An off-site material management unit is exempted from the requirements in paragraph (b)(1) of this section if the off-site material management unit is also subject to another subpart under 40 CFR, Part 61 or 40 CFR, Part 63, and the permittee is controlling the HAPs listed in Table 1 of this subpart that are emitted from the unit in compliance with the provisions specified in the other applicable subpart under Part 61 or Part 63.

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c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) Each permittee subject to the wastewater provisions in 40 CFR 63.647 shall comply with the record keeping provisions in 40 CFR 61.356 of 40 CFR, Part 61, Subpart FF. There are no additional record keeping requirements for wastewater under this subpart.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC and PTI No. 03-7545]

- (2) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.343(c)	Fixed Roof Tank Visual Inspection Requirements
61.343(d)	Fixed Roof Tank Repair Requirements
61.349(a)(1)(ii)	Bypass Monitoring
61.349(a)(1)(iii)	Gauging and Sampling Devices
61.349(f)	Closed Vent System Inspection Requirements
61.349(g)	Closed Vent System Repair Requirements
61.356(a), 61.356(f)(1), 61.356(g), 61.356(h) and 61.356(j)(3)	Recordkeeping Requirements

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 61, Subpart FF and PTI No. 03-7545]

e) Reporting Requirements

- (1) Each permittee subject to the wastewater provisions in 40 CFR 63.647 shall comply with the reporting provisions in 40 CFR 61.357(d)(6) and 61.357(d)(8). There are no additional reporting requirements for wastewater under this subpart.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC and PTI No. 03-7545]

- (2) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.357(d)(6)	Quarterly Reports – Include Statement Certifying Required Inspection were Performed
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61.357(d)(8)	Annual Report Summarizing Inspections with Detectable Emissions
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 61, Subpart FF and PTI No. 03-7545]

f) Testing Requirements

- (1) The permittee shall comply with the testing requirements under 40 CFR, Part 61, Subpart FF, including the following section:

61.355(h)	No Detectable Emissions Procedures
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 61, Subpart FF and PTI No. 03-7545]

g) Miscellaneous Requirements

- (1) None.

85. T212, Tank 72

Operations, Property and/or Equipment Description:

Above-ground fixed roof tank (592,178 gallons) with a closed vent system and control device This emissions unit vents to the NESHAPs sewer which are then routed to the SRU Fuel Gas Amine Treater.

- 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 operations(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. 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 No. P0114999, modification issued 7/5/13)	7.35 tons volatile organic compounds (VOC)/yr See b)(2)e. and b)(2)f.
b.	OAC rule 3745-21-09(L)	See c)(1), d)(1) and e)(1)
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, these emissions units are affected sources consisting of organic liquids storage tanks, subject to the emission limitations/control measures specified in this section.]	See b)(2)a., c)(2), d)(2), d)(3), d)(4), and e)(2)
d.	40 CFR, Part 61, Subpart FF [40 CFR 61.340-61.358] [In accordance with 40 CFR 61.340, this emissions unit is an affected source, since the storage tank includes a Group 1 wastewater stream per 40 CFR, Part 63, Subpart CC, with benzene containing waste.]	See b)(2)c., b)(2)d., d)(5) and e)(3)
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671]	See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 40 CFR 63.640, this emissions unit is an affected source, since the storage tank includes a Group 1 wastewater stream, with benzene containing waste.]	

(2) Additional Terms and Conditions

- a. In accordance with 40 CFR 60.112b(a)(3), the permittee shall equip the storage vessel (tank) with a closed vent system and control device meeting the following specifications:
 - i. The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in Part 60, Subpart VV, 40 CFR 60.485(b).
 - ii. The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater.

The permittee shall comply with the control device requirements under 40 CFR 60.112b(a)(3)(ii) by routing all closed vent system vapors and gases to the "Compressor System" which is used to compress vapors from emissions unit P025 and route them to the existing fuel gas amine treater which is a component of the existing refinery fuel gas system.

- b. In accordance with 40 CFR Part 63.640(n)(1), a Group 1 or 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. Each permittee of a Group 1 wastewater stream shall comply with the requirements of 40 CFR 61.340 through 61.355 of 40 CFR, Part 61, Subpart FF for each process wastewater stream that meets the definition in 40 CFR 63.641.

Compliance with this requirement is demonstrated by routing emissions to the closed NESHAP sewer (emissions unit P025), whose emissions are routed to the existing sulfur recovery unit fuel gas amine treater ("Compressor System").

During all times when the vent from this emissions unit is routed to the "Compressor System" which is used to compress vapors from emissions unit P025 and route them to the existing fuel gas amine treater which is a component of the existing refinery fuel gas system, the gaseous stream is exempt from 40 CFR, Part 61, Subpart FF, per 40 CFR 61.340(d). In accordance with 40 CFR 61.340(d), during these times, no testing, monitoring, recordkeeping or reporting is required under this subpart for the vent stream from this emissions unit.

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- d. The permittee shall comply with the applicable restrictions required under 40 CFR 61, Subpart FF, including the following sections:

61.343(a)(1)	Install a Fixed-Roof and Closed-Vent System to Route All Organic Vapors from Tank Waste Stream (Including Dewatering) to Compressor System
61.343(a)(1)(i)(A)	Fixed Roof Tank Requirements: Design Cover and All Openings to Operate with No Detectable Emissions (Less Than 500 ppmv)
61.343(a)(1)(i)(B)	Fixed Roof Tank Requirements: Openings Closed at All Times Except for Sampling, Inspections, Maintenance or Repair and Exemptions Listed in 61.343(a)(1)(i)(C)
61.343(d)	First Attempt at Repair within 45 Days
61.350	Delay of Repairs

- e. Best available technology (BAT) control requirements for this emissions unit has been determined to be the routing of tank emissions to the same Compressor System which is used to compress vapors from emissions unit P025 and route them to the existing fuel gas amine treater which is a component of the existing refinery fuel gas system.
- f. The requirements of this rule also include compliance with the applicable requirements of OAC rule 3745-21-09(L); 40 CFR, Part 60, Subpart Kb; 40 CFR, Part 63, Subpart CC; and 40 CFR, Part 61, Subpart FF.

c) Operational Restrictions

- (1) The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 1.52 pounds per square inch absolute (psia).

[OAC rule 3745-77-07(A)(1) and PTI No. P0114999]

- (2) The permittee shall operate the closed vent system and control device [see b)(2)a.] and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted in accordance with 40 CFR 60.113b(c)(1) [see e)(2)c.].

[OAC rule 3745-77-07(A)(1) and PTI No. P0114999]

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 pound per square inch absolute.
- c. The annual throughput of any petroleum liquid stored in the tank.

[OAC rule 3745-77-07(C)(1) and PTI No. P0114999]

(2) After installing control equipment in accordance with 40 CFR 60.112b(a)(3) or (b)(1) (closed vent system and control device other than a flare), the permittee shall keep the following records:

- a. A copy of the operating plan; and
- b. A record of the measured values of the parameters monitored in accordance with 40 CFR 60.113b(c)(2).

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb; and PTI No. P0114999]

(3) The permittee shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb; and PTI No. P0114999]

(4) The permittee of each storage vessel as specified in 40 CFR 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb; and PTI No. P0114999]

(5) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.343(c)	Tank Requirements: Quarterly Visual Inspections of Fixed Roof, Seal, Access Door and Other Openings
61.356(g)	Recordkeeping: Maintain Records of Visual Inspections That Detected a Problem
61.356(h)	Recordkeeping: Test Results of No Detectable Emissions



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61.343(c)	Tank Requirements: Quarterly Visual Inspections of Fixed Roof, Seal, Access Door and Other Openings
61.343(d)	Fixed Roof Tank Repair Requirements
61.349(a)(1)(ii)	Bypass Monitoring
61.349(a)(1)(iii)	Gauging and Sampling Devices
61.349(f)	Closed Vent System Inspection
61.349(g)	Requirements
61.356(a), 61.356(f)(10), 61.356(g), 61.356(h) and 61.356(j)(3)	Closed Vent System Repair Requirements
61.355(h)	Testing for No Detectable Emissions

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]

e) Reporting Requirements

- (1) If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 psia, the permittee shall notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1) and PTI No. P0114999]

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 61, Subpart FF, including 40 CFR 61.357

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 61, Subpart FF]

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:

7.35 tons VOC/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA determined



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by U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0114999]

g) Miscellaneous Requirements

(1) None.

86. T214, Tank 482

Operations, Property and/or Equipment Description:

Above-ground, fixed roof tank with a capacity of 70,476 gallons (group 2 storage vessel)

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 operations(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. 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 No. 03-13434, modification issued 6/3/08)	6.43 tons volatile organic compounds (VOC)/yr See b)(2)c. and b)(2)d.
b.	OAC rule 3745-21-09(L)	See c)(1), d)(1) and e)(1)
c.	40 CFR, Part 60, Subpart Ka [40 CFR 60.110a – 60.115a] [In accordance with 40 CFR 60.110a, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)a.
d.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, these emissions units are affected sources consisting of storage vessels associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)b., d)(2) and e)(2)
e.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. This emissions unit is subject to NSPS standards in 40 CFR, Part 60, Subpart Ka and MACT standards in 40 CFR, Part 63, Subpart CC.

A Group 2 storage vessel that is also subject to the provisions of 40 CFR, Part 60, Subpart Ka, but not to the control requirements of 40 CFR, Part 60, Subpart Ka, is required to comply only with the provisions of 40 CFR, Part 63, Subpart CC. [40 CFR 63.640(n)(7)]

- b. The permittee shall comply with the applicable storage vessel provisions under 40 CFR, Part 63, Subpart CC, including the following sections:

63.640(l), 63.640(l)(1), 63.640(l)(2), 63.640(l)(2)(i), 63.640(l)(2)(ii), Table 11	63.640(l)(1), 63.640(l)(2)(i), 63.640(m) and	Applicability and Compliance Dates if a Process Change Causes Group 2 Emission Point(s) to Become Group 1 Emission Point(s)
63.640(n)(7)		Applicability and Overlap Provisions for 40 CFR, Part 60, Subpart Ka

- c. Best available technology (BAT) control requirements for this emissions unit has been determined to be use of submerged fill.
- d. The requirements of this rule also include compliance with the requirements of OAC rule 40 CFR, Part 60, Subpart Ka; and 40 CFR, Part 63, Subpart CC.

c) Operational Restrictions

- (1) The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 1.52 pounds per square inch absolute (psia).

[OAC rule 3745-77-07(A)(1) and PTI No. 03-13434]

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 pound per square inch absolute.
- c. The annual throughput of any petroleum liquid stored in the tank.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13434]



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- (2) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following section:

63.655(i)(1)(iv)	If a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent for existing sources or 2 percent for new sources, a record of any data, assumptions, and procedures used to make this determination shall be retained.
63.655(i)(5)	Retain Records for 5 Years

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

e) Reporting Requirements

- (1) If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 psia, the permittee shall notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13434]

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.640(l)(3)(i) through 63.640(l)(3)(vii)	Applicability of Reporting Requirements and Notification of Compliance Status if a Process Change Occurs for Existing Source
63.655(e)(1), 63.655(f), 63.655(f)(1)(i)(A)	Notification of Compliance Status Reporting Requirements
63.655(h)(6)(ii)	Storage Vessel Provisions – Notification of Variation in Use of Any Storage Vessel

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC]

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:

6.43 tons VOC/yr



Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA determined by U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13434]

- g) Miscellaneous Requirements
 - (1) None.

87. T217, Tank 164468 ("E-tank")

Operations, Property and/or Equipment Description:

above ground, fixed roof organic liquids storage tank No. 164468 with a capacity of 4,478,655 gallons, controlled by a Compressor System (vented to the closed NESHAPs sewer P025) (group 1 storage vessel) ("E-Tank")

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 operations(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. 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 No. 03-13434, modification issued 6/3/08)	See b)(2)d. and b)(2)e.
b.	OAC rule 3745-21-09(L)	See c)(1), d)(1) and e)(1)
c.	40 CFR, Part 60, Subpart Ka [40 CFR 60.110a – 60.115a] [In accordance with 40 CFR 60.110a, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)a.
d.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source, since the storage tank includes a Group 1 wastewater stream, with benzene containing waste.]	See b)(2)c., d)(3) and e)(2)
e.	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358] [In accordance with 40 CFR 61.340, this emissions unit is an affected	See b)(2)b. ,b)(2)c., d)(2) , e)(3) and f)(1)

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	source, since the storage tank includes a Group 1 wastewater stream per 40 CFR, Part 63, Subpart CC, with benzene containing waste.]	
f.	40 CFR, Part 61, Subpart A	See 40 CFR 61.01 through 61.19
g.	40 CFR, Part 63, Subpart DD [40 CFR 63.680 – 63.698]	Exempt [See b)(2)f.]
h.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply. Table 2 to 40 CFR, Part 63, Subpart DD – Applicability of General Provisions to Subpart DD shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. 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 this subpart. [40 CFR 63.640(n)(5)]
- b. The permittee shall comply with the applicable restrictions required under 40 CFR 61, Subpart FF, including the following sections:

61.343(a)(1)	Install a Fixed-Roof and Closed-Vent System to Route All Organic Vapors from Tank Waste Stream (Including Dewatering) to Compressor System
61.343(a)(1)(i)(A)	Fixed Roof Tank Requirements: Design Cover and All Openings to Operate with No Detectable Emissions (Less Than 500 ppmv)
61.343(a)(1)(i)(B)	Fixed Roof Tank Requirements: Openings Closed at All Times Except for Sampling, Inspections, Maintenance or Repair and Exemptions Listed in 61.343(a)(1)(i)(C)
61.343(d)	First Attempt at Repair within 45 Days
61.350	Delay of Repairs

- c. Each permittee of a Group 1 wastewater stream shall comply with the requirements of 40 CFR 61.340 through 61.355 of 40 CFR, Part 61, Subpart FF for each process wastewater stream that meets the definition in 40 CFR 63.641.

Compliance with this requirement is demonstrated by routing emissions to the closed NESHAP sewer (emissions unit P025), whose emissions are routed to the existing sulfur recovery unit fuel gas amine treater ("Compressor System").

During all times when the vent from this emissions unit is routed to the Compressor System used to compress vapors from emissions unit P025, the gaseous stream is exempt from 40 CFR, Part 61, Subpart FF, per 40 CFR 61.340(d). In accordance with 40 CFR 61.340(d), during these times, no testing, monitoring, recordkeeping or reporting is required under this subpart for the vent stream from this emissions unit.

- d. Best available technology (BAT) for this emissions unit has been determined to be the routing of tank emissions to the same Compressor System which is used to compress vapors from emissions unit P025 and route them to the existing fuel gas amine treater. The vent stream routed to the Compressor System is exempt from the requirements of 40 CFR, Part 61, Subpart FF: Closed-vent Systems and Control Devices [40 CFR 61.349], per 40 CFR 61.340(d).
- e. The requirements of this rule also include compliance with the requirements of OAC rule 40 CFR, Part 60, Subpart Ka; 40 CFR, Part 63, Subpart CC; and 40 CFR, Part 61, Subpart FF.
- f. An off-site material management unit is exempted from the requirements in 40 CFR 63.683(b)(1) when the permittee meets one of the exemptions provided in paragraphs 63.683(b)(2)(i) through (b)(2)(iv) of this section as applicable to the unit. An off-site material management unit is exempted from the requirements in paragraph (b)(1) of this section if the off-site material management unit is also subject to another subpart under 40 CFR, Part 61 or 40 CFR, Part 63, and the permittee is controlling the HAPs listed in Table 1 of this subpart that are emitted from the unit in compliance with the provisions specified in the other applicable subpart under Part 61 or Part 63.

c) **Operational Restrictions**

- (1) The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 1.52 pounds per square inch absolute (psia).

[OAC rule 3745-77-07(A)(1) and PTI No. 03-13434]

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.



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- 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 pound per square inch absolute.
- c. The annual throughput of any petroleum liquid stored in the tank.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13434]

- (2) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.343(c)	Tank Requirements: Quarterly Visual Inspections of Fixed Roof, Seal, Access Door and Other Openings
61.356(g)	Recordkeeping: Maintain Records of Visual Inspections That Detected a Problem
61.356(h)	Recordkeeping: Test Results of No Detectable Emissions

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 61, Subpart FF; and PTI No. 03-13434]

- (3) Each permittee subject to the wastewater provisions in 40 CFR 63.647 shall comply with the record keeping provisions in 40 CFR 61.356 of 40 CFR, Part 61, Subpart FF. There are no additional record keeping requirements for wastewater under this subpart.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. 03-13434]

e) Reporting Requirements

- (1) If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 psia, the permittee shall notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13434]

- (2) Each permittee subject to the wastewater provisions in 40 CFR 63.647 shall comply with the reporting provisions in 40 CFR 61.357 of 40 CFR, Part 61, Subpart FF. There are no additional reporting requirements for wastewater under this subpart.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC; and PTI No. 03-13434]

- (3) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 61, Subpart FF, including the following sections:

61.357(d)(6)	Quarterly Reports – Include Statement Certifying Required Inspections were Performed
61.357(d)(8)	Annual Report Summarizing Inspections with Detectable Emissions

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 61, Subpart FF; and PTI No. 03-13434]

f) Testing Requirements

- (1) The permittee shall conduct an annual test of the cover and all openings for no detectable emissions (less than 500 ppmv) using the following test methods and procedures:
 - a. The permittee shall test equipment for compliance with no detectable emissions as required in 40 CFR 61.343 of this subpart in accordance with the following requirements:
 - i. Monitoring shall comply with Method 21 from Appendix A of 40 CFR, Part 60.
 - ii. The detection instrument shall meet the performance criteria of Method 21.
 - iii. The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21.
 - iv. Calibration gases shall be:
 - (a) Zero air (less than 10 ppm of hydrocarbon in air); and
 - (b) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.
 - v. The background level shall be determined as set forth in Method 21.
 - vi. The instrument probe shall be traversed around all potential leak interfaces as close as possible to the interface as described in Method 21.
 - vii. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared to 500 ppm for determining compliance.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 61, Subpart FF; and PTI No. 03-13434]

g) Miscellaneous Requirements

- (1) None.



88. T222, Tank 56

Operations, Property and/or Equipment Description:

above ground, fixed roof organic liquids storage tank No. 56 with a capacity of 2,520,000 gallons (group 2 storage vessel)

- 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 operations(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. 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 No. 03-13669, modification issued 11/6/03)	36.45 tons organic compounds (OC)/yr Control Requirements [See b)(2)a.] See b)(2)c.
b.	OAC rule 3745-21-09(L)	See b)(2)b., c)(1) and e)(1)
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	Record keeping and Reporting Requirements [See c)(1), d)(1) and d)(2)]
d.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)b.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirement for this emissions unit has been determined to be the use of a submerged fill pipe.
- b. Emissions unit T222 is a group 2 storage vessel (as defined in 40 CFR 63.641) that is part of an existing source and is also subject to the provisions of 40 CFR, Part 60, Subpart Kb. In accordance with 40 CFR 63.640(n)(1), emissions unit T222 is required to comply only with the requirements of 40 CFR, Part 60, Subpart Kb and is exempt from the control and record keeping requirements of OAC rule 3745-21-09(L).
- c. The requirements of this rule also include compliance with the requirements of 40 CFR, Part 60, Subpart Kb and 40 CFR, Part 63, Subpart CC.

c) Operational Restrictions

- (1) The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 0.75 pounds per square inch absolute (psia).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 60, Subpart Kb and PTI No. 03-13669]

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to comply with the requirements of 40 CFR 60.116b(c) and to demonstrate compliance with the emission limitation of 36.45 tons OC per year the permittee shall collect and record the following information each month:
 - a. the volatile organic liquid (VOL) stored;
 - b. the maximum true vapor pressure, in pounds per square inch absolute of VOL stored;
 - c. the VOL throughput, in gallons per month;
 - d. the calculated OC emissions, in tons per month (OC emissions shall be calculated using the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods); and



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- e. the annual OC emissions, in tons per year [summation of d)(2)d. for each month to date for the calendar year].

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb and PTI No. 03-13669]

- (2) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.116b(a) through 60.116b(c)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
60.116b(e)(1) through 60.116b(e)(3)	Monitoring of Operations: Determination of Temperature and Vapor Pressure of Product Stored

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

e) Reporting Requirements

- (1) If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 0.75 psia, the permittee shall notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb and PTI No. 03-13669]

- (2) The permittee shall submit annual deviation (excursion) reports that identify any and all exceedances of the annual material throughput limitation, as well as the corrective actions taken to achieve compliance. If no deviations occurred during a calendar year, the permittee shall submit an annual report which states that no deviations occurred during that year. These reports shall be submitted by January 31 of each year.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13669]

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:

36.45 tons OC/yr



Applicable Compliance Method:

Compliance shall be determined by the monitoring and record keeping in section d)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. 03-13669]

g) Miscellaneous Requirements

(1) None.

89. T223, Tank 71

Operations, Property and/or Equipment Description:

above ground, fixed roof organic liquids storage tank No. 71 with a capacity of 705,022 gallons (group 2 storage vessel)

- 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 operations(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. 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 No. 03-16166, modification issued 9/7/04)	21.06 tons organic compounds (OC)/yr [See b)(2)a. and b)(2)c.]
b.	OAC rule 3745-21-09(L)	See c)(1) and e)(1)
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	Record keeping and Reporting Requirements [See c)(1), d)(1) and d)(2)]
d.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)b.
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirement for this emissions unit has been determined to be the use of a submerged fill pipe.
- b. Emissions unit T223 is a group 2 storage vessel (as defined in 40 CFR 63.641) that is part of an existing source and is also subject to the provisions of 40 CFR, Part 60, Subpart Kb. In accordance with 40 CFR 63.640(n)(1), emissions unit T223 is only required to comply with the requirements of 40 CFR, Part 60, Subpart Kb.
- c. The requirements of this rule also include compliance with the requirements of 40 CFR, Part 60, Subpart Kb and 40 CFR, Part 63, Subpart CC.

c) Operational Restrictions

- (1) The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 0.75 pounds per square inch absolute (psia).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 60, Subpart Kb and PTI No. 03-16166]

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to comply with the requirements of 40 CFR 60.116b(c) and to demonstrate compliance with the emission limitation of 21.06 tons OC per year, the permittee shall collect and record the following information each month:

- a. the volatile organic liquid (VOL) stored;
- b. the maximum true vapor pressure, in pounds per square inch absolute of VOL stored;
- c. the VOL throughput, in gallons per month;
- d. the calculated OC emissions, in tons per month (OC emissions shall be calculated using the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods); and
- e. the annual OC emissions, in tons per year [summation of d)(2)d. for each month, to date, for the calendar year].

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb and PTI No. 03-16166]

- (2) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:



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60.116b(a) through 60.116b(c)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
60.116b(e)(1) through 60.116b(e)(3)	Monitoring of Operations: Determination of Temperature and Vapor Pressure of Product Stored

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

e) Reporting Requirements

- (1) If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 0.75 psia, the permittee shall notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb and PTI No. 03-16166]

- (2) The permittee shall submit annual deviation (excursion) reports that identify any and all exceedances of the annual material throughput limitation, as well as the corrective actions taken to achieve compliance. If no deviations occurred during a calendar year, the permittee shall submit an annual report which states that no deviations occurred during that year. These reports shall be submitted by January 31 of each year.

[OAC rule 3745-77-07(C)(1) and PTI No. 03-16166]

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:

21.06 tons OC/yr

Applicable Compliance Method:

Compliance shall be determined by the monitoring and recordkeeping in section d)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. 03-16166]

g) Miscellaneous Requirements

- (1) None.

90. T231, Tank 327

Operations, Property and/or Equipment Description:

above ground, external floating roof organic liquids storage tank No. 327 with a capacity of 4,876, 569 gallons (group 1 storage vessel)

- 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 operations(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. 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 No. P0134347, issued 8/30/23)	13.89 tons volatile organic compounds (VOC)/yr Control requirements See b)(2)a.
b.	OAC rule 3745-21-09(Z)	See b)(2)b. through b)(2)h.
c.	40 CFR, Part 60, Subpart Kb	See b)(2)i
d.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)i. and b)(2)j.
e.	40 CFR, Part 63, Subpart WW [40 CFR 63.1060 – 63.1067]	See b)(2)j. and b)(2)k.
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirement for this emissions unit has been determined to be the use of submerged fill, an external floating roof and compliance with OAC rule 3745-21-09(Z) and 40 CFR, Part 63, Subpart CC.
- b. Any external floating roof storage tank equipped with either a 1) liquid-mounted primary seal and rim-mounted secondary seal; or a 2) mechanical shoe primary seal and a rim-mounted secondary seal; or a 3) mechanical shoe primary seal and a shoe-mounted, secondary seal, provided the shoe-mounted secondary seal was installed prior to 1/10/81; or a 4) vapor-mounted primary seal and a rim mounted secondary seal; or a 5) flexible wiper primary seal and a 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 (equivalent of 10.0 square inches for every 3.14 linear feet of tank circumference); and
 - iii. for the secondary seal, the total seal gap area shall not exceed 1.0 square inch per foot of tank diameter (equivalent of 1.0 square inch for every 3.14 linear feet of tank circumference).

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 Ohio EPA, Northwest District Office within 30 days after the change occurs.

- c. 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.
- d. 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.
- e. Any rim vent shall be set to open only at the manufacturer's recommended setting, except when the external floating roof is being floated off the roof leg supports.
- f. 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.
- g. Any stub drain shall be equipped with a projection into the tank below the liquid surface.



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- h. 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.
- i. Emissions unit T231 is a group 1 storage vessel (as defined in 40 CFR 63.641) that is part of an existing source and is also subject to the provisions of 40 CFR, Part 60, Subpart Kb. In accordance with 40 CFR 63.640(n)(1), emissions unit T231 is required to comply only with the requirements of 40 CFR, Part 60, Subpart Kb except as provided in paragraph (n)(8) of 40 CFR 63.640 or 40 CFR, Part 63, Subpart CC.
- j. Each owner or operator of a Group 1 storage vessel subject to 40 CFR, Part 63, Subpart CC shall comply with the requirements of 40 CFR, Part 63, Subpart WW according to the requirements in paragraphs (a) through (i) of 40 CFR 63.660. [40 CFR 63.660]
- k. The permittee shall comply with the applicable control requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1061	Definitions
63.1062	Storage vessel control requirements
63.1063(a)	Floating roof requirements: design requirements
63.1067	Implementation and enforcement

c) **Operational Restrictions**

- (1) The permittee shall not exceed an annual material throughput rate of 1,779,947,685 gallons.
 [OAC rule 3745-77-07(A)(1) and PTI No. P0134347]
- (2) The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 11.1 psia.
 [OAC rule 3745-77-07(A)(1) and PTI No. P0134347]

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The seal and seal fabric shall be inspected annually for visible holes, tears, or other openings.
 [OAC rule 3745-77-07(C)(1) and PTI No. P0134347]
- (2) The permittee shall maintain records of the following information:
 - a. the types of petroleum liquids stored in the tank;



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- 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 pound per square inch absolute; and
- c. the annual throughput of any petroleum liquid stored in the tank.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

- (3) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1063(c), (d), (e)	External floating roof inspection frequency, inspection procedures, and repair requirements
63.1065	Recordkeeping requirements for vessel dimensions and capacity, inspection results, and floating roof landings

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart CC and Subpart WW; and PTI No. P0134347]

e) Reporting Requirements

- (1) If any of the conditions described in d)(1) are detected during the annual visual inspection, a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

- (2) The permittee shall submit annual reports that summarize the total annual material throughput, in gallons, for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

- (3) The permittee shall submit annual deviation (excursion) reports that identify any and all exceedances of the annual material throughput limitation, as well as the corrective actions taken to achieve compliance. If no deviations occurred during a calendar year, the permittee shall submit an annual report which states that no deviations occurred during that year. These reports shall be submitted by January 31 of each year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]



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- (4) If the permittee places, stores, or holds in the external floating roof tank any petroleum liquid with a true vapor pressure greater than or equal to 76.6 Kpa (11.11 psia), the permittee shall notify the Director (the Ohio EPA Northwest District Office) within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart Kb; and PTI No. P0134347]

- (5) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1066	Notification of initial startup and periodic reports

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC and Subpart WW]

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:

13.89 tons VOC/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance by rim seal loss, withdrawal loss and deck fitting loss calculations as determined by the most recent version of the U.S. EPA TANKS program with a maximum annual material throughput of 1,779,947,685 gallons.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

g) Miscellaneous Requirements

- (1) None.



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91. T236, Tank 108

Operations, Property and/or Equipment Description:

above ground, fixed roof kerosene storage/rundown tank No. 108 with a capacity of 345,462 gallons (group 2 storage vessel)

- 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 operations(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. 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 No. P0104006, issued 12/3/08)	20.0 tons organic compounds (OC)/yr See b)(2)a. and b)(2)c.
b.	OAC rule 3745-21-09(L)	See c)(1) and e)(1)
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	Record keeping and Reporting Requirements [See c)(1), d)(1), d)(2) and e)(1)]
d.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)b.
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirement for this emissions unit has been determined to be the use of a submerged fill pipe.
- b. Emissions unit T236 is a group 2 storage vessel (as defined in 40 CFR 63.641) that is part of an existing source and is also subject to the provisions of 40 CFR, Part 60, Subpart Kb. In accordance with 40 CFR 63.640(n)(1), emissions unit T236 is only required to comply with the requirements of 40 CFR, Part 60, Subpart Kb.
- c. The requirements of this rule also include compliance with the requirements of 40 CFR, Part 60, Subpart Kb and 40 CFR, Part 63, Subpart CC.

c) Operational Restrictions

- (1) The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 0.75 pound per square inch absolute (psia).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 60, Subpart Kb and PTI No. P0104006]

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to comply with the requirements of 40 CFR 60.116b(c) and to demonstrate compliance with the emission limitation of 20.0 tons OC per year, the permittee shall collect and record the following information each month:

- a. the volatile organic liquid (VOL) stored;
- b. the maximum true vapor pressure, in pounds per square inch absolute of VOL stored;
- c. the VOL throughput, in gallons per month;
- d. the calculated OC emissions, in tons per month (OC emissions shall be calculated using the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods); and
- e. the annual OC emissions, in tons per year [summation of d)(2)d. for each month, to date, for the calendar year].

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb and PTI No. P0104006]

- (2) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:



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60.116b(a) through 60.116b(c)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
60.116b(e)(1) through 60.116b(e)(3)	Monitoring of Operations: Determination of Temperature and Vapor Pressure of Product Stored

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Kb]

e) Reporting Requirements

- (1) If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 0.75 psia, the permittee shall notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 60, Subpart Kb and PTI No. P0104006]

- (2) The permittee shall submit annual deviation (excursion) reports that identify any and all exceedances of the annual material throughput limitation, as well as the corrective actions taken to achieve compliance. If no deviations occurred during a calendar year, the permittee shall submit an annual report which states that no deviations occurred during that year. These reports shall be submitted by January 31 of each year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0104006]

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:

20.0 tons OC/yr

- Applicable Compliance Method:

Compliance shall be determined by the monitoring and record keeping in section d)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0104006]

g) Miscellaneous Requirements

- (1) None.

92. T237, Tank 106

Operations, Property and/or Equipment Description:

above ground, external floating roof organic liquids storage tank No. 106 with a capacity of 3,968,941 gallons (group 1 storage vessel)

- 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 operations(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. 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 No. P0134347, issued 8/30/23)	11.37 tons volatile organic compounds (VOC)/yr
b.	OAC rule 3745-21-09(Z)	See b)(2)a. through b)(2)g
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b]	See b)(2)h
d.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)h. and b)(2)i.
e.	40 CFR, Part 63, Subpart WW [40 CFR 63.1060 – 63.1067]	See b)(2)i. and b)(2)j.
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. Any external floating roof storage tank equipped with either a 1) liquid-mounted primary seal and rim-mounted secondary seal; or a 2) mechanical shoe primary seal and a rim-mounted secondary seal; or a 3) mechanical shoe primary seal and a shoe-mounted secondary seal, provided the shoe-mounted secondary seal was installed prior to 01/10/81; or a 4) vapor-mounted primary seal and a rim mounted secondary seal; or a 5) flexible wiper primary seal and a 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 (equivalent of 10.0 square inches for every 3.14 linear feet of tank circumference); and
- iii. for the secondary seal, the total seal gap area shall not exceed 1.0 square inch per foot of tank diameter (equivalent of 1.0 square inch for every 3.14 linear feet of tank circumference).

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 Ohio EPA, Northwest District Office within 30 days after the change occurs.

b. Any openings 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.

c. 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.

d. Any rim vent shall be set to open only at the manufacturer's recommended setting, except when the external floating roof is being floated off the roof leg supports.

e. 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.

f. Any stub drain shall be equipped with a projection into the tank below the liquid surface.

g. 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.



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- h. This emissions unit is a Group 1 storage vessel as defined in 40 CFR Part 63.641. After the compliance date specified in paragraph (h) of 40 CFR Part 63.640, a Group 1 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 either the requirements of 40 CFR, Part 60, Subpart Kb, except as provided in paragraph (n)(8) of 40 CFR 63.640 or 40 CFR, Part 63, Subpart CC. [40 CFR 63.640(n)(2)]
- i. Each owner or operator of a Group 1 storage vessel subject to 40 CFR, Part 63, Subpart CC shall comply with the requirements of 40 CFR, Part 63, Subpart WW according to the requirements in paragraphs (a) through (i) of 40 CFR 63.660. [40 CFR 63.660]
- j. The permittee shall comply with the applicable control requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1061	Definitions
63.1062	Storage vessel control requirements
63.1063(a)	Floating roof requirements: design requirements
63.1067	Implementation and enforcement

c) **Operational Restrictions**

- (1) The permittee shall not place, store, or hold in this external floating roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 11.1 pounds per square inch absolute (psia).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 60, Subpart Kb and PTI No. P0134347]
- (2) The permittee shall comply with the applicable operational requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1063(b)	Floating roof requirements: operational requirements
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[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart WW and PTI No. P0134347]

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The seal and seal fabric shall be inspected annually for visible holes, tears, or other openings.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]
- (2) The permittee shall maintain records of the following information:
 - a. the types of petroleum liquids stored in the tank;



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- 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 pound per square inch absolute; and
- c. the annual throughput of any petroleum liquid stored in the tank.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

- (3) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1063(c), (d), (e)	External floating roof inspection frequency, inspection procedures, and repair requirements
63.1065	Recordkeeping requirements for vessel dimensions and capacity, inspection results, and floating roof landings

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC and Subpart WW]

e) Reporting Requirements

- (1) If any of the conditions described in d)(1) are detected during the annual visual inspection, a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

- (2) If the permittee places, stores, or holds in the external floating roof tank any petroleum liquid with a true vapor pressure which is equal to or greater than 11.1 psia, the permittee shall notify the Director (the Ohio EPA, Northwest District Office) within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

- (3) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1066	Notification of initial startup and periodic reports



[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC and Subpart WW]

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:

11.37 tons VOC/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

g) Miscellaneous Requirements

(1) None.

93. T238, Tank 107

Operations, Property and/or Equipment Description:

above ground, external floating roof organic liquids storage tank No. 107 with a capacity of 3,968,941 gallons (group 1 storage vessel)

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 operations(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. 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 No. P0134347, issued 8/30/23)	13.69 tons volatile organic compounds (VOC)/yr
b.	OAC rule 3745-21-09(Z)	See b)(2)a. through b)(2)g.
c.	40 CFR, Part 60, Subpart Kb	See b)(2)h.
d.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)h. and b) 2)i.
e.	40 CFR, Part 63, Subpart WW [40 CFR 63.1060 – 63.1067]	See b)(2)i. and b)(2)j.
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. Any external floating roof storage tank equipped with either a 1) liquid-mounted primary seal and rim-mounted secondary seal; or a 2) mechanical shoe primary

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seal and a rim-mounted secondary seal; or a 3) mechanical shoe primary seal and a shoe-mounted secondary seal, provided the shoe-mounted secondary seal was installed prior to 01/10/81; or a 4) vapor-mounted primary seal and a rim mounted secondary seal; or a 5) flexible wiper primary seal and a 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 (equivalent of 10.0 square inches for every 3.14 linear feet of tank circumference); and
- iii. for the secondary seal, the total seal gap area shall not exceed 1.0 square inch per foot of tank diameter (equivalent of 1.0 square inch for every 3.14 linear feet of tank circumference).

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 Ohio EPA, Northwest District Office within 30 days after the change occurs.

- b. Any openings 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.
- c. 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.
- d. Any rim vent shall be set to open only at the manufacturer's recommended setting, except when the external floating roof is being floated off the roof leg supports.
- e. 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.
- f. Any stub drain shall be equipped with a projection into the tank below the liquid surface.
- g. 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.
- h. This emissions unit is a Group 1 storage vessel as defined in 40 CFR Part 63.641. After the compliance date specified in paragraph (h) of 40 CFR Part 63.640, a Group 1 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 either



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the requirements of 40 CFR, Part 60, Subpart Kb, except as provided in paragraph (n)(8) of 40 CFR 63.640 or 40 CFR, Part 63, Subpart CC. [40 CFR 63.640(n)(2)]

- i. Each owner or operator of a Group 1 storage vessel subject to 40 CFR, Part 63, Subpart CC shall comply with the requirements of 40 CFR, Part 63, Subpart WW according to the requirements in paragraphs (a) through (i) of 40 CFR 63.660. [40 CFR 63.660]
- j. The permittee shall comply with the applicable control requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1061	Definitions
63.1062	Storage vessel control requirements
63.1063(a)	Floating roof requirements: design requirements
63.1067	Implementation and enforcement

c) **Operational Restrictions**

- (1) The permittee shall not place, store, or hold in this external floating roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 11.1 pounds per square inch absolute (psia).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 60, Subpart Kb and PTI No. P0134347]

- (1) The permittee shall comply with the applicable operational requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1063(b)	Floating roof requirements: operational requirements
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[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart WW and PTI No. P0134347]

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The seal and seal fabric shall be inspected annually for visible holes, tears, or other openings.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

- (2) The permittee shall maintain records of the following information:

- a. the types of petroleum liquids stored in the tank;



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- 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 pound per square inch absolute; and
- c. the annual throughput of any petroleum liquid stored in the tank.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

- (3) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1063(c), (d), (e)	External floating roof inspection frequency, inspection procedures, and repair requirements
63.1065	Recordkeeping requirements for vessel dimensions and capacity, inspection results, and floating roof landings

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC and Subpart WW]

e) Reporting Requirements

- (1) If any of the conditions described in d)(1) are detected during the annual visual inspection, a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

- (2) If the permittee places, stores, or holds in the external floating roof tank any petroleum liquid with a true vapor pressure greater than or equal to 76.6 Kpa (11.11 psia), the permittee shall notify the Director (the Ohio EPA Northwest District Office) within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

- (3) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1066	Notification of initial startup and periodic reports



[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart CC and Subpart WW]

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:

13.69 tons VOC/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134347]

g) Miscellaneous Requirements

(1) None.



94. T239, PR100110

Operations, Property and/or Equipment Description:

above ground, external floating roof organic liquids storage tank No. 110 with a capacity of 2,664,985 gallons (group 1 storage vessel)

- 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 operations(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. 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(F) (PTI No. P0134346, issued 8/3/23)	8.49 tons volatile organic compounds (VOC)/yr See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) (PTI No. P0134346, issued 8/3/23)	Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the VOC emissions from this air contaminant source since the potential to emit is less than 10 tons per year taking into consideration practically and legally enforceable voluntary restrictions and federally enforceable requirements.
c.	OAC rule 3745-21-09(Z)	See b)(b).
d.	40 CFR, Part 60, Subpart Kb	See b)(2)c.
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission	See b)(2)c. and b)(2)d.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	limitations/control measures specified in this section.]	
f.	40 CFR, Part 63, Subpart WW [40 CFR 63.1060 – 63.1067]	See b)(2)d. and b)(2)e.
g.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. Permit to install No. P0104853 takes into account the following voluntary restriction as proposed by the permittee for the purpose of establishing practically and legally enforceable limitations representing the potential to emit for VOC from this emissions unit:

i. an operational restriction limiting the annual material throughput [See c)(1)].

The potential to emit for this emissions unit is also limited by the federally enforceable control requirements of 40 CFR, Part 60, Subpart Kb to employ an external floating roof. The potential to emit for this emissions unit is 8.49 tons of VOC/year and is based on an annual throughput of 975,384,510 gallons of organic liquid, U.S. EPA’s AP-42 calculation methods and/or currently accepted best engineering calculation methods, and landing losses calculated in accordance with AP-42 Section 7.1.3.2.2 (11/06). The landing losses were calculated assuming RVP 15 gasoline and an estimated one landing event per year.

b. The requirements of this rule are less stringent than the requirements established under 40 CFR, Part 60, Subpart Kb and 40 CFR, Part 63, Subpart CC.

c. This emissions unit is a Group 1 storage vessel as defined in 40 CFR Part 63.641. After the compliance date specified in paragraph (h) of 40 CFR Part 63.640, a Group 1 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 either the requirements of 40 CFR, Part 60, Subpart Kb, except as provided in paragraph (n)(8) of 40 CFR 63.640 or 40 CFR, Part 63, Subpart CC. [40 CFR 63.640(n)(2)]

d. Each owner or operator of a Group 1 storage vessel subject to 40 CFR, Part 63, Subpart CC shall comply with the requirements of 40 CFR, Part 63, Subpart WW according to the requirements in paragraphs (a) through (i) of 40 CFR 63.660. [40 CFR 63.660]

e. The permittee shall comply with the applicable control requirements under 40 CFR, Part 63, Subpart WW, including the following section:



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63.1061	Definitions
63.1062	Storage vessel control requirements
63.1063(a)	Floating roof requirements: design requirements
63.1067	Implementation and enforcement

c) Operational Restrictions

- (1) The permittee shall not exceed an annual material throughput rate of 975,384,510 gallons.

[OAC rule 3745-77-07(A)(1) and PTI No. P0134346]

- (2) The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 11.1 pounds per square inch absolute (psia).

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 60, Subpart Kb; and PTI No. P0134346]

- (3) The permittee shall comply with the applicable operational requirements under 40 CFR, Part 63, Subpart WW, including the following section:

63.1063(b)	Floating roof requirements: operational requirements
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[OAC rule 3745-77-07(A)(1); 40 CFR, Part 60, Subpart WW and PTI No. P0134346]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the amount of material throughput for this emissions unit, in gallons per month and total gallons, to date, for the calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134346]

- (2) The permittee shall maintain records of the following information:

- a. The types of petroleum liquids stored in the tank;
- b. The period of storage; and
- c. 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134346]



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- (3) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
63.1063(c), (d), (e)	External floating roof inspection frequency, inspection procedures, and repair requirements
63.1065	Recordkeeping requirements for vessel dimensions and capacity, inspection results, and floating roof landings

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subparts CC and WW; and PTI No. P0134346]

e) Reporting Requirements

- (1) The permittee shall submit annual reports that summarize the total annual material throughput, in gallons, for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P013436]

- (2) The permittee shall submit annual deviation (excursion) reports that identify any and all exceedances of the annual material throughput limitation, as well as the corrective actions taken to achieve compliance. If no deviations occurred during a calendar year, the permittee shall submit an annual report which states that no deviations occurred during that year. These reports shall be submitted by January 31 of each year.

[OAC rule 3745-77-07(C)(1) and PTI No. P013436]

- (3) If the permittee places, stores, or holds in the external floating roof tank any petroleum liquid with a true vapor pressure greater than or equal to 76.6 Kpa (11.11 psia), the permittee shall notify the Director (the Ohio EPA Northwest District Office) within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb; and PTI No. P013436]

- (4) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart CC and 40 CFR, Part 63, Subpart WW, including the following section:

63.660(a), (b), (c), (e) – (h)	Comply with the requirements of 40 CFR, Part 63, Subpart WW
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63.1066	Notification of initial startup and periodic reports
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[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subparts CC and WW; and PTI No. P0134346]

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:

8.49 tons VOC/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the most recent version of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods.

[OAC rule 3745-77-07(C)(1) and PTI No. P0134346]

g) Miscellaneous Requirements

(1) None.

95. Emissions Unit Group – Decanted Oil Group 2 Vessels: T268, T269, T270

EU ID	Operations, Property and/or Equipment Description
T268	above ground, fixed roof decanted oil storage tank No. 123 with a capacity of 348,600 gallons (group 2 storage vessel)
T269	above ground, fixed roof decanted oil storage tank No. 124 with a capacity of 348,600 gallons (group 2 storage vessel)
T270	above ground, fixed roof decanted oil storage tank No. 125 with a capacity of 348,600 gallons (group 2 storage vessel)

Operations, Property and/or Equipment Description:

- 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 operations(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. 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 No. P0105198, issued 10/5/09)	5.28 tons volatile organic compounds (VOC)/yr [See b)(2)a.]
b.	OAC rule 3745-21-09(L)	Exempt [See b)(2)b. and c)(1)]
c.	OAC rule 3745-21-09(T)(4)(a)	See b)(2)c. and Facility-Wide Term and Condition B.2
d.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)b.
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, these emissions units are affected sources consisting of storage vessels associated with petroleum refining	Storage Vessel Provisions - See d)(2) Equipment Leak Standards - See b)(2)d.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	process units, subject to the emission limitations/control measures specified in this section.]	
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. PTI No. P0105198 takes into account the following voluntary restriction as proposed by the permittee for the purpose of establishing practically and legally enforceable limitations representing the potential to emit for VOC for each storage tank:
 - i. the use of submerged fill;
 - ii. an operational restriction limiting the vapor pressure of the material stored [see c)(1)]; and
 - iii. an operational restriction limiting the annual material throughput [see c)(2)].
- b. Each storage tank has a design capacity greater than 151 m³ (39,900 gallons) and stores a liquid with a volatile organic liquid (VOL) with a maximum true vapor pressure less than 0.51 pounds per square inch absolute (psia); therefore, pursuant to 40 CFR 60.110b(b), Subpart Kb is not applicable. Additionally, the maximum true vapor pressure is less than 1.52 psia and therefore each storage tank is exempt from the control and record keeping requirements of OAC rule 3745-21-09(L).
- c. The permittee has an approved [as indicated in OAC rule 3745-21-09(T)(4)(a)] alternative leak detection and repair (LDAR) monitoring, recordkeeping and reporting program entitled “Premcor Lima Refinery, LDAR Plan” dated November 19, 2002. The permittee’s alternative LDAR monitoring plan includes regulations in 40 CFR, Part 60, Subparts VV and GGG; 40 CFR, Part 61, Subpart V; and 40 CFR, Part 63, Subpart CC.

Any components associated with the emission units contained in PTI No. P0105198 that are applicable to state and federal LDAR requirements shall be included in the alternative LDAR monitoring, recordkeeping and reporting program.

c) Operational Restrictions

- (1) The permittee shall not place, store, or hold in a fixed roof storage tank any petroleum liquid that, as stored, has a true vapor pressure greater than 0.51 pounds per square inch absolute (psia).

[OAC rule 3745-77-07(A)(1) and PTI No. P0105198]

- (2) The maximum annual material throughput for a single storage tank shall not exceed 166,440,000 gallons.

[OAC rule 3745-77-07(A)(1) and PTI No. P0105198]

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall collect and record the following information each month for each storage tank:
 - a. The volatile organic liquid (VOL) stored;
 - b. The maximum true vapor pressure, in psia of VOL stored;
 - c. The VOL throughput, in gallons per month;
 - d. The calculated VOC emissions, in tons per month (VOC emissions shall be calculated using the most recent version of the U.S. AP-42 calculation methods and/or currently accepted best engineering calculation methods.);
 - e. The annual VOC emissions, in tons per year [summation of d)(1)d. for each month, to date, for the calendar year]; and
 - f. The annual VOL throughput, in gallons per year [summation of d)(1)c. for each month, to date, for the calendar year].

[OAC rule 3745-77-07(C)(1) and PTI No. P0105198]

- (2) Each storage tank is a Group 2 storage vessel as defined in 40 CFR Part 63.641. Pursuant to 40 CFR Part 63.655(i)(1)(v), the permittee shall comply with the following record keeping requirements of 40 CFR 63.1065(a) of subpart WW:
 - a. readily accessible records showing the dimensions of the storage vessel; and
 - b. an analysis showing the capacity of the storage vessel.

The above records shall be kept as long as each storage vessel retains Group 2 status and is in operation.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC and PTI No. P0105198]

e) **Reporting Requirements**

- (1) If the permittee places, stores, or holds, in a fixed roof storage tank, any petroleum liquid with a true vapor pressure that is greater than 0.51 psia, the permittee shall notify the Director (the Ohio EPA, Northwest District Office) 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.

[OAC rule 3745-77-07(C)(1) and PTI No. P0105198]

- (2) The permittee shall submit annual deviation (excursion) reports that identify any and all exceedances of the annual material throughput limitation, as well as the corrective actions taken to achieve compliance. If no deviations occurred during a calendar year, the permittee shall submit an annual report which states that no deviations occurred during that year. These reports shall be submitted electronically through Ohio EPA Air Services by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0105198]

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:

5.28 tons VOC/yr

Applicable Compliance Method:

Compliance shall be determined by the monitoring and recordkeeping in d)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0105198]

g) Miscellaneous Requirements

- (1) None.

96. T271, Tank 128

Operations, Property and/or Equipment Description:

above ground, internal floating roof sour water storage tank No. 128 with a capacity of 1,445,300 gallons (group 1 storage vessel)

- 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 operations(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. 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)(a)(ii) (PTI No. P0107991, modification issued 4/19/11)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the VOC emissions from this air contaminant source since the potential to emit is less than 10 tons per year taking into consideration the federally enforceable requirement to employ an internal floating roof under OAC rule 3745-21-09(L) and 40 CFR, Part 60, Subpart Kb. See b)(2)a.
b.	OAC rule 3745-21-09(L)	See b)(2)c. through b)(2)g., d)(3) and e)(4) and e)(5)
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] 40 CFR 60.112b 40 CFR 60.113b 40 CFR 60.115b 40 CFR 60.116b [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)b., d)(2) and e)(2) See d)(2) and e)(2) See d)(2) and e)(2) See d)(2) and d)(7)



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of storage vessels associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	Storage Tank Provisions See b)(2)g., b)(2)h. and e)(3)

(2) Additional Terms and Conditions

a. The potential to emit for this emissions unit is 5.85 tons of VOC/year and is based on a maximum annual throughput of 527,534,500 gallons of foul condensate, U.S EPA's AP-42 calculation methods and/or currently accepted best engineering calculation methods., and landing losses calculated in accordance with AP-42 Section 7.1.3.2.2 (11/06).

b. The permittee shall comply with the applicable internal floating roof storage vessel provisions under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.112b(a)(1)(i) 60.112b(a)(1)(ix)	through	Standards for VOC: Internal Floating Roof Must Rest on Liquid Surface, Closure Devices, Openings Must be Below Liquid Surface and Have Cover, Vents Must be Gasketed and Only Open When Roof not Floating, Ladder Must Have Fabric Sleeve, Vents Must be Gasketed and Closed, Rim Vents Must Have Gasket, Supports Columns Must Have Fabric Sleeve
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c. The automatic bleeder vents are to be closed at all times except when the roof is floated off or landed on the roof leg supports, and the rim vents, if provided, are to be set to open when the roof is being floated off the roof leg supports or is at the manufacturer's setting. [OAC rule 3745-21-09(L)(b)]

d. All openings, except stub drains, are to be equipped with a cover, seal, or lid which is to be in a closed position at all times when in actual use for tank gauging or sampling. [OAC rule 3745-21-09(L)(c)]

e. The requirements of OAC rule 3745-21-09(L) are equivalent to or less stringent than the requirements of 40 CFR, Part 63, Subpart CC and 40 CFR, Part 60, Subpart Kb.

f. This emissions unit is a Group 1 storage vessel as defined in 40 CFR Part 63.641. A Group 1 storage vessel that is part of an existing source and is also subject to



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the provisions of 40 CFR, Part 60, Subpart Kb is required to comply only with the requirements of 40 CFR, Part 60, Subpart Kb, except as provided in paragraph (n)(8) of 40 CFR 63.640. [40 CFR 63.640(n)(1)]

- g. 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 40 CFR 63.121 except as in provided in paragraphs (b) through (l) of 40 CFR 63.646. [40 CFR 63.646(a)]

c) Operational Restrictions

- (1) The maximum throughput for this tank shall not exceed 527,534,500 gallons per year.
[OAC rule 3745-77-07(A)(1) and PTI No. P0107991]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the amount of material throughput for this emissions unit, in gallons per month and total gallons, to date, for the calendar year.
[OAC rule 3745-77-07(C)(1) and PTI No. P0107991]
- (2) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(a)(1) through 60.113b(a)(4)	Internal Floating Roof Visual Inspections, Seal Inspections, Emptying and Degassing Requirements
60.115b, 60.115b(a)(2), 60.116b(a) and 60.116b(b)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
60.116b(e)(1) through 60.116b(e)(3)	Monitoring of Operations: Determination of Temperature and Vapor Pressure of Product Stored
60.116b(f)	Monitoring of Operations: Requirements for Storing Waste Mixture of Indeterminate or Variable Composition

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb and PTI No. P0107991]

- (3) The permittee shall maintain a record of any period of time in which the automatic bleeder vents, rim vents, and all openings other than stub drains were not maintained as required in this permit. [OAC rule 3745-21-09(L)]

[OAC rule 3745-77-07(C)(1) and PTI No. P0107991]

e) Reporting Requirements

- (1) The permittee shall submit annual reports that summarize the total annual material throughput, in gallons, for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107991]

- (2) The permittee shall comply with the reporting requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.113b(a)(5)	Internal Floating Roof: 30 Day Notification for Filling or Refilling
60.115b(a)(3) and 60.115b(a)(4)	Internal Floating Roof: Report Within 30 Days for Records of Inspection Defects and Repairs

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Kb and PTI No. P0107991]

- (3) Each permittee subject to the wastewater provisions in 40 CFR 63.647 shall comply with the recordkeeping and reporting provisions in 40 CFR 61.356 and 61.357 of 40 CFR, Part 61, Subpart FF unless they are complying with the wastewater provisions specified in paragraph (o)(2)(ii) of 40 CFR 63.640. There are no additional reporting and recordkeeping requirements for wastewater under this subpart unless a wastewater stream is included in an emissions average. Recordkeeping and reporting for emissions averages are specified in 40 CFR 63.653 and in paragraphs (f)(5) and (g)(8) of 40 CFR 63.654. [40 CFR 63.655(a)]

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart CC and PTI No. P0107991]

- (4) The permittee shall notify the Northwest District Office within 30 days of the occurrence of any period in time in which the automatic bleeder vents, rim vents, and all openings other than stub drains were not maintained as required in this permit. [OAC rule 3745-21-09(L)]

[OAC rule 3745-77-07(C)(1) and PTI No. P0107991]

- (5) If the permittee places, stores, or holds in a fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute and such tank does not comply with the requirements of OAC rule 3745-21-09(L)(1), the permittee shall so notify the director within 30 days of becoming aware of the occurrence. [OAC rule 3745-21-09(L)]

[OAC rule 3745-77-07(C)(1) and PTI No. P0107991]

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:

5.85 tons of VOC/yr

Applicable Compliance Method:

Compliance with the annual VOC limit is based on a maximum annual throughput of 527,534,500 gallons of foul condensate, U.S. EPA's AP-42 calculation methods and/or currently accepted best engineering calculation methods, and landing losses calculated in accordance with AP-42 Section 7.1.3.2.2 (11/06).

[OAC rule 3745-77-07(C)(1) and PTI No. P0107991]

g) Miscellaneous Requirements

(1) None



97. T273, Tank 120

Operations, Property and/or Equipment Description:

Above ground, vertical fixed roof amine storage tank No. 120 (PR 100181) with a capacity of 25,381 gallons (group 2 storage vessel)

- 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 operations(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. 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 No. P0106332, issued 5/12/10)	The BAT 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 emissions is less than 10 tons/yr. See b)(2)a.
b.	OAC rule 3745-21-09(L)	See b)(2)b.
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)c.
d.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.641, this emissions unit is a Group 2 storage vessel]	See b)(2)d.
e.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The potential to emit for VOC emissions for this emissions unit is 3.03 tons per year and was determined by the use of the U.S. EPA AP-42 calculation methods and/or currently accepted best engineering calculation methods and a maximum throughput of 10,035,263 gallons per year.
- b. This emissions unit is exempt from the requirements of OAC rule 3745-21-09(L)(1) because it is a fixed roof storage tank with a capacity less than 40,000 gallons.
- c. Pursuant to 40 CFR 60.110b(b), this rule is not applicable to this emission unit because it has a capacity of greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum vapor pressure less than 15.0 kPa.
- d. This emissions unit is a Group 2 storage vessel which is not subject to control, monitoring, record keeping, or reporting requirements under 40 CFR, Part 63, Subpart CC.

c) Operational Restrictions

- (1) The permittee shall not exceed a maximum annual material throughput rate of 10,035,263 gallons.

[OAC rule 3745-77-07(A)(1) and PTI No. P0106332]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the amount (in gallons per month and total gallons, to date for the calendar year) of material throughput for this emission unit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0106332]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

- a. exceedances of the maximum annual material throughput rate of 10,035,263 gallons.

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0106332]



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- f) Testing Requirements
 - (1) None.

- g) Miscellaneous Requirements
 - (1) None.

98. T280, VAC Bottoms Tank

Operations, Property and/or Equipment Description:

4,060,929 Gallon Fixed Roof Vacuum Bottoms Storage Tank (storing organic liquid with a vapor pressure less than 0.754 psia)

- 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 rule 3704.03(T) (PTI No. P0109927, issued 6/1/12)	39.1 tons of volatile organic compounds (VOC) per rolling 12-month period See b)(2)a.
b.	OAC rule 3745-21-09(L)	See b)(2)b., c)(1), d)(3), and e)(2)
c.	40 CFR, Part 60, Subpart Kb [40 CFR 60.110b – 60.117b] 40 CFR 60.116b(a) – (d) [In accordance with 40 CFR 60.110b, this emissions unit is an affected source consisting of an organic liquids storage tank, subject to the emission limitations/control measures specified in this section.]	See b)(2)c. and d)(2)
d.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.671] [In accordance with 40 CFR 63.640, this emissions unit is an affected source consisting of a storage vessel associated with petroleum refining process units, subject to the emission limitations/control measures specified in this section.]	See b)(2)d.



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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR, Part 63, Subpart A [40 CFR 63.1 - 63.15]	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirement for this emissions unit has been determined to be an emission limitation of 39.1 tons of VOC per rolling 12-month period.
- b. The requirements of OAC rule 3745-21-09(L) are equivalent to or less stringent than the requirements of 40 CFR, Part 63, Subpart CC and 40 CFR, Part 60, Subpart Kb.
- c. This emissions unit is exempt from the control requirements specified in 40 CFR, Part 60, Subpart Kb because the maximum true vapor pressure of the stored organic liquid is less than 5.2 kPa (0.754 psia).
- d. This emissions unit is a Group 2 storage vessel as defined in 40 CFR Part 63.641. 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, except as provided in paragraph (n)(8) of 40 CFR 63.640. [40 CFR 63.640(n)(1)]

c) Operational Restrictions

- (1) No person shall place, store, or hold in a fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute unless such tank is designed or equipped in accordance with OAC rule 3745-21-09(L)(1)(a) – (d).

[OAC rule 3745-77-07(A)(1) and PTI No. P0109927]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain the following records each month for this emissions unit:
 - a. the amount of material throughput, in gallons per month;
 - b. the VOC emissions, in tons per month, as calculated using U.S EPA’s AP-42 calculation methods and/or currently accepted best engineering calculation methods., and landing losses calculated in accordance with AP-42 Section 7.1.3.2.2 (11/06).
 - c. the rolling 12-month emissions of VOC, in tons [summation of d)(1)b.].

[OAC rule 3745-77-07(A)(1) and PTI No. P0109927]



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- (2) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 60, Subpart Kb, including the following sections:

60.116b(a) through 60.116b(d)	Monitoring of Operations: Records Retention Requirements, Dimensions and Capacity Records, Records of Vapor Pressure of Stored Material
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[OAC rule 3745-77-07(C)(1), 40 CFR 60.1, Subpart Kb and PTI No. P0109927]

- (3) The permittee shall maintain records of the following information in a readily accessible location for at least 5 years and shall make copies of the records available to the Northwest District Office upon verbal or written request:

- 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 pound per square inch absolute.

[OAC rule 3745-77-07(C)(1) and PTI No. P0109927]

e) Reporting Requirements

- (1) The permittee shall submit annual reports that summarize the total annual material throughput, in gallons, for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0109927]

- (2) If the permittee places, stores, or holds in a fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute and such tank does not comply with the requirements of OAC rule 3745-21-09(L)(1), the permittee shall so notify the director within 30 days of becoming aware of the occurrence.

[OAC rule 3745-77-07(C)(1) and PTI No. P0109927]

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:

39.1 tons of VOC per rolling 12-month period



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Applicable Compliance Method:

Compliance with the rolling 12-month VOC limitation is based on a record keeping requirements specified in condition d)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0109927]

g) Miscellaneous Requirements

(1) None.