Ohio Environmental Protection Agency

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

9/13/2016

Certified Mail

Larry Fioritto
Perstorp Polyols, Inc.
600 Matzinger Road
Toledo, OH 43612

Facility ID: 0448010133
Permit Number: P0120041
County: Lucas

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

Dear Permit Holder:

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

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

and

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

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

Sincerely,

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

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

PUBLIC NOTICE

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

Draft Title V Permit Renewal
Perstorp Polyols, Inc.
600 Matzinger Road, , Toledo, OH 43612
ID#: P0120041
Date of Action: 9/13/2016
Permit Desc: Polyol and formaldehyde manufacturing facility.
The permit and complete instructions for requesting information or submitting comments may be obtained at: http://epa.ohio.gov/dapc/permitsonline.aspx by entering the ID # or: Brad Faggionato, Toledo Department of Environmental Services, 348 South Erie Street, Toledo, OH 43604. Ph: (419)936-3015

Statement of Basis For Air Pollution Title V Permit

Facility ID:	0448010133
Facility Name:	Perstorp Polyols, Inc.
Facility Description:	Polyol and formaldehyde manufacturing facility
Facility Address:	600 Matzinger Road, Toledo, OH 43612
Permit #:	P0120041, Renewal

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

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

A. Standard Terms and Conditions

Has each insignificant emissions unit been reviewed to confirm it meets the definition in OAC rule 3745-77-01(U)?	Yes. T113 & T114, although de minimis, are subject to 40 CFR Part 63 Subpart G as a group 1 storage vessel per Consent Decree dated June 15, 2015. Therefore listed as an insignificant emissions unit with applicable requirements.
Were there any "common control" issues associated with this facility? If yes, provide a summary of those issues and explain how the DAPC decided to resolve them.	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a minor permit modification per OAC rule 3745-77-08(C)(1)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a significant permit modification per OAC rule 3745-77-08(C)(3)	N/A

Please identify the affected unit(s)and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a reopening per OAC rule 3745-77-08(D)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document resulting from a renewal per OAC rule 3745-77-08(E)	B001 – updated MACT DDDDD terms P801 – updated with PTI P0120528 issued 3/29/2016 P803 – updated with PTI P0119263 issued 9/17/2015
Please identify the affected unit(s) and pollutant(s) for which a Compliance Assurance Monitoring (CAM) Plan is required per 40 CFR 64. Provide more emissions unit specific detail in Section C.	P812 - all VOC emissions are also organic HAP and therefore compliance with 40 CFR Part 63 Subparts F and G will be sufficient to show compliance with 40 CFR Part 64 for VOC emissions

B. Facility-Wide Terms and Conditions

Term and Condition (paragraph)	Basis		Comments
	SIP (3745-)	Other	
B.1.	N	Y	Federal/State enforceable standard terms
B.2.	N	Y	40 CFR Part 60, Subparts A and Kb: T104 – T106, T108 – T111. Standards of Performance for Volatile Organic Liquid Storage Vessels.
B.3.	N	Y	40 CFR Part 60, Subparts A and VV: P801 and P812. Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.
B.4.	N	Y	40 CFR Part 60, Subparts A and VVa: P803. Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.
B.5.	N	Y	40 CFR Part 60, Subparts A and III: P812. Standards of Performance for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes.
B.6.	N	Y	40 CFR Part 63, Subpart A (General Provisions) and 40 CFR Part 63, Subpart F: J001, J002, P801, P803, P812, T004, T006, T016 - T018, T025 - T029, T104 - T106 and T108 - T114. National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry.

B.7.	N	Y	40 CFR Part 63, Subpart A (General Provisions) and 40 CFR 63, subpart G: J001, J002, P801, P803, P812, T004, T006, T016 - T018, T025 - T029, T104 - T106 and T108 - T114. National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater.
B.8.	N	Y	40 CFR Part 63, Subpart A (General Provisions) and 40 CFR Part 63, Subpart H: P801, P803, P812. National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.
B.9. & B.10.	N	Y	40 CFR Part 63, Subpart A (General Provisions) and 40 CFR Part 63, Subpart DDDDD: B001. National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.
B.11.	N	Y	40 CFR Part 64: P812. CAM Plan for VOC emissions that are controlled by a catalytic oxidizer. Compliance with 40 CFR Part 63 Subparts F & G will be sufficient to show compliance with CAM.
B.12.	N	Y	This facility developed and registered a risk management plan pursuant to section 112(r) of the Act and, therefore, is subject to Section 112(r) of the Act.
B.13.	77	N	SIP. Insignificant emissions units with applicable requirements: J001, J002, T002, T005, T007, T018, T019, T112 – T114.

C. Emissions Unit Terms and Conditions

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

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
B001 - 85 mmBtu natural gas/ methanol/#2 fuel oil (backup) fired boiler with no controls	20 percent opacity, as a 6-minute average.	17-07 (A)(1)	N	N	Y	Y	N	Y	Y	N	N	N	These fuels are designated as clean burn fuels and therefore tracking of fuel type shall be sufficient to verify compliance with VE limit.
	0.020 pound of PE per mmBtu of actual heat input	17-10(B)(1)	N	N	Y	Y	N	Y	Y	N	N	N	Compliance with this emissions limitation shown with PTE calculations using AP-42 emission factors while combusting natural gas or #2 fuel oil. Compliance shown with methanol using a performance test dated 9/3/2003 of 0.002 pound of PE per mmBtu of actual heat input. OR,M,R&Rp – tracking of combustion fuel type shall be sufficient to show compliance with this emissions limit
	None	18-06(A)	N	Y	N	N	N	N	N	N	N	N	ND – This rule does not establish SO_2 emission limitations while combusting natural gas
	1.6 pounds of sulfur dioxide per MM Btu actual heat input for fuel oil	18-06(D)											M,R,Rp - Fuel oil burned in this emissions unit shall meet a sulfur content that is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.6 pounds of sulfur dioxide per MM Btu actual heat input using either of the alternative methods described in the monitoring/recordkeeping section of this emissions unit.
	When burning heavy liquids: 1.1E-03 pound of HCl/MMBtu of heat input; 2.0E-06 pound of mercury /MMBtu of heat input; 130 ppm CO by volume on a dry basis, corrected to 3% O_2 or 0.13 pound/MMBtu of steam	N	Y	N	Y	Y	N	Y	Y	Y	N	N	Basis – 40 CFR Part 63 Subpart DDDDD. OR,M.R,Rp - incorporated by table reference to the appropriate MACT section. Facility shall combust natural gas, methanol and #2 fuel oil. Facility has defined methanol as a liquid fuel. Per definition methanol is not a light liquid, therefore by default is heavy liquid. Facility states #2 fuel oil will only be used as back up fuel. ET – Per MACT requirements

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	output; 6.2E-02 pound of PM/MMBtu of heat input or 2.0E-04 pound of TSM/MMBtu of heat input or 7.5E-02 pound of PM/MMBtu of steam output or 2.5E-04 pound of TSM/MMBtu of steam output; Work practice standards and tune-up requirements												
P004 – material handling, drying and sodium formate bagging controlled by a wet scrubber	PE: 0.48 pounds per hour and 2.1 tons per year; 5% opacity as a 3-minute average	N	Y	N	Y	Y	N	Y	Y	N	Y	N	Basis - OAC rule 3745-31-05(A)(3) established by PTI 04-01123 issued 1/27/2004. The drying oven is steam operated. As established in PTI 04-949 as issued July 25, 1995, for BAT purposes, any VOC emissions predicted for this drying operation have been included in the related process, P801, for ease in record keeping for the shared control device (incinerator). OR,M,R&Rp - continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate to maintain stack test compliance level. St - updated terms in conformance with the OEPA permit terms and conditions library for wet scrubber. ET - stack testing performed May 25, 1999 indicated a PE rate of 0.27 lb/hr, and an opacity of 0% at the maximum throughput rate. Engineering Guide 16 allows stack testing for non-major sources at the discretion of the field office. Based on the guidance of EG#16, no retesting is required.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													CAM – Not applicable, pre-control emissions are less than major source threshold for particulate
	None	17-07 (A)(1)	N	Y	N	N	N	N	N	N	N	N	ND - 20% opacity as a 6-minute average is effectively less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3) of 5% opacity as a 3-minute average.
	None	17-11 (A)(2)	N	Y	N	N	N	N	N	N	N	N	ND - the BAT of 0.48 pound per hour is more stringent than the Table 1 minimum process weight rate requirement of 0.551 pound per hour and the BAT requirement of 96% overall control efficiency used to develop the BAT is greater than the maximum 90% efficiency required by Figure II.
P801: TMP & sodium formate manufacturing process including reactors, evaporators, coolers, crystallizers and distillation equipment controlled by a catalytic incinerator. including fugitive leaks.	VOC: 0.70 pound per hour & 3.07 tons per year (stack), 2.5 tons per year (fugitive); Formaldehyde: 0.11 pound per hour & 0.48 ton per year (process); VOC emissions from P801 & P803 vented to catalytic incinerator with minimum 98% destruction efficiency	N	Y	N	Y	Y	N	Y	Y	Y	N	N	Basis - OAC rule 3745-31-05(A)(3) established by PTI 04-949 issued 7/26/1995 and carried through in current PTI P0120528 issued 3/29/2016. OR - throughput restriction and incinerator required. M,R,Rp - continuously monitor the throughput and incinerator performance to maintain stack test compliance level. OEPA guidance requiring catalyst testing has been added to the permit. ET - stack testing performed over a range of process conditions during the period of time from August 14 thru 20 of 2007 demonstrated a maximum discharge rate for VOC of <.04 pound per hour and <<0.01 pound per hour for formaldehyde. A mass rate of emissions for VOC will be determined during stack testing performed within 6 months of expiration.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	None	21-07(M)(2)	N	Y	N	N	N	N	N	N	N	N	ND-exempt per OAC rule 3745-31-07(M)(3)(c)(iii), BAT that specifies an overall control efficiency for VOC emissions that is greater than 85% by weight (98% by weight).
	reduce TOC/HAP 98% or to 20 ppmv TOC/HAP	N	Y	N	Y	Y	N	Y	Y	Y	N	N	Basis - 40 CFR Part 63, Subpart G. Sources subject to Subpart G include the process vents, storage vessels, transfer racks and wastewater streams which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110. The permittee must maintain and operate a vapor collection system and control device to collect and control process vent emissions from affected sources. The control device shall reduce the total organic hazardous air pollutants by 98 weight percent or to a concentration of 20 ppm by volume, whichever is less stringent, in accordance with 40 CFR 63.113. The permittee must operate and maintain a closed vent system and control device to collect and control storage tank emissions from affected sources. The control device shall reduce the total organic hazardous air pollutants by 95 weight percent unless otherwise allowed, in accordance with 40 CFR 63.119. No transfer racks associated with this emissions unit are MACT Subpart G (HAP emissions) affected sources. OR,M.R,Rp - incorporated by table reference to the appropriate MACT section. ET - stack testing performed February 23, 2000 indicated a destruction efficiency of 99.9% at the maximum throughput rate. Stack testing performed May 7, 2002 resulted in HON emissions of 4.2 ppm acetaldehyde, 0.30 ppm formaldehyde and 4.4 ppm methanol = 8.9 ppm TOC against a standard of 20 ppm TOC (vs. 98% destruction). Testing performed over a range of process conditions

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													during the period of time from August 14 thru 20 of 2007 demonstrated a minimum destruction efficiency of 99.6% and a maximum discharge concentration of 19ppm for VOC, 0.03 ppm for formaldehyde and 0.27 ppm for HON. Retesting will be required within 6 months of permit expiration.
	VOC leak detection and repair program	21-09(DD)	N	Y	N	N	N	N	N	N	N	N	ND - complying with the VOC leak detection and repair program requirements of OAC rule 3745-21-09(DD) by maintaining compliance with the operational restrictions, monitoring, recordkeeping and reporting requirements of 40 CFR Part 63, Subpart H for all VOC process equipment leaks
	VOC leak detection and repair program	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 60, Subpart VV. The permittee may elect to comply with the VOC leak detection and repair program requirements of 40 CFR Part 60, Subpart VV by maintaining compliance with the operational restrictions, monitoring, record keeping and reporting requirements of 40 CFR Part 63, Subpart H for all VOC process equipment leaks as provided in 40 CFR 63.160(c).
	HAP leak detection and repair program	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63, Subpart H. Sources subject to Subpart H include the process leaks from pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, instrumentation systems, and control devices or closed vent systems required by Subpart H which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.160. Except as otherwise provided, the permittee must establish a hazardous air pollutant (HAP) leak detection and repair program for the affected sources, in compliance with the operational restrictions, monitoring, record keeping and reporting requirements of 40 CFR 63.162 through 63.170 and 63.172 through 63.174. OR,M.R,Rp - incorporated by table reference to the

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													appropriate MACT section.
	applicable requirements	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subparts G or H are also subject to Subparts A & F. Sources subject to Subpart F include the maintenance wastewater and heat exchange systems which contact hazardous air pollutants, as provided in 40 CFR 63.100. OR,M.R,Rp - incorporated by table reference to the appropriate MACT section.
P803: Pentaerythritol, Sodium formate and Dipentaerythritol mfg. plant. and associated equipment	VOC: 1.25 pounds per hour and 5.5 tons per year (stack); 3.23 pounds per hour and 14.15 tons per year (fugitive)	N	Y	N	Y	Y	N	Y	Y	Y	N	N	Basis - ORC 3704.03(T) as established by PTI P0119263 issued 9/17/2015. OR – maintain temp before and across catalyst bed of catalytic oxidizer no more than 50F below the temp during the last performance test showing compliance with VOC emissions limits M,R, and Rp - terms conform with the OEPA permit terms and conditions library for catalytic oxidizer ET – performance testing requirement of catalytic oxidizer within six months prior to permit expiration
	PM_{10}: 2.25 pounds per hour and 9.9 tons per year	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - OAC rule 3745-31-05(A)(3) established by PTI P0119263 issued 9/17/2015. OR – water scrubbers shall operate when emissions unit active and scrubber flow rate shall not be less than 80% of flow rate shown during last performance test showing compliance M,R, and Rp - terms conform with the OEPA permit terms and conditions library for wet scrubber ET – per EG#16 no retesting for PE is required
	20% opacity as a 6-minute average, except as provided by rule	17-07(A)(1)	N	N	N	Y	N	Y	Y	N	N	N	M,R, and Rp - terms conform with the OEPA permit terms and conditions library with monthly checks of stack opacity ET – use Method 9 to determine opacity
	PE: 33 pounds per	17-11(B)	N	Y	N	N	N	N	N	N	N	N	ND – PTE of 4.5 pounds per hour is less than the Table 1 requirement & 90% overall control efficiency is equivalent

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	hour												to the maximum 90% efficiency required by Figure II.
	overall control efficiency for VOC of at least 85%, by weight	21-07(M)(2)	N	Y	N	N	N	N	N	N	N	N	ND - requirements of this rule are less stringent than the requirements of 40 CFR Part 63, Subpart G, provided the permittee continues to choose to comply with the 98% control option under 40 CFR 63.113(a)(2)
	reduce TOC/HAP 98% or to 20 ppmv TOC/HAP	N	Y	N	Y	Y	N	Y	Y	Y	N	N	Basis - 40 CFR Part 63, Subpart G. Sources subject to Subpart G include the process vents, storage vessels, transfer racks and wastewater streams which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110. The permittee must maintain and operate a vapor collection system and control device to collect and control process vent emissions from affected sources. The control device shall reduce the total organic hazardous air pollutants by 98 weight percent or to a concentration of 20 ppm by volume, whichever is less stringent, in accordance with 40 CFR 63.113. The permittee must operate and maintain a closed vent system and control device to collect and control storage tank emissions from affected sources. The control device shall reduce the total organic hazardous air pollutants by 95 weight percent unless otherwise allowed, in accordance with 40 CFR 63.119. No transfer racks associated with this emissions unit are MACT Subpart G (HAP emissions) affected sources. OR,M.R,Rp - incorporated by table reference to the appropriate MACT section. ET - Retesting will be required within 6 months of expiration.
	VOC leak detection and repair program	21-09(DD)	N	Y	N	N	N	N	N	N	N	N	ND - complying with the VOC leak detection and repair program requirements of OAC rule 3745-21-09(DD) by maintaining compliance with the operational restrictions, monitoring, recordkeeping and reporting requirements of 40 CFR Part 63, Subpart H for all VOC process equipment leaks
	VOC leak	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 60, Subpart VVa. The permittee may

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	detection and repair program												choose to comply with 40 CFR part 63 Subpart H, to satisfy the requirements of §§60.482–1a through 60.487a for an affected facility. When choosing to comply with 40 CFR part 63, Subpart H, the requirements of §60.485a(d), (e), and (f), and §60.486a(i) and (j) still apply. OR,M.R,Rp - incorporated by table reference to the appropriate MACT section.
	HAP leak detection and repair program	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63, Subpart H. Sources subject to Subpart H include the process leaks from pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, instrumentation systems, and control devices or closed vent systems required by Subpart H which contact hazardous air pollutants, as provided in 40 CFR 63.160. Except as otherwise provided, the permittee must establish a hazardous air pollutant (HAP) leak detection and repair program for the affected sources, in compliance with the operational restrictions, monitoring, record keeping and reporting requirements of 40 CFR 63.162 through 63.170 and 63.172 through 63.174. OR,M.R,Rp - incorporated by table reference to the appropriate MACT section.
	applicable requirements	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subparts G or H are also subject to Subparts A & F. Sources subject to Subpart F include the maintenance wastewater and heat exchange systems which contact hazardous air pollutants, as provided in 40 CFR 63.100. OR,M.R,Rp - incorporated by table reference to the appropriate MACT section.
P812: Formaldehyde manufacturing plant	CO: 3.13 pounds per hour and 13.7 tons per year	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis - OAC rule 3745-31-05(A)(3) as established by PTI 04-1397 issued 5/31/2005. ET – stack testing performed February 22, 2000 indicated a CO emission rate of 0.44 pound per hour. Per EG#16, further stack testing not required.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	VOC: 9.0 pounds per hour and 39.42 tons per year (stack); 2.9 tons per year (fugitive)	N	Y	N	Y	Y	N	Y	Y	Y	Y	N	Basis - OAC rule 3745-31-05(A)(3) as established by PTI 04-1397 issued 5/31/2005. OR – maintain temp before and across catalyst bed of catalytic oxidizer no more than 50F below the temp during the last performance test showing compliance with VOC emissions limits M,R, and Rp - terms conform with the OEPA permit terms and conditions library for catalytic oxidizer St – d)(5), e)(6) ET – performance testing requirement of catalytic oxidizer for destructive efficiency within six months prior to permit expiration
	reduce VOC emissions at least 98%, by weight, or VOC concentration less than 20 ppm	21-09(EE)	N	N	Y	Y	N	Y	Y	Y	Y	N	OR – maintain temp before and across catalyst bed of catalytic oxidizer no more than 50F below the temp during the last performance test showing compliance with VOC emissions limits M,R, and Rp - terms conform with the OEPA permit terms and conditions library for catalytic oxidizer ET – performance testing requirement of catalytic oxidizer within six months prior to permit expiration
	reduce TOC emissions by 98 weight-percent, or to a TOC concentration of 20 ppmv on a dry basis corrected to 3 percent oxygen	N	Y	N	Y	Y	N	Y	Y	Y	N	N	Basis - 40 CFR Part 60, Subpart III OR,M.R,Rp - incorporated by table reference to the appropriate NSPS section. ET – performance testing requirement of catalytic oxidizer within six months prior to permit expiration
	reduce TOC/HAP 98% or to 20 ppmv TOC/HAP	N	Y	N	Y	Y	N	Y	Y	Y	N	N	Basis - 40 CFR Part 63, Subpart G. Sources subject to Subpart G include the process vents, storage vessels, transfer racks and wastewater streams which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110. The permittee must maintain and operate a vapor collection

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													system and control device to collect and control process vent emissions from affected sources. The control device shall reduce the total organic hazardous air pollutants by 98 weight percent or to a concentration of 20 ppm by volume, whichever is less stringent, in accordance with 40 CFR 63.113. The permittee must operate and maintain a closed vent system and control device to collect and control storage tank emissions from affected sources. The control device shall reduce the total organic hazardous air pollutants by 95 weight percent unless otherwise allowed, in accordance with 40 CFR 63.119. No transfer racks associated with this emissions unit are MACT Subpart G (HAP emissions) affected sources. OR,M.R,Rp - incorporated by table reference to the appropriate MACT section. ET – performance testing requirement of catalytic oxidizer within six months prior to permit expiration
	Control VOC emissions	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 64 Per the facility, all VOC emissions are also organic HAP and therefore compliance with 40 CFR Part 63 Subparts F and G will be sufficient to show compliance with 40 CFR Part 64 for VOC emissions.
	VOC leak detection and repair program	21-09(DD)	N	Y	N	N	N	N	N	N	N	N	ND - complying with the VOC leak detection and repair program requirements of OAC rule 3745-21-09(DD) by maintaining compliance with the operational restrictions, monitoring, recordkeeping and reporting requirements of 40 CFR Part 63, Subpart H for all VOC process equipment leaks
	VOC leak detection and repair program	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 60, Subpart VV. The permittee may elect to comply with the VOC leak detection and repair program requirements of 40 CFR Part 60, Subpart VV by maintaining compliance with the operational restrictions, monitoring, record keeping and reporting requirements of 40 CFR Part 63, Subpart H for all VOC process equipment leaks as provided in 40 CFR 63.160(c).

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	HAP leak detection and repair program	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63, Subpart H. Sources subject to Subpart H include the process leaks from pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, instrumentation systems, and control devices or closed vent systems required by Subpart H which contact hazardous air pollutants, as provided in 40 CFR 63.160. Except as otherwise provided, the permittee must establish a hazardous air pollutant (HAP) leak detection and repair program for the affected sources, in compliance with the operational restrictions, monitoring, record keeping and reporting requirements of 40 CFR 63.162 through 63.170 and 63.172 through 63.174. OR,M.R,Rp - incorporated by table reference to the appropriate MACT section.
	applicable requirements	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subparts G or H are also subject to Subparts A & F. Sources subject to Subpart F include the maintenance wastewater and heat exchange systems which contact hazardous air pollutants, as provided in 40 CFR 63.100. OR,M.R,Rp - incorporated by table reference to the appropriate MACT section.
T001: formic acid fixed roof tank with no controls	VOC: 0.40 ton per year (fugitive)	N	Y	N	N	Y	N	Y	Y	N	Y	N	Basis - OAC rule 3745-31-05(A)(3) BAT as established by PTI 04-01417 issued 9/1/2005. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a liquid with a maximum 0.56 psia vapor pressure at 5.8 million gallons per year throughput. M.R,Rp – Since emission limit based on PTE, verifying maximum vapor pressure of contents sufficient to show compliance. St - Terms and conditions consistent with the current language of the State's library of terms and conditions.
T004: Formaldehyde Storage Tank	VE: 0% opacity as a	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 3745-31-05(A)(3) as established in PTI 04-479 issued 8/24/1988. Requires use of a collection system

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
(formalin, tank V-145), fixed roof tank, controlled by a closed vent system with a catalytic incinerator; this emissions unit is a Group 2 tank (<75 m3) that operates more than 300 hours per year in organic hazardous air pollutant service	six-minute average												and catalytic incinerator. M,R,Rp – monitoring performance of control system shall ensure opacity limitation
	VOC: 3.07 tons per year	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - OAC rule 3745-31-05(A)(3) BAT per PTI 04-479 issued 8/24/1988. The VOC emissions for P003 (now P801), P004, T004, T005 and T006 were combined in one allowable VOC limit. OR – maintain temp before and across catalyst bed of catalytic oxidizer no more than 50F below the temp during the last performance test showing compliance with VOC emissions limits M,R, and Rp - terms conform with the OEPA permit terms and conditions library for catalytic oxidizer ET – This emissions unit does not require performance testing for the oxidizer. But, since P801 requires performance testing within six months prior to permit expiration and this tank exhausts to the same equipment, the testing will also apply to this emissions unit.
	applicable requirements	N	Y	N	N	Y	N	Y	N	N	N	N	Basis - 40 CFR Part 63, Subpart G for Formaldehyde as a Group 2 due to volume <75 m^3. M,R - Sole requirement is to maintain tank dimensions
	applicable requirements	N	Y	N	N	Y	N	Y	N	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subparts G or H are also subject to Subparts A & F. Sources subject to Subpart F include systems which contact hazardous air pollutants (i.e., formaldehyde), as provided in 40 CFR 63.100.
	None	N	Y	Y	N	N	N	N	N	N	N	N	ND - NSPS 40 CFR Part 60 Subpart Kb is not applicable as the tank is <75 m^3.
T006: Fixed roof formaldehyde storage tank [85% water and 15% formaldehyde, Tank V-160], controlled by a closed vent system with a	3.07 tons of VOC per year from P004, P801, T004 and T006; VE: 0% opacity as a	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - OAC rule 3745-31-05(A)(3) BAT per PTI 04-479 issued 8/24/1988. The VOC emissions for P003 (now P801); P004, T004, T005 and T006 were combined in one allowable VOC limit. PTI 04-949 did not include a modification to limitations of T004 and T006. The tanks remain connected to the common vent system for the process tanks controlled by the catalytic incinerator. The

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
catalytic incinerator; Group 2 tank	six-minute average												tanks and control system were accounted for in the MACT Notification of Compliance Status and are included in the emission testing demonstrating compliance with the MACT (less than 20 ppm HAP) as well as the Permit pound per hour limitation of P801. Tank is equipped with submerged fill confirmed by one time compliance inspection on start-up. OR – maintain temp before and across catalyst bed of catalytic oxidizer no more than 50F below the temp during the last performance test showing compliance with VOC emissions limits M,R, and Rp - terms conform with the OEPA permit terms and conditions library for catalytic oxidizer ET – This emissions unit does not require performance testing for the oxidizer. But, since P801 requires performance testing within six months prior to permit expiration and this tank exhausts to the same equipment, the testing will also apply to this emissions unit.
	applicable requirements	N	Y	N	N	Y	N	Y	N	N	N	N	Basis - 40 CFR Part 63, Subpart A & G for Formaldehyde as a Group 2 due to volume <75 m^3. M,R - Sole requirement is to maintain tank dimensions
	applicable requirements	N	Y	N	N	Y	N	Y	N	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subparts G or H are also subject to Subparts A & F. Sources subject to Subpart F include systems which contact hazardous air pollutants (i.e., formaldehyde), as provided in 40 CFR 63.100.
	None	N	Y	Y	N	N	N	N	N	N	N	N	ND - NSPS 40 CFR Part 60 Subpart Kb is not applicable as the tank is <75 m^3.
T016: Fixed roof formaldehyde storage tank (50% formaldehyde, Tank V-130), controlled by a closed vent system	0.03 tpy of organic compounds	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 3745-31-05(A)(3) as established in PTI 04-652. Requires the use of a collection system and catalytic incinerator shared with P801. Tank is equipped with submerged fill confirmed by one time compliance inspection on start-up. OR – maintain temp before and across catalyst bed of

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
with a catalytic incinerator; Group 2 tank													catalytic oxidizer no more than 50F below the temp during the last performance test showing compliance with VOC emissions limits M,R,Rp- continuously monitor the incinerator performance to maintain stack test compliance level per State library terms and conditions. St – Added M,R,Rp terms and conditions consistent with the current language of the State's library of terms and conditions.
	applicable requirements	N	Y	N	N	N	N	Y	N	N	N	N	Basis - 40 CFR Part 63, Subpart G for Formaldehyde as a Group 2 due to volume <75 m^3. R - Sole requirement is to maintain tank dimensions
	applicable requirements	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subpart G are also subject to Subparts A & F. Sources subject to Subpart F include systems which contact hazardous air pollutants (i.e., formaldehyde), as provided in 40 CFR 63.100.
	None	N	N	Y	N	N	N	N	N	N	N	N	ND - NSPS 40 CFR Part 60 Subpart Kb is not applicable as the tank is <75 m^3.
T017: Fixed roof methanol storage tank (V-146), controlled by a closed vent system with a catalytic incinerator; Group 2 tank	0.02 tpy of volatile organic compounds	N	Y	N	Y	Y	N	Y	Y	N	Y	N	Basis - 3745-31-05(A)(3) as established in PTI 04-652 issued 11/7/1990. Requires the use of submerged fill and a collection system with catalytic incinerator shared with P801. OR – maintain temp before and across catalyst bed of catalytic oxidizer no more than 50F below the temp during the last performance test showing compliance with VOC emissions limits M,R,Rp,ET- continuously monitor the throughput and incinerator performance to maintain stack test compliance level, or monitor temp per State library terms and conditions. St - Added terms and conditions consistent with the current language of the State's library of terms and conditions.
	applicable	N	Y	N	N	N	N	Y	N	N	N	N	Basis - 40 CFR Part 63, Subpart G for Formaldehyde as a

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	requirements												Group 2 due to volume <75 m^3. R - Sole requirement is to maintain tank dimensions
	applicable requirements	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subpart G are also subject to Subparts A & F. Sources subject to Subpart F include systems which contact hazardous air pollutants (i.e., formaldehyde), as provided in 40 CFR 63.100.
	None	N	Y	Y	N	N	N	N	N	N	N	N	ND - NSPS 40 CFR Part 60 Subpart Kb is not applicable as the tank is <75 m^3.
T020, T021: Fixed roof trimethylolpropane storage tanks (V900 &V910), controlled by a pressure relief valve with a minimum setting of 2" water column and a liquid seal filled with glycerine	0.24 ton of VOC per year each	N	Y	N	Y	Y	N	Y	Y	N	Y	N	Basis - 3745-31-05(A)(3) as established in PTI 04-949 issued 7/26/1995. OR - The permittee shall maintain and operate a pressure relief valve with a minimum setting of 2" water column and a liquid seal filled with glycerine. M,R,Rp&ET - record types of liquids to insure no increase in PTE. One time compliance inspection on start-up for pressure relief valve and liquid seal. St - Added terms and conditions consistent with the current language of the State's library of terms and conditions.
	None	N	Y	Y	N	N	N	N	N	N	N	N	ND - 40 CFR Part 63 Subparts A, F and G are not applicable as TMP is not a listed HAP.
	None	N	Y	Y	N	N	N	N	N	N	N	N	ND - NSPS 40 CFR Part 60 Subpart Kb is not applicable as the tank is <75 m^3.
T023: 24,200 gal. fixed roof storage tank for TMP co-product.	0.59 ton of VOC per year	N	Y	N	Y	Y	N	Y	Y	N	Y	N	Basis - 3745-31-05(A)(3) as established in PTI 04-01251 issued 4/17/2001, M,R,Rp - record types of liquids to insure no increase in PTE. One time compliance inspection on start-up for liquid seal. ET - standing losses are ignored due to the controlling effect of the glycerine seal. St - Added terms and conditions consistent with the current language of the State's library of terms and conditions.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	None	N	Y	Y	N	N	N	N	N	N	N	N	ND - NSPS 40 CFR Part 60 Subpart Kb is not applicable as the tank has capacity less than 151 m^3 but more than 75 m^3 and storing a liquid which has a maximum true vapor pressure less than 15 kPa.
T024: 24,200 gal. fixed roof storage tank for TMP co-product with no controls	0.68 ton of VOC per year	N	Y	N	N	Y	N	Y	Y	N	Y	N	Basis - 3745-31-05(A)(3) as established in PTI 04-01251 issued 4/17/2001. M,R,Rp - record types of liquids to allow to insure no increase in PTE. St - Added terms and conditions consistent with the current language of the State's library of terms and conditions.
	None	N	Y	Y	N	N	N	N	N	N	N	N	ND - NSPS 40 CFR Part 60 Subpart Kb is not applicable as the tank has capacity less than 151 m^3 but more than 75 m^3 and storing a liquid which has a maximum true vapor pressure less than 15 kPa.
T025: Fixed roof storage tank (Penta Plant, V-120) for 12% formaldehyde, no controls; Group 2 tank	applicable requirements	N	Y	N	N	N	N	Y	N	N	N	N	Basis - 40 CFR Part 63, Subpart G for Formaldehyde as a Group 2 due to volume and vapor pressure. (the tank has capacity less than 151 m^3 but more than 75 m^3 and storing a liquid which has a maximum true vapor pressure less than 13.1 kPa) R - Sole requirement is to maintain tank dimension
	applicable requirements	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subpart G are also subject to Subparts A & F. Sources subject to Subpart F include systems which contact hazardous air pollutants (i.e., formaldehyde), as provided in 40 CFR 63.100.
	None	N	Y	Y	N	N	N	N	N	N	N	N	ND - OAC rule 3745-31-05(A)(3), when installed was considered a “process” or “day tank” not requiring a PTI versus a raw material tank that required a PTI: since MACT is applicable, no BAT determination is required.
	None	N	Y	Y	N	N	N	N	N	N	N	N	ND - exempt from 40 CFR Part 60, Subpart Kb, installed before July 23, 1984 (installation date of 6/79) and Subpart Ka by not storing a petroleum based liquid.
T026, T027: Fixed	None	N	Y	Y	N	N	N	N	N	N	N	N	ND - exempt from OAC rule 3745-31-05(A)(3), installed

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
roof storage tanks (V-55 & V-56) for formaldehyde-methanol mixture controlled by a closed vent system with a catalytic incinerator; Group 2 tanks													before January 1 1974.
	None	21-07(M)(2)	N	Y	N	N	N	N	N	N	N	N	ND – Per OAC rule 3745-21-07(M)(3)(c)(ii), since the uncontrolled PTE is less than 40 pounds of VOC per day, this rule is not applicable.
	applicable requirements	N	Y	N	N	N	N	Y	N	N	N	N	Basis - 40 CFR Part 63, Subpart G for Formaldehyde as a Group 2 due to volume and vapor pressure. (the tank has capacity less than 151 m^3 but more than 75 m^3 and storing a liquid which has a maximum true vapor pressure less than 13.1 kPa) R - Sole requirement is to maintain tank dimension
	applicable requirements	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subpart G are also subject to Subparts A & F. Sources subject to Subpart F include systems which contact hazardous air pollutants (i.e., formaldehyde), as provided in 40 CFR 63.100.
	None	N	Y	Y	N	N	N	N	N	N	N	N	ND - exempt from 40 CFR Part 60, Subpart Kb, installed before July 23, 1984 (installation date of 6/72) and Subpart Ka by not storing a petroleum based liquid.
T028, T029: Fixed roof storage tank (V-57) for formaldehyde-methanol mixture controlled by a closed vent system with a catalytic incinerator; Group 1 tank	None	N	Y	Y	N	N	N	N	N	N	N	N	ND - exempt from OAC rule 3745-31-05(A)(3), installed before January 1 1974.
	None	21-07(M)(2)	N	Y	N	N	N	N	N	N	N	N	ND – exempt per compliance with 40 CFR Part 63 Subpart G
	Reduce total organic HAP by 95%	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63, Subpart G for formaldehyde and methanol. OR,M,R,Rp - subject to Group 1 requirements based on volume and vapor pressure (4.2 psia = 29 kPa): operate and maintain a closed vent system and control device to collect and control the storage tank emissions. The control device shall reduce the total organic hazardous air pollutants by 95 weight percent except as provided in 40 CFR 63.119.
	applicable requirements	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subpart G are also subject to Subparts A & F. Sources

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													subject to Subpart F include systems which contact hazardous air pollutants (i.e., formaldehyde and methanol), as provided in 40 CFR 63.100.
	None	N	Y	Y	N	N	N	N	N	N	N	N	ND - exempt from 40 CFR Part 60, Subpart Kb, installed before July 23, 1984 (installation date of 6/72).
T104: Methanol internal floating roof storage tank with no controls (V-10)	None	N	Y	Y	N	N	N	N	N	N	N	N	ND - exempt from OAC rule 3745-31-05(A)(3), installed before January 1, 1974. An OAC rule 3745-31-05(A)(3) limitation was established by PTI 04-01442 as issued 9/12/2006, but construction of the related process was not undertaken. The proposed PTI did not represent "reconstruction" for MACT or NSPS purposes and would not have changed the determinations.
	applicable requirements	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63, Subpart G for methanol. OR - Sources subject to Subpart G include storage vessels which contact hazardous air pollutants (i.e., methanol), as provided in 40 CFR 63.110. Except as provided in 40 CFR 63.119, the permittee shall equip and maintain a fixed roof and internal floating roof for this emissions unit based on volume <151 m^3 and vapor pressure <76.6 kPa. Group I.
	applicable requirements	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subpart G are also subject to Subparts A & F. Sources subject to Subpart F include systems which contact hazardous air pollutants (i.e., methanol), as provided in 40 CFR 63.100.
	None	N	Y	Y	N	N	N	N	N	N	N	N	Basis - exempt from 40 CFR Part 60, Subpart Kb, installed before July 23, 1984 (installation date of 6/72) and Subpart Ka installed before May 18, 1978 and Subpart K installed before June 11, 1973.
T105: Fixed roof storage tank (#202.102-1.1 for formaldehyde-methanol mixture controlled by a closed	0.08 ton of formaldehyde/ Methanol per year, submerged fill,	N	Y	N	Y	Y	N	Y	Y	Y	Y	N	Basis - OAC rule 3745-31-05(A)(3) as established in PTI 04-278. OR – maintain temp before and across catalyst bed of catalytic oxidizer no more than 50F below the temp during the last performance test showing compliance with VOC emissions limits

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
vent system with a catalytic incinerator; Group 1 tank	and closed vent system and 97% effective control												M,R,Rp - record types of liquids to allow uncontrolled emissions calculation and continuously monitor the incinerator performance to maintain stack test compliance level. St - Added terms and conditions consistent with the current language of the State's library of terms and conditions. ET – performance testing requirement of catalytic oxidizer within six months prior to permit expiration
	applicable requirements	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63, Subpart G for Group 1 >75 m^3> 13.1 kp formaldehyde and methanol. 95% minimum control efficiency.
	applicable requirements	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subpart G are also subject to Subparts A & F. Sources subject to Subpart F include systems which contact hazardous air pollutants (i.e., formaldehyde and methanol), as provided in 40 CFR 63.100.
	None	N	Y	N	N	N	N	N	N	N	N	N	Basis -NSPS 40 CFR Part 60 Subpart Kb capacity greater than 75 m^3 and less than 151 m^3 with a true maximum true vapor pressure greater than 15 kPa: compliance demonstrated through compliance with 40 CFR Part 63 Subpart F & G per 63.110(b)
	None	21-07(M)(2)	N	Y	N	N	N	N	N	N	N	N	ND – exempt per compliance with 40 CFR Part 63 Subpart G
T106: Fixed roof storage tank (#202-103-1.1) for formaldehyde-methanol mixture controlled by a closed vent system with a catalytic incinerator; Group 1 tank	0.14 tpy formaldehyde/ methanol, submerged fill, and closed vent system and 97% effective control	N	Y	N	Y	Y	N	Y	Y	Y	N	N	Basis - OAC rule 3745-31-05(A)(3) as established in PTI 04-278 issued 8/21/1985. OR – maintain temp before and across catalyst bed of catalytic oxidizer no more than 50F below the temp during the last performance test showing compliance with VOC emissions limits M,R,Rp - record types of liquids to allow uncontrolled emissions calculation and continuously monitor the incinerator performance to maintain stack test compliance level. St - Added terms and conditions consistent with the

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													current language of the State's library of terms and conditions. ET – performance testing requirement of catalytic oxidizer within six months prior to permit expiration
	applicable requirements	N	Y	N	Y	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63, Subpart G for Group 1 >75 m^3> 13.1 kp formaldehyde and methanol. 95% minimum control efficiency.
	applicable requirements	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subparts G are also subject to Subparts A & F. Sources subject to Subpart F include systems which contact hazardous air pollutants (i.e., formaldehyde & methanol), as provided in 40 CFR 63.100.
	None	N	Y	N	N	N	N	N	N	N	N	N	Basis -NSPS 40 CFR Part 60 Subpart Kb capacity greater than 75 m^3 and less than 151 m^3 with a true maximum true vapor pressure greater than 15 kPa: compliance demonstrated through compliance with 40 CFR Part 63 Subpart F & G per 63.110(b)
	None	21-07(M)(2)	N	Y	N	N	N	N	N	N	N	N	ND – exempt per compliance with 40 CFR Part 63 Subpart G
T108: Methanol internal floating roof storage tank, no controls (V-100)	0.68 ton of VOC per year; Submerged fill	N	Y	N	N	Y	N	Y	Y	N	Y	N	Basis - OAC rule 3745-31-05(A)(3) as established in PTI 04-01417 as issued 9/1/05 M,R,Rp- record types of liquids and throughputs to allow uncontrolled emissions calculation. Submerged fill demonstrated by a one-time inspection. St - Added terms and conditions consistent with the current language of the State's library of terms and conditions.
	applicable requirements	N	Y	N	N	N	N	N	N	N	N	N	Basis - 40 CFR Part 63, Subpart G Group 1 (>151 m^3> 5.2 kp) for methanol.
	applicable requirements	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subparts G are also subject to Subparts A & F. Sources subject to Subpart F include systems which contact hazardous air pollutants (i.e., methanol), as provided in 40 CFR 63.100.

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	None	N	Y	N	N	N	N	N	N	N	N	N	Basis- Installed under PTO 04-265 issued 8/21/1985,and modified by PTI 04-479 Issued August 24, 1988 >151 m^3&>3.5 kPa: NSPS 40 CFR Part 60 Subpart Kb applies. M,R,Rp,ET - compliance demonstrated through compliance with 40 CFR Part 63 Subpart F & G.
T109, T110: Formaldehyde fixed roof storage tanks controlled by a closed vent system with an electrically heated catalytic incincerator (V-510 & V-520)	0.007 ton of OC per year, 98% control efficency	N	Y	N	Y	Y	N	Y	Y	Y	Y	N	Basis - OAC rule 3745-31-05(A)(3) as established by PTI 04-01397 issued May 31, 2005 OR – maintain temp before and across catalyst bed of catalytic oxidizer no more than 50F below the temp during the last performance test showing compliance with VOC emissions limits M,R,Rp - record types of liquids and continuously monitor the incinerator performance to maintain stack test compliance level. St - Added terms and conditions consistent with the current language of the State's library of terms and conditions.
	applicable requirements	N	Y	N	Y	Y	N	Y	Y	Y	Y	N	Basis - 40 CFR Part 63, Subpart G for formaldehyde. Group 1 >151 m^3> 0.7 kPa OR - subject to Group 1 requirements based on volume, operate and maintain a closed vent system and control device to collect and control the storage tank emissions. The control device shall reduce the total organic hazardous air pollutants by 95 weight percent except as provided in 40 CFR 63.119. M,R,Rp - continuously monitor the incinerator performance to maintain stack test compliance level. ET – performance testing requirement of catalytic oxidizer within six months prior to permit expiration
	applicable requirements	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subparts G are also subject to Subparts A & F. Sources subject to Subpart F include systems which contact hazardous air pollutants (i.e., formaldehyde), as provided in 40 CFR 63.100.
	None	N	Y	N	N	N	N	N	N	N	N	N	Basis 40 CFR Part 60 Subpart Kb - >151 m^3>3.5 kPa M,R,Rp,ET - compliance demonstrated through

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													compliance with 40 CFR Part 63 Subpart F & G.
T111: Fixed roof storage tank (V-530) for formaldehyde controlled by a closed vent system with an electrically heated catalytic incinerator; Group 1 tank	0.1 ton of VOC per year, 98% destruction efficiency	N	Y	N	Y	Y	N	Y	Y	Y	Y	N	Basis - OAC rule 3745-31-05(A)(3) as established by PTI 04-1043 issued 10/9/1996. OR – maintain temp before and across catalyst bed of catalytic oxidizer no more than 50F below the temp during the last performance test showing compliance with VOC emissions limits M,R,Rp - continuously monitor the incinerator performance to maintain stack test compliance level. St - Added terms and conditions consistent with the current language of the State's library of terms and conditions for catalytic incinerator. ET – performance testing requirement of catalytic oxidizer within six months prior to permit expiration
	applicable requirements	N	Y	N	Y	Y	N	Y	Y	Y	N	N	Basis - 40 CFR Part 63, Subpart G for formaldehyde. Group 1, >151 m^3> 0.7 kPa OR - subject to Group 1 requirements based on volume, operate and maintain a closed vent system and control device to collect and control the storage tank emissions. The control device shall reduce the total organic hazardous air pollutants by 95 weight percent except as provided in 40 CFR 63.119. M,R,Rp - continuously monitor the incinerator performance to maintain stack test compliance level. ET – performance testing requirement of catalytic oxidizer within six months prior to permit expiration
	applicable requirements	N	Y	N	N	Y	N	Y	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subparts G are also subject to Subparts A & F. Sources subject to Subpart F include systems which contact hazardous air pollutants (i.e., formaldehyde), as provided in 40 CFR 63.100.
	None	N	Y	N	N	N	N	N	N	N	N	N	Basis 40 CFR Part 60 Subpart Kb - >151 m^3>3.5 kPa M,R,Rp,ET - compliance demonstrated through compliance with 40 CFR Part 63 Subpart F & G.

DRAFT

Division of Air Pollution Control
Title V Permit
for
Perstorp Polyols, Inc.

Facility ID:	0448010133
Permit Number:	P0120041
Permit Type:	Renewal
Issued:	9/13/2016
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

Ohio Environmental Protection Agency

Division of Air Pollution Control
Title V Permit
for
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Authorization

Facility ID:	0448010133
Facility Description:	Polyol and formaldehyde manufacturing facility
Application Number(s):	A0054701, A0055152, A0055599
Permit Number:	P0120041
Permit Description:	Polyol and formaldehyde manufacturing facility
Permit Type:	Renewal
Issue Date:	9/13/2016
Effective Date:	To be entered upon final issuance
Expiration Date:	To be entered upon final issuance
Superseded Permit Number:	P0108494

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

Perstorp Polyols, Inc.
600 Matzinger Road
Toledo, OH 43612

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

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

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

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

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

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

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

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

(5) Standard Term and Condition A. 30.

(Authority for term: ORC 3704.036(A))

2. Monitoring and Related Record Keeping and Reporting Requirements

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

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

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

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

(4) The analytical techniques or methods used.

(5) The results of such analyses.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

4. Risk Management Plans

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

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

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

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

5. Title IV Provisions

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

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

6. Severability Clause

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

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

7. General Requirements

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

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

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

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

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

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

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

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

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

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

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

8. Fees

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

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

9. Marketable Permit Programs

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

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

10. Reasonably Anticipated Operating Scenarios

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

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

11. Reopening for Cause

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

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

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

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

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

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

12. Federal and State Enforceability

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

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

13. Compliance Requirements

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

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

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

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

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

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

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

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

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

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

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

(2) Compliance certifications shall include the following:

a. Identification of each term or condition that is the basis of the certification. The identification may include a statement by the Responsible Official that every term and condition that is federally enforceable has been reviewed, and such terms and conditions with which there has been continuous compliance throughout the year are not separately identified.

b. The permittee's current compliance status.

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

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

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

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

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

14. Permit Shield

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

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

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

15. Operational Flexibility

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

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

16. Emergencies

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

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

17. Off-Permit Changes

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

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

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

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

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

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

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

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

18. Compliance Method Requirements

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

(This term is provided for informational purposes only.)

19. Insignificant Activities or Emissions Levels

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

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

20. Permit to Install Requirement

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

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

21. Air Pollution Nuisance

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

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

22. Permanent Shutdown of an Emissions Unit

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

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

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

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

23. Title VI Provisions

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

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

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

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

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

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

The permittee shall submit required reports in the following manner:

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

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

25. Records Retention Requirements Under State Law Only

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

26. Inspections and Information Requests

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

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

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

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

28. Permit Transfers

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

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

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

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

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

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

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

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

30. Submitting Documents Required by this Permit

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

B. Facility-Wide Terms and Conditions

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

   a) None.

2. The following emissions units contained in this permit are subject to the applicable requirements of 40 CFR Part 60, Subparts A and Kb: T104 – T106, T108 – T111. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Toledo Division of Environmental Services.

3. The following emissions units contained in this permit are subject to the applicable requirements of 40 CFR Part 60, Subparts A and VV: P801 and P812. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Toledo Division of Environmental Services.

4. The following emissions units contained in this permit are subject to the applicable requirements of 40 CFR Part 60, Subparts A and VVa: P803. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Toledo Division of Environmental Services.

5. The following emissions units contained in this permit are subject to the applicable requirements of 40 CFR Part 60, Subparts A and III: P812. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Toledo Division of Environmental Services.

6. The following emissions units contained in this permit are subject to the applicable requirements of 40 CFR Part 63, Subpart A (General Provisions) and 40 CFR Part 63, Subpart F: J001, J002, P801, P803, P812, T004, T006, T016 - T018, T025 - T029, T104 - T106 and T108 - T114. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Toledo Division of Environmental Services.

7. The following emissions units contained in this permit are subject to 40 CFR Part 63, Subpart A (General Provisions) and 40 CFR 63, subpart G: P801, P803, P812, T004, T006, T016 - T018, T025 - T029, T104 - T106 and T108 - T114. The following insignificant (de minimis) emissions units contained in this permit are Group 1 transfer load racks using closed-vent system with a catalytic incinerator as control and are therefore also subject to these requirements: J001 and J002. The complete MACT requirements, including the MACT General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Toledo Division of Environmental Services.

8. The following emissions units contained in this permit are subject to the applicable requirements of 40 CFR Part 63, Subpart A (General Provisions) and 40 CFR Part 63, Subpart H: P801, P803, P812. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Toledo Division of Environmental Services.

9. The permittee shall comply with the applicable provisions of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, as promulgated by the United States Environmental Protection Agency under 40 CFR Part 63, Subpart DDDDD. The final rules found in 40 CFR Part 63, Subpart DDDDD establish national emission standards for hazardous air pollutants (NESHAP), operational limits, work practice standards, and compliance requirements for industrial, commercial, and institutional boilers located at a major source of hazardous air pollutants (HAP). The permittee shall comply with the requirements and limits of this NESHAP for the facility's new (commenced construction after 6/4/10) boilers by January 31, 2013, or upon startup, whichever is later; and the facility's existing boilers shall be in compliance with 40 CFR Part 63, Subpart DDDDD no later than January 31, 2016.

10. The terms in this permit identify the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) contained in 40 CFR Part 63, Subpart DDDDD and are meant to help the permittee maintain compliance with this NESHAP. The requirements of this Subpart apply to the facility's boilers and process heaters according to their applicable subcategory, as identified in 40 CFR 63.7499 and as defined in 40 CFR 63.7575.

11. Pursuant to 40 CFR Part 64, the permittee has submitted and the Ohio EPA has approved compliance assurance monitoring plan for the emissions units P812 at this facility. The permittee shall comply with the provisions of the plan during any operation of the aforementioned emissions units.

12. This facility developed and registered a risk management plan pursuant to section 112(r) of the Act and, therefore, is subject to Section 112(r) of the Act.

13. 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 3745-31, and/or 40 CFR Part 60 or 63:

    J001 - Formaldehyde truck loading rack (40 CFR Part 63 Subpart G, group I);

    J002 - Formaldehyde railcar loading rack (40 CFR Part 63 Subpart G, group I);

    T002 - 138,000 gallon sodium hydroxide storage tank (PTI 04-479);

    T005 - Condensate Tank (PTI 04-479);

    T007 - Sodium hydroxide storage tank (PTI 04-479);

    T018 - Reactor Product Tank (PTI 04-918);

    T019 - Neopentylglycol Tank (PTI 04-930);

    T112 - Formaldehyde product working tank (40 CFR Part 63, subpart G, group II);

    T113 - Acetaldehyde storage tank, V130B (40 CFR Part 63, subpart G, group I); and

    T114 - Acetaldehyde storage tank, V130A (40 CFR Part 63, subpart G, group I).

C. Emissions Unit Terms and Conditions

1. B001, Boiler

Operations, Property and/or Equipment Description:

Existing 85 mmBtu/Hr. natural gas/No. 2 oil fired boiler changed to additionally burn methanol Comparable/Syngas Fuel.

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (VE) shall not exceed 20% opacity as a 6-minute average, except as provided by rule
b.	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 pound per mmBtu of actual heat input
c.	OAC rule 3745-18-06(A)	See b)(2)a.
d.	OAC rule 3745-18-06(D)	See b)(2)b.
f.	40 CFR Part 63, Subpart A (40 CFR 63.1 thru 63.16)	See b)(2)c.
g.	40 CFR Part 63 Subpart DDDDD (63.7480 – 7575) This emissions unit is an existing boiler designed to combust gas 1 and heavy liquid fuel and located at a facility which is a major source of hazardous air pollutants (HAPs) and is subject to 40 CFR Part 63, Subpart DDDDD (63.7480 through 63.7575)	The emissions from the boiler(s) shall not exceed the following emission limitations,as identified in the most recent amendment to 40 CFR Part 63, Subpart DDDDD, and as identified in: Table 2 for existing units when burning heavy liquid fuel (methanol): 1.1E-03 pound of hydrogen chloride (HCl) per MMBtu of heat input; and 2.0E-06 pound of mercury (Hg) per MMBtu of heat input; and 130 ppm carbon monoxide (CO) by volume on a dry basis, corrected to 3%

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		O_2or 0.13 pound per MMBtu of steam input; and Filterable Particulate Matter (PM) or Total Selected Metals (TSM) shall not exceed: 6.2E-02 pound of PM per MMBtu of heat input or 2.0E-04 pound of TSM per MMBtu of heat input or 7.5E-02 pound of PM per MMBtu of steam input or 2.5E-04 pound of TSM per MMBtu of steam input. Boilers subject to emission standards in Table 2 shall also meet the work practice standards identified in Table 3 during startup and shutdown of the unit and the tune-up requirements, as applicable, in Table 3. Boilers not subject to emission standards shall meet the tune-up requirements identified in Table 3 as applicable to the unit. The permittee shall demonstrate compliance with the limits published in the final amendments to Subpart DDDDD, as required by the subpart. [63.7500(a] See b)(2)d. and b)(2)o.

(2) Additional Terms and Conditions

a. On any day in which natural gas is the only fuel fired: OAC rule 3745-18-06(A) does not establish SO_2 emission limitations for the fuel burning equipment associated with this emissions unit because the emissions unit only employs natural gas as fuel.

b. The quality of the fuel oil burned in this emissions unit shall meet a sulfur content that is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.6 pounds of sulfur dioxide per MM Btu actual heat input.

c. Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD (63.7565) shows which parts of the General Provisions apply to this subpart.

d. The permittee shall develop a site-specific continuous monitoring system (CMS) performance evaluation test plan and shall, upon request, submit a copy to the appropriate District Office or local air agency of the Ohio EPA Division of Air Pollution Control (DAPC) for evaluation and/or approval. A performance evaluation of each CMS shall be conducted in accordance with the site-specific performance evaluation test plan. The continuous monitoring system (CMS) shall be operated and certified in accordance with the appropriate performance specification under Appendix B to Part 60 and shall meet the requirements of 40 CFR 63.7525. The test evaluation of the CMS(s) shall demonstrate the precision and accuracy of the equipment and completeness of the data collected. The site-specific performance evaluation test plan shall require all CMS (systems required by rule) be maintained in continuous operation during process operations. The site-specific monitoring plan shall address the following requirements:

i. the design, data collection, quality assurance, and quality control elements outlined in 40 CFR 63.8(d);

ii. installation of the CEMS sampling probe at a location that is representative of the exhaust emissions (*e.g.*, on or downstream of the last control device);

iii. performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems;

iv. performance evaluation procedures and acceptance criteria (*e.g.,* calibrations, accuracy audits, analytical drift);

v. ongoing operation and maintenance procedures in accordance with the general requirements of 40 CFR 63.8(c);

vi. ongoing data quality assurance procedures in accordance with the general requirements of 40 CFR 63.8(d); and

vii. ongoing recordkeeping and reporting procedures in accordance with the requirements of 40 CFR 63.10(c) and (e).

The performance evaluation test plan shall also include the evaluation program objectives, an evaluation program summary, the performance evaluation schedule, data quality objectives, and both an internal and external quality assurance (QA) program.

viii. The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of CMS performance.

ix. The external QA program shall include, at a minimum, provisions for systems audits and validation of instrument calibrations, data collection, sample logging, and documentation of quality control data and field maintenance activities and must also address the following requirements:

(a) each CMS (parameter monitor or sampling probe) shall be installed at a location that accurately measures the exhaust emissions representative of the emissions unit (e.g., on or downstream of the last control device) and accurately measures the process and/or the control device parameters;

(b) performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(c) performance evaluation procedures and acceptance criteria, including calibration frequency, results, and records.

The permittee shall notify both the Central Office and the appropriate District or local office of the Ohio EPA DAPC at least 60 days before the performance evaluation is scheduled for a CEMS or COMS, or by a mutually agreed upon (by DAPC Central Office) date. The permittee shall notify the appropriate District or local office of the Ohio EPA DAPC at least 60 days before the performance evaluation is scheduled for a CPMS. The DAPC may request a copy of the site-specific performance evaluation test plan and additional relevant information following the review of a site-specific performance evaluation test plan. All CMS shall be installed, operational, and the data verified, as specified in 40 CFR 63.7505(d), either prior to or in conjunction with conducting performance tests required under 40 CFR 63.7.

e. The permittee shall develop and, if requested, submit a site-specific test plan to the Director (appropriate Ohio EPA Division of Air Pollution Control, District Office or local air agency) for evaluation and approval, at least 60 calendar days before the performance test is scheduled to take place and simultaneously with the notification of intention to conduct a performance test, unless the Director agrees upon a different date. The site-specific test plan shall demonstrate the precision and accuracy of the equipment and completeness of the data collected. The test plan shall include, at a minimum, the following elements: a test program summary; the test schedule; data quality objectives; and both an internal and external quality assurance (QA) program.

The internal quality assurance (QA) program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of test data precision (e.g.: sampling and analysis of replicate samples). The external QA program shall include, at a minimum, the following elements:

i. provisions for a test method performance audit during the performance test, in order to provide a measure of test data bias;

ii. provisions for systems audits, instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities; and

iii. provisions to provide appropriate notice (60 days), to the Director, of the performance test, performance audit, and systems audit, allowing the regulating agency the opportunity to arrange for their own on-site evaluation.

The performance audits shall consist of blind audit samples, provided by an accredited audit sample provider, which shall be taken and analyzed during each performance test. The Director may request additional relevant information following the receipt and review of the site-specific test plan.

f. Table 10 to 40 Part 63 Subpart DDDDD provides applicability provisions, definitions, and other general provisions of 40 CFR Part 63, Subpart A that are applicable to 40 CFR Part 63, Subpart DDDDD.

g. The emissions limits, work practice standards, and operating limits of the NESHAP apply at all times of boiler operation, except during periods of startup and shutdown during which the requirements of Table 3 #5 (startup) and #6 (shutdown) of Part 63, Subpart DDDDD apply. Compliance with the emissions limits is demonstrated through: performance stack testing; fuel analyses; and/or continuous monitoring using continuous monitoring systems (CMS), including continuous parameter monitoring systems (CPMS).

h. Following the initial compliance demonstration, compliance with the emission standards for HCl and Hg, or TSM where opting to comply with the standard for TSM instead of PM, may be demonstrated using fuel analysis (instead of a performance test) if the emission rate, calculated in accordance with 40 CFR 63.7530(c), is less than the applicable limit identified in Table 1 or 2, or Tables 11 through 13. Fuel analyses shall be conducted in accordance with 40 CFR 63.7521 and Table 6 to Subpart DDDDD of Part 63. For gaseous fuels, fuel analysis cannot be used for compliance with the HCl or TSM standards.

i. For each existing boiler a one-time energy assessment must be performed by a qualified energy assessor no later than 1/31/16. The one-time energy assessment for existing units must include the following:

i. a visual inspection of the boiler system;

ii. an evaluation of operating characteristics of the boiler systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints;

iii. an inventory of major energy use systems consuming energy from affected boilers, which are under the control of the boiler operator;

iv. a review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage;

v. a review of the facility's energy management practices and recommendations for improvements consistent with the definition of energy management practices, if identified;

vi. a list of cost-effective energy conservation measures that are within the permittee's control;

vii. a list of the energy savings potential of the energy conservation measures identified; and

viii. a comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping these investments.

j. Following the initial compliance date, tune-ups must be conducted for each boiler within the applicable annual, biennial, or 5-year schedule as specified in 40 CFR 63.7500(c), (d), and (e), 40 CFR 63.7540(a)(10) through (13), and Table 3 to the subpart. An initial tune-up must be completed for an existing boiler no later than 1/31/16; unless the boiler in not in operation at this time, where a tune-up must be completed within 30 days after the re-start of the boiler.

k. The permittee shall develop a site-specific fuel monitoring plan for each fuel burned in boilers that burn more than a single type of fuel; or for each fuel that the facility chooses to demonstrate compliance through fuel analyses. A fuel analyses is not require for fuels used only for startup and shutdown or for transient flame stability, natural gas, refinery gas, or fuels exempted in 40 CFR 63.7510(a)(2)(i) or (ii) or 40 CFR 63.7521(f)(1) through (4). For solid and liquid fuels, fuel analyses must be conducted for Cl and Hg, and TSM if opting to comply with the TSM alternative standard; and for gaseous fuels, other than natural gas, refinery gas, or exempted fuels, a fuel analysis must be conducted for Hg. Fuel analyses shall be conducted in accordance with the procedures identified in 40 CFR 63.7521 and Table 6 to Subpart DDDDD. A fuel gas system that consists of multiple gaseous fuels collected and mixed is considered a single fuel type; and sampling and analysis is only required for the gas mix that will feed the boiler. The site-specific fuel analysis plan shall include the following information:

i. the identification of all fuel types anticipated to be burned in each boiler;

ii. for each anticipated fuel type, a statement as to whether the fuel analyses will be conducted by the permittee or by the fuel supplier;

iii. for each anticipated fuel type, the specific procedures to be used for collecting and preparing the composite samples if the procedures are different from those described in 40 CFR 63.7521(c) and (d) and/or Table 6 to the subpart;

iv. for each anticipated fuel type, the analytical methods from Table 6 to the subpart that will be used for the measurement of chlorine (Cl), mercury

(Hg), and/or total selected metals (TSM) and the minimum expected detection levels;

v. if requesting the use of an alternative analytical method other than those required by Table 6 from Subpart DDDDD to Part 63, a detailed description of the methods and procedures that are proposed to be used, along with the written approval of the Administrator (U.S. EPA Region V) and a copy of the site-specific monitoring plan that was approved; and

vi. for each anticipated fuel type, identification of the location where fuel samples will be collected, that most accurately represents the fuel type and prior to mixing with other dissimilar fuel types.

If using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 of the Subpart.

l. Any reference to the "Director" in this permit shall take the meaning of the applicable District Office or local air agency of the Division of Air Pollution Control (DAPC), unless otherwise specified in the terms. Unless other arrangements have been approved by the Director, notification of the initial certification and performance evaluations of a continuous monitoring system (CMS), scheduled performance testing, and all required reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

m. Except for existing units demonstrating compliance through emissions averaging (40 CFR 63.7522), each existing boiler subject to Part 63 Subpart DDDDD shall meet each applicable emission limit in Table 2; and all exiting boilers shall meet the work practice standards identified in Table 3 and each applicable operating limit for the control device(s) identified in Table 4, by the compliance date of 1/31/16.

n. An existing boiler located at a major source of HAP shall demonstrate initial compliance with the emission limits in Table 2 of Part 63 Subpart DDDDD no later than 7/29/16 or no later than 180 days after re-start of a boiler that was not operated following the compliance date (1/31/16) or that has not operated for over a year following the last compliance demonstration.

o. Continuous compliance with each emission limits in Table 2, work practice standards in Table 3, and operating limits in Table 4 of the subpart shall be demonstrated in accordance with the methods specified in 40 CFR 63.7540(a) and Table 8 to Subpart DDDDD of Part 63. Operating above the established maximum or below the established minimum operating limit(s) shall constitute a deviation of the operating limits identified in Table 4 of the subpart.

c) Operational Restrictions

(1) The permittee shall burn only natural gas, methanol or #2 fuel oil in this emissions unit.

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

(2) The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart DDDDD — National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, including the following sections:

63.7500(a)(3)	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
63.7505(c)	demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or continuous monitoring systems
63.7510(b)	Demonstrate initial compliance with the applicable emission limits for HCl, mercury, or TSM through fuel analysis
63.7510(e)	conduct an initial tune-up of the boiler or process heater
63.7515(e)	demonstrate compliance of the mercury, HCl, or TSM emission limits with monthly fuel analysis
63.7520(c)	boilers where compliance was/is demonstrated through a performance test, the permittee shall maintain the operating load such that is does not exceed 110% of the highest hourly average operating load recorded during the most recent performance test demonstrating compliance
63.7525(a)	maintain an oxygen analyzer system or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen (or carbon dioxide (CO_2)) for boiler or process heater subject to a CO emission limit in Tables 1, 2, or 11 through 13 to this subpart
63.7530(h)	meet the work practice standard according to Table 3 of this subpart
63.7540(a)(10)	conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, methanol or #2 fuel oil in this emissions unit, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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

(2) The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below:

a. Alternative 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil

supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in pounds per mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days when this emissions unit is only operated for the purpose of "test firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in pounds per mmBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the Director.

[Authority for term: OAC rules 3745-18-04(E)(3) and 3745-18-04(I)]

(3) The permittee shall comply with the applicable monitoring and record keeping required under 40 CFR Part 63, Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, including the following sections:

63.7510(a)(2)	boiler burning more than one type of fuel, an initial fuel analysis must be conducted for each non-exempt fuel burned in the boiler
63.7515(e)	Monthly fuel analysis
63.7520(c)	collect the operating load data or steam generation data every 15 minutes, in order to monitor and maintain the operating load such that it does not exceed 110% of the highest hourly average operating load established during the most recent performance test demonstrating compliance
63.7521	Fuel analysis procedures
63.7525(a)	boilers subject to a CO emission limit and using the option to install

	an oxygen analyzer, the system shall monitor the oxygen in the boiler flue gas and it shall be installed, calibrated, and maintained in accordance with the manufacturer's recommendations
63.7525(d)	For an operating limit that requires the use of a CMS other than a PM CPMS or COMS, you must install, operate, and maintain each CMS according to the procedures in this section
63.7530(c)	Procedure to conduct fuel analysis to demonstrate initial compliance
63.7535(b)	must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods
63.7540(a)(2)	Record of type and amount of all fuels burned during each reporting period
63.7555	Required recordkeeping
63.7560	Record retention

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas, CSF and/or #2 fuel oil was burned in this emissions unit.

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

(2) The permittee shall submit quarterly deviation (excursion) reports that identify all shipments of fuel oil used to fire this emissions unit (for alternative 1), and/or all daily grab samples of the oil (for alternative 2), that are in excess of the calculated sulfur dioxide emission limitation of 1.6 pounds per mmBtu of actual heat input.

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

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

[Authority for term: OAC rule 3745-15-03(B)(1)(a) and OAC rule 3745-15-03(C); and OAC rule 3745-77-07(C)(1)]

(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.

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(5) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, including the following sections:

63.7521(b)(2)	fuel analyses plan must be submitted no later than 60 days before the date of the intended initial compliance demonstration and must include the information contained in this section for your fuel analysis plan
63.7545(e)	Notification of Compliance Status for the initial compliance demonstration of each boiler or process heater, including all performance test results and fuel analyses
63.7545(f)	Notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption
63.7550	Required reporting
63.7555	Required records
63.7560	Record retention

f) Testing Requirements

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

a. Emission Limitation:

20% opacity, as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and in OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

0.020 pound of particulate emissions per million Btu of actual heat input

Applicable Compliance Method:

When firing natural gas, this emissions limitation is less than the result of calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 1.9 pounds of PE per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot.

Compliance while firing methanol shall be based upon the results of the most recent stack test which demonstrated compliance with the emissions limitation (0.002 lb/mmBtu while firing methanol with natural gas based on stack testing performed September 3, 2003).

When firing #2 fuel oil, this emissions limitation is less than the result of calculations based on emission factors specified in USEPA reference document

AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.3-1 dated 9/98, as follows: divide the emission factor of 2.0 pounds of PE per million 1000 gallons by a heating value of 140 mmBtu per 1000 gallons of oil.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative USEPA approved test methods may be used with prior written approval from the Ohio EPA.

c. Emission Limitation:

1.6 pounds of sulfur dioxide per mmBtu of actual heat input when firing with #2 fuel oil.

Applicable Compliance Method:

Continuous compliance with the allowable sulfur dioxide emission limitation shall be demonstrated by documenting that the sulfur content of each shipment of oil received, or each daily composite sample of the oil burned during each calendar day, meets the limitation.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6. Alternative USEPA approved test methods may be used with prior written approval from the Ohio EPA.

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

d. The emissions from this/these boiler(s) shall not exceed the following emission limits or the limitations specified in the most recent amendment to 40 CFR Part 63, Subpart DDDDD in:

1.1E-03 pound of HCl per MMBtu of heat input;
2.0E-06 pound of Hg per MMBtu of heat input;
130 ppm CO by volume on a dry basis, corrected to 3% O_2 or 0.13 pound of CO per MMBtu of steam input; and
Filterable Particulate Matter (PM) or Total Selected Metals (TSM) shall not exceed: 6.2E-02 pound of PM per MMBtu of heat input or 2.0E-04 pound of TSM per MMBtu of heat input or 7.5E-02 pound of PM per MMBtu of steam input or 2.5E-04 pound of TSM per MMBtu of steam input.

Applicable Compliance Method:

For existing boilers, the permittee shall conduct an initial performance test on or before 7/29/16 to demonstrate compliance with the requirements of Part 63 Subpart DDDDD. The appropriate tests methods from Table 5 to Subpart DDDDD shall be conducted while establishing operating limits in accordance with Table 7 to the subpart. Boilers equipped with CEMS for Hg are exempt from the performance testing requirements for Hg and the sorbent or carbon injection

operating limits for a dry scrubber if meeting the performance evaluation and certification requirements for Hg CEMS and 40 CFR 63.7540(a)(14). Boilers equipped with CEMS for HCl are exempt from the performance testing requirements for HCl and the effluent pH and liquid flow rate operating limits for a wet acid gas scrubber if meeting the performance evaluation and certification requirements for HCl CEMS and 40 CFR 63.7540(a)(15).

Performance testing must be conducted on an annual basis in accordance with 40 CFR 63.7520 and completed no more than 13 months after the previous performance test. If after 2 consecutive years the emissions of a pollutant identified in Table 2 are at or below 75% of the emissions limit for that pollutant and there have been no changes in the operation of the boiler or air pollution control equipment that could increase emissions, performance testing may revert to every 3 years, or no more than 37 months after the previous test, for the pollutant. If the pollutant exceeds 75% of the applicable limit, testing shall revert back to annually, until the performance tests over another consecutive 2-year period have demonstrated the emissions to be at or below 75% of the applicable emission limit identified in Table 2. For each existing boiler in which compliance is demonstrated through emissions averaging, performance testing shall remain annually. The average operating load must be recorded during each performance test.

Following an initial compliant performance test with the emission limits in Table 2, further performance tests are not required for a boiler designed to burn light liquid fuels and that only burns ultra-low sulfur liquid fuel, if the fuel is monitored and monthly records can demonstrate that only ultra-low sulfur liquid fuel is burned in the boiler.

Performance testing is not required for boilers designed to burn gas 1 fuels subcategory, where monthly records can document the fuel usage and that it meets the specifications of “gas 1 fuel”. Following the compliance test date, a performance test must be conducted for each new fuel not meeting the specifications of “gas 1 fuel” within 60 days of first burning it.

If an affected boiler and a non-affected unit(s) vent(s) to a common stack, the non-affected unit(s) must be shut down or vented to a different stack during the performance test, unless compliance can be demonstrated with the non-affected units venting to the stack during the performance demonstration.

The following test method(s) shall be employed, in accordance with Table 5 to Subpart DDDDD, to demonstrate compliance with the allowable mass emission rate(s)*:

Method 1, Appendix A-1, Part 60 to select the sampling ports locations and number of traverse points;

Method 2, 2F, or 2G, Appendix A-1 or A-2, Part 60 to determine the velocity and volumetric flow-rate of the stack gases;

Method 3A or 3B, Appendix A-2, Part 60, or ANSI/ASME PTC19.10 to determine the oxygen and/or carbon dioxide concentrations, excess air, and dry molecular weight of the stack gases;

Method 4, Appendix A-3, Part 60 to measure the moisture content of the stack gases;

Method 5 or 17 Appendix A-3 or A-6, Part 60 for PM emission concentration;

Method 7, 7A, 7C, 7D, or 7E, Appendix A, Part 60, as appropriate, if subject to OAC 3745-110, the NO_x RACT;

Method 10 Appendix A-4, Part 60 to measure the CO emission concentration;

Method 26 or 26A, Appendix A-8, Part 60 to measure HCl emissions concentrations;

Method 29 Appendix A-8, Part 60 for the TSM emission concentration;

Method 29, 30A, or 30B, Appendix A-8, Part 60; or Method 101A in Appendix B to Part 61; or ASTM Method D6784for the Hg emission concentration;

Method 19 F-factor methodology, Appendix A-7 to Part 60 to convert PM, HCl, Hg, and TSM concentrations to pound per MMBtu emission rates; and

Sampling sites shall be located after the control device and prior to any releases to the atmosphere.

i. To determine compliance with the emission limitations from Subpart DDDDD, the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 of Appendix A to part 60 shall be used to convert the measured PM or TSM, HCl, and Hg concentrations from the performance test, to pounds per million Btu heat input emission rates.

ii. Each performance test shall consist of 3 separate runs as specified in 40 CFR 63.7(e)(3), using the applicable test methods in Table 5. Each test run shall last at least one hour and shall be conducted under the conditions specified in Tables 5 and 7, and must met the minimum sampling times and volumes specified in the last column of Table 2 for existing boilers.

iii. During each performance test the maximum operating load shall be established by collecting the operating load or steam generation data every 15 minutes during the entire performance test. The average operating load shall be computed from the hourly averages using all of the 15-minute readings taken during each performance test. The

maximum operating load shall be calculated as the average of the 3 test runs established during the most recent performance tests multiplied by 1.1 (110%).

iv. The performance tests shall be conducted while the boiler is operating at representative operating load conditions, while burning the mixture(s) of fuel containing the highest content of Cl, Hg, and TSM if complying with the alternative standard for PM. These requirements could result in the need to conduct more than one performance test. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of the performance test. The permittee shall make available to the Ohio EPA, Division of Air Pollution Control, Central Office or the appropriate District Office or local air agency, upon request, any records that may be necessary to determine the conditions of the performance tests.

v. In order to establish the site-specific operating limits as required by 40 CFR 63.7530(b)(4) and Table 4 to Subpart DDDDD, the permittee shall collect and record the appropriate parameters for the control device, in accordance with Table 7 to the subpart, every 15 minutes during each performance test. The minimum operating parameters shall be established as follows:

Where demonstrating compliance with a CO limit, the minimum oxygen level operating limit shall be established as the lowest hourly average measured during the most recent performance test demonstrating compliance with the CO limit.

The permittee shall notify the appropriate Ohio EPA, Division of Air Pollution Control, District Office or local air agency in writing and at least 60 calendar days before a performance test is initially scheduled to begin, of plans to conduct a performance test. If a performance evaluation of the COMS or CEMS is to be conducted at the same time, the Division of Air Pollution Control's Central Office shall also be notified. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the monitored 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 Division of Air Pollution Control’s refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA, Division of Air Pollution Control, District Office, local air agency, or Central 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 each emissions unit and the testing procedures provide a valid characterization of the emissions from each emissions unit and/or the performance of the baghouse and wet scrubber.

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 shall be submitted

to the appropriate Ohio EPA, Division of Air Pollution Control, District Office or local air agency within 30 days following completion of the test(s).

In the event the permittee is unable to conduct the performance test on the date specified in the notification requirement due to unforeseeable circumstances beyond control, the permittee shall notify the appropriate Ohio EPA, Division of Air Pollution Control, District Office or local air agency as soon as practicable and without delay prior to the scheduled performance test date and specify the date when the performance test is rescheduled. This notification of delay in conducting the performance test shall not relieve the permittee of legal responsibility for compliance with any other applicable provisions of this part or with any other applicable federal, State, or local requirement.

The permittee shall maintain performance test results and any other data needed to determine emissions from each emissions unit for a minimum of 5 years after the testing is conducted or after the data is collected. These records shall be made available for inspection by the Director of the Ohio EPA or his/her representative, upon request.

[Authority for term: [40 CFR 63.7520], [40 CFR 63.7500(a)], [40 CFR 63.7510], [40 CFR 63.7515], [40 CFR 63.7522(j)(2)]], [40 CFR 63.7525(l)(8) and (m)], [40 CFR 63.7530(a), (b)(4)(i), (iv) through (ix), (h), and (i)], [40 CFR 63.7545(d)], [40 CFR 63, Subpart DDDDD Tables 4, 5, 7, and 8; for the Table 2 limits], [40 CFR 63.6(h)(7)(iii)], [40 CFR 63.7], [40 CFR 63.10(d)], [OAC 3745-110], and [OAC 3745-15-04(A)]]

e. Emission Limitation:

Carbon Monoxide shall not exceed the applicable limitation identified in Table 2 in Part 63, Subpart DDDDD, in ppm by volume on a dry basis, corrected to 3 % oxygen; and

The oxygen content must be maintained at or above the lowest hourly average O_2 level measured during the most recent CO performance test.

Applicable Compliance Method:

Each boiler subject to a CO emission limit in Table 2 to Subpart DDDDD, shall be equipped with an oxygen analyzer system, as defined in 40 CFR 63.7575. The initial compliance demonstration for CO shall include a performance test for CO according to Table 5 (Method 3A or 3B) to the subpart. Compliance with the CO standard shall be demonstrated as follows:

Where electing to install an oxygen analyzer or oxygen trim system, the following requirements shall be met:

i. the systemshall maintain excess air at the desired level in the boiler by providing an automatic feedback signal to thecombustion air controller;

ii. the system shall be installed, certified, operated, and maintained in accordance Performance Specification 4, 4A, or 4B of 40 CFR Part 60, Appendix B; and

iii. the system shall be set and operated to maintain the oxygen level at the lowest hourly average oxygen concentrationmeasured during the most recent CO performance test demonstrating compliance, and as theoperating limit for oxygen,in accordance with Table 7 to Subpart DDDDD.

[Authority for term: [40 CFR 63.7525(a)], [40 CFR 63.7515(i)], [40 CFR 63.7530(b)(4)], [40 CFR 63.7540(a)(8)], [40 CFR 63.7510(c)], and [40 CFR 63.8]]

f. Emission Limitation:

Chlorine input (Cl entering boiler in lbs/MMBtu); and

Mercury input (Hg entering boiler in lbs/MMBtu); or

Total Selected Metals input (TSM entering boiler in lbs/MMBtu)

Applicable Compliance Method:

For each boiler burning more than one type of fuel, an initial fuel analyses shall be conducted for each type of fuel burned in the boiler in accordance with 40 CFR 63.7521 and Table 6 to the subpart. For solid and liquid fuels an initial fuel analysis must be conducted for Cl and Hg; and for gaseous fuels, not exempted in 40 CFR 63.7510(a)(2)(i) and (ii), an initial fuel analysis must be conducted for Hg. Composited fuel samples shall be prepared during the initial performance test; and solid fuel samples shall be prepared in accordance with 40 CFR 63.7521(c) and (d) or an equivalent method. The resultant fuel analyses shall establish maximum fuel pollutant input levels, in pounds per million Btu, of Cl and Hg, and TSM where opting to comply with the TSM standard. The maximum Cl, Hg, and/or TSM input shall be calculated in accordance with 40 CFR 63.7530(b) using Equations 7 (for Cl), 8 (for Hg), and 9 (for TSM):

the maximum Cl fuel input (Cl_{input}) shall be established during the initial performance testing according to the following procedures from 40 CFR 63.7530(b)(1):

i. the fuel type or fuel mixture that has the highest content of Cl shall be determined from the fuels that are burned or will be burned in the boiler;

ii. during the performance testing for HCl, the fraction of the total heat input for each fuel type burned (Q_i) shall be determined based on the fuel mixture that has the highest content of Cl, and the average Cl concentration shall be determined for each fuel type burned (C_i);

iii. a maximum Cl input level shall be established using Equation 7 from 40 CFR 63.7530(b)(1):

$$Cl_{input} = \sum_{i=1}^{n} (C_i)(Q_i)$$

Where:

Cl_{input} = maximum amount of Cl entering the boiler from the fuels burned in pounds per million Btu.

C_i = arithmetic average concentration of Cl in fuel type "i", analyzed according to 40 CFR 63.7521, in pounds per million Btu.

Q_i = fraction of total heat input from fuel type "i", based on the mixture that has the highest content of Cl. If multiple fuel types are not burned during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Q_i.

n = number of different fuel types burned in the boiler for the mixture having the highest content of Cl.

the maximum Hg fuel input level (Hg input) shall be established during the initial performance testing according to the following procedures from 40 CFR 63.7530(b)(2):

i. the fuel type or fuel mixture that has the highest content of Hg shall be determined from all the fuels that are burned or that will be burned in the boiler;

ii. during the performance testing for Hg, the fraction of the total heat input for each fuel type burned (Q_i) shall be determined based on the mixture that has the highest content of Hg, and the average Hg concentration shall be determined for each fuel type burned (HG_i);

iii. a maximum Hg input level shall be established using Equation 8 from 40 CFR 63.7530(b)(2):

$$Hg_{input} = \sum_{i=1}^{n} (HG_i)(Q_i)$$

Where:

Hg_{input} = maximum amount of Hg entering the boiler from the fuels burned, in pounds per million Btu.

HG_i = arithmetic average concentration of Hg in fuel type "i", analyzed according to 40 CFR 63.7521, in pounds per million Btu.

Q_i = fraction of total heat input from fuel type "i", based on the mixture that has the highest Hg content. If multiple fuel types are not burned during

the performance testing, it is not necessary to determine the value of this term. Insert a value of ``1'' for Q_i.

n = number of different fuel types burned in the boiler for the mixture having the highest content of Hg.

the maximum TSM fuel input level (TSM input) shall be established during the initial performance testing according to the following procedures from 40 CFR 63.7530(b)(3):

i. the fuel type or fuel mixture that has the highest content of TSM shall be determined from all the fuels that are burned or that will be burned in the boiler;

ii. during the performance testing for TSM, the fraction of the total heat input for each fuel type burned (Q_i) shall be determined based on the mixture that has the highest content of TSM, and the average TSM concentration shall be determined for each fuel type burned (TSM_i);

iii. a maximum TSM input level shall be established using Equation 9 from 40 CFR 63.7530(b)(3):

$$TSM_{input} = \sum_{i=1}^{n} (TSM_i)(Q_i)$$

Where:

TSM_{input} = maximum amount of TSM entering the boiler from the fuels burned, in pounds per million Btu.

TSM_i = arithmetic average concentration of TSM in fuel type "i", analyzed according to 40 CFR 63.7521, in pounds per million Btu.

Q_i = fraction of total heat input from fuel type "i", based on the mixture that has the highest TSM content. If multiple fuel types are not burned during the performance testing, it is not necessary to determine the value of this term. Insert a value of ``1'' for Q_i.

n = number of different fuel types burned in the boiler for the mixture having the highest content of TSM.

[Authority for term: [40 CFR 7510(a)(2)], [40 CFR 63.7530(b)(1),(2), and (3)], and [40 CFR Part 63, Subpart DDDDD Table 6]]

g. Emission Limitation:

lb HCl/MMBtu of actual heat input; and

lb Hg/MMBtu of actual heat input; or

lb of TSM/MMBtu of actual heat input

Applicable Compliance Method:

For each pollutant that the permittee elects to demonstrate compliance through fuel analyses, monthly (or quarterly where meeting the requirements of 40 CFR 63.7515(e)) fuel analyses shall be conducted according to the procedures found in 40 CFR 63.7521, Table 6 to the subpart, and the site-specific fuel analyses plan. Monthly fuel samples shall be collected at a minimum of 14 calendar days from the sample collected for analyses in the previous month. Certified laboratory fuel analyses testing results (which can be submitted by the supplier), demonstrating that sufficient data has been collected to comply with 40 CFR 63.7530(c) for a 90th percentile confidence level of the subject pollutant concentration, shall be used to calculate the subject pollutant's emission rate as required per 40 CFR 63.7530(c).The maximum Cl, Hg, and TSM (if opting to comply with TSM) input shall be calculated (as above) in accordance with 40 CFR 63.7530(b) using Equations 7 (for Cl), 8 (for Hg), and 9 (for TSM); and the HCl, Hg, and TSM emission rates shall be calculated in accordance with 40 CFR 63.7530(c) using Equations 15 (for 90th percentile confidence level pollutant concentration), 16 (for HCl), 17 (for Hg) and 18 (for TSM). The data, calculated to pounds of pollutant per MMBtu per Table 6, shall be reduced to 12-month rolling averages at the end of 12 months. The rolling 12-month average emissions, established through the monthly fuel analyses, shall be maintained at or below the applicable emission limit for HCl, Hg, or TSM as identified in Table 2 to Subpart DDDDD. A fuel analysis must be conducted before burning a new fuel not previously tested. The following procedures and calculations shall be used to demonstrate compliance with an applicable limit through fuel analysis:

i. if burning more than one fuel type, the permittee shall determine the fuel or fuel mixture that would result in the maximum emission rates of each/the pollutant (which could mean multiple fuels);

ii. the 90th percentile confidence level, of the pollutant concentration of the composite samples of each fuel type analyzed, shall be determined using the one-sided z-statistic test described in Equation 15 from 40 CFR 63.7530(c)(2) as follows:

P_{90} = mean + (SD x t)

Where:

P_{90} = 90th percentile confidence level pollutant concentration, in pounds per million Btu

mean = arithmetic average of the pollutant concentration in the fuel samples analyzed according to 40 CFR 63.7521, in pounds per million Btu

SD = standard deviation of the pollutant concentration in the fuel samples analyzed according to 40 CFR 63.7521, in pounds per million Btu. SD is

calculated as the sample standard deviation divided by the square root of the number of samples.

t = t distribution critical value for 90th percentile ($t_{0.1}$) probability for the appropriate degrees of freedom (number of samples minus one), as obtained from a t-Distribution Critical Value Table

iii. in order to demonstrate compliance with the applicable emission limit for HCl, the HCl emission rate for the boiler shall be calculated to be less than the applicable emission limit using Equation 16 from 40 CFR 63.7530(c)(3) as follows:

$$HCl = \sum_{i=1}^{n} [(C_{i90})(Q_i)(1.028)]$$

Where:

HCl = HCl emission rate from the boiler in pounds per million Btu.

C_{i90} = 90th percentile confidence level concentration of Cl in fuel type “i” in pounds per million Btu, as calculated according to Equation 15 above

Q_i = fraction of total heat input from fuel type “i” based on the fuel mixture that has the highest content of Cl. If only one fuel type is used, it is not necessary to determine the value of Q_i and it will equal ”1".

n = number of different fuel types burned in the boiler for the mixture having the highest content of Cl.

1.028 = molecular weight ratio of HCl to Cl

iv. in order to demonstrate compliance with the applicable emission limit for Hg, the Hg emission rate for the boiler shall be calculated to be less than the applicable emission limit using Equation 17 from 40 CFR 63.7530(c)(4) as follows:

$$Hg = \sum_{i=1}^{n} [(Hg_{i90})(Q_i)]$$

Where:

Hg = Hg emission rate from the boiler in pounds per million Btu.

Hg_{i90} = 90th percentile confidence level concentration of Hg in fuel type “i” in pounds per million Btu, as calculated according to Equation 15 above.

Q_i = fraction of total heat input from fuel type “i”, based on the fuel mixture that has the highest Hg content. If only one fuel type is used, it is not necessary to determine the value of Q_i and it will equal ”1".

n = number of different fuel types burned in the boiler for the mixture having the highest content of Hg.

v. in order to demonstrate compliance with the applicable emission limit for TSM, the TSM emission rate for the boiler shall be calculated to be less than the applicable emission limit using Equation 18 from 40 CFR 63.7530(c)(5) as follows:

$$TSM = \sum_{i=1}^{n} [(TSM_{i90})(Q_i)]$$

Where:

TSM = TSM emission rate from the boiler in pounds per million Btu.

TSM_{i90} = 90th percentile confidence level concentration of TSM in fuel type "i" in pounds per million Btu, as calculated according to Equation 15 above.

Q_i = fraction of total heat input from fuel type "i", based on the fuel mixture that has the highest TSM content. If only one fuel type is used, it is not necessary to determine the value of Q_i and it will equal "1".

n = number of different fuel types burned in the boiler for the mixture having the highest content of TSM.

[Authority for term: [40 CFR 63.7505(c)], [40 CFR 63.7510(b)], [40 CFR 63.7515(e)], [40 CFR 63.7530(c)], [40 CFR 63.7505(c)], and [40 CFR Part 63, Subpart DDDDD Table 6]]

(2) Each tune-up conducted to demonstrate compliance with the requirements of Part 63 Subpart DDDDD shall include the following elements:

a. inspection of the burner(s) (and requirement to clean or replace any necessary components);

b. inspection of the flame pattern and requirement to adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications if applicable;

c. inspect the air-to-fuel ratio control system to ensure it is correctly calibrated and functioning properly;

d. optimize total emissions of CO, in correlation with any applicable NOx standards, consistent with the manufacturer's specification if applicable;

e. measure the concentration of CO (in ppm, by volume) and oxygen (in volume percent) in the effluent gas stream, at the high-fire or typical operating load, and both before and after any adjustments (measurements can be make using a portable CO analyzer);

f. maintain records of the tune-up, inspection, and any corrective actions taken; and

g. where more than one type of fuel is used, records of the type and amount of each fuel type burned over the 12 months prior to the tune-up.

Inspections may be delayed until the next scheduled shutdown; and units that produce electricity for sale may delay the inspection until the first outage, but may not exceed 36 months from the previous inspection. The frequency of tune-ups shall be based on the frequency identified in Table 3 to the subpart. An initial tune-up must be completed for an existing unit no later than 1/31/16, unless the boiler is not in operation at that time, where a tune-up must be completed within 30 days after the re-start of the boiler.

[Authority for term: [40 CFR 63.7500(c), (d), and (e)], [40 CFR 63.7510(e) and (j)], [40 CFR 63.7515(d)], [40 CFR 63.7540(a)(10) through (13)], and [40 CFR Part 63, Subpart DDDDD, Table 3]]

(3) The permittee shall provide, or have provided, performance testing materials and conditions favorable for stack testing. Air pollution control systems shall be constructed such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and the stack or duct shall be free of cyclonic flow during performance testing. The following conditions shall be provided:

a. sampling ports adequate for the appropriate testing methods;

b. safe sampling platform(s);

c. safe access to sampling platform(s);

d. utilities for sampling and testing equipment; and

e. any other facilities that the Ohio EPA, Division of Air Pollution Control representative deems necessary for safe and adequate testing of each emissions unit.

[Authority for term: [40 CFR 63.7(d)]]

(4) Fuel analyses samples collected in order to demonstrate compliance with 40 CFR Part 63, Subpart DDDDD shall meet the sampling procedures found in 40 CFR 63.7521 and the testing shall be conducted according to the methods and procedures found in Table 6 to the Subpart and the site-specific fuel monitoring plan, for Cl, Hg, or TSM (if choosing to comply with the alternative TSM standard). Monthly records of the types and amounts of each fuel burned in the boiler shall be maintained as required by 40 CFR 63.7540(a). If the fuel supplier is providing the fuel analyses, they must use the methods and procedures found in Table 6 to Part 63 Subpart DDDDD.

[Authority for term: [40 CFR 63.7510(a)], [40 CFR 63.7521], [40 CFR 63.7530(c)], [40 CFR 63.7540(a)(2)], and [40 CFR Part 63, Subpart DDDDD Table 6 and 8]]

(5) Fuel samples used to meet the fuel sampling analyses requirements shall be collected as follows:

a. When sampling during stack testing, three composite fuel samples shall be collected at one hour intervals during the testing period or fuel samples shall be obtained in accordance to the methods identified in Table 6 to the subpart. For monthly sampling, each composite sample shall be collected at approximately equal 10-day intervals during the month. An automated sampling mechanism shall provide representative composite fuel samples.

b. If sampling from a belt (or screw) feeder, the belt shall be stopped and a 6-inch wide sample shall be collected from the full cross-section of the belt, to obtain a minimum two pounds of sample. Both fines and coarse material shall be included in the full cross- section sample. The samples shall be retained in a clean plastic bag until preparations for testing.

c. If sampling from a fuel pile or truck, for each composite sample, a minimum of five sampling locations shall be selected, uniformly spaced over the surface of the pile. At each sampling site, the sample shall be withdrawn by digging, with a clean shovel, into the pile to a depth of approximately 18 inches. Both fines and coarse material shall be collected in the recovered samples. The samples shall be retained in a clean plastic bag until preparations for testing.

d. Each composite sample shall be prepared according to the procedures:

i. thoroughly mix and pour the entire composite sample over a clean plastic sheet;

ii. break larger pieces (e.g. larger than 3 inches) into smaller sizes;

iii. make a pie shape with the entire composite sample and subdivide it into four equal parts;

iv. separate one of the quarter samples as the first subset;

v. if this subset is too large for grinding, repeat the procedure in paragraph iii above, start over with the quarter sample and obtain a one-quarter subset from this sample;

vi. grind the sample in a mill; and

vii. make a pie shape with the entire composite sample and subdivide it into four equal parts to obtain a one-quarter sub-sample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

The concentration of pollutants in the fuel (Cl, Hg, and/or TSM) shall be determined in pounds per million Btu, for each composite sample for each fuel type and according to the procedures in Table 6 to this Subpart, for use in Equations 7, 8, and 9 of 40 CFR 63.7530(b).

[Authority for term: [40 CFR 63.7521(c), (d), and (e)]]

g) Miscellaneous Requirements

(1) None.

2. P004, Formate handling

Operations, Property and/or Equipment Description:

Sodium Formate drying and bagging;modified

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01123 as modified 1/27/2004)	Visible particulate emissions (VE) from the stack serving this emissions unit shall not exceed 5 percent opacity as a three-minute average
		Particulate emissions (PE) from the stack serving this emissions unit shall not exceed 0.48 pound per hour and 2.1 tons per year
		See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(A)(1)	See b)(2)c.
c.	OAC rule 3745-17-11(A)(2)	See b)(2)c.

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to the wet scrubber at all times the emissions unit is in operation.

b. These emission limitations were established for PTI purposes to reflect the potential to emit for this emissions unit at the maximum rate of production while controlled. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements above verifying proper operation of the controls to ensure compliance with these limitations.

c. 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) Operational Restrictions

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable pressure drop across the scrubber while the emissions unit is in operation, that must be maintained in order to demonstrate compliance, shall not be less than the minimum static pressure drop (in inches of water) established during the most recent emission test that demonstrated that the emissions unit was in compliance.

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

(2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber liquid flow rate while the emissions unit is in operation, that shall be maintained in order to demonstrate compliance, shall not be less than the minimum water flow rate (in gallons per minute) established during the most recent emission test that demonstrated that the emissions unit was in compliance.

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

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber (in pounds per square inch, gauge) 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 flow rate on a daily 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.

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.

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 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.

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 Toledo Division of Environmental Services. The permittee may request revisions to the permitted range or limit for the pressure drop or liquid flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable particulate emission rate 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.

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 04-01123, issued on 1/27/2004: d)(1). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[Authority for term: 3745-77-07(A)(3)(a)(ii)]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) 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 and/or the liquid flow rate was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;

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 scrubber;

c. each incident of deviation described in a. or b. where a prompt investigation was not conducted;

d. each incident of deviation described in a. or b. where prompt corrective action, that would bring the pressure drop and/or 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 a. or 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.

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

[Authority for term: OAC rule 3745-15-03(B)(1)(a), OAC rule 3745-15-03(C) and OAC rule 3745-77-07(C)(1)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(3) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-01123, issued on 1/27/2004: e)(1) and e)(2). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(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% opacity as a 3-minute average

Applicable Compliance Method:

If required, compliance shall be demonstrated through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method

9. Alternative USEPA approved test methods may be used with prior written approval from the Ohio EPA.

b. Emission Limitation:

0.48 pound of PE per hour

Applicable Compliance Method:

If required, compliance shall be determined in accordance with methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5 and in OAC rule 3745-17-03(B)(10). Alternative USEPA approved test methods may be used with prior written approval from the Ohio EPA.

c. Emission Limitation:

2.1 tons of PE per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable particulate emission limitation (0.48 pound per hour) by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 04-01123, issued on 1/27/2004: f)(1). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

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

g) Miscellaneous Requirements

(1) The maximum capacity of P801 shall not exceed the maximum production rates of trimethylolpropane and of sodium formate stated in the application for PTI 04-01123.

[Authority for term: PTI 04-1123 and OAC rule 3745-77-07(A)(1)]

3. P801, TMP and Formate Mfg.

Operations, Property and/or Equipment Description:

Trimethylolpropane (TMP) and sodium formate manufacturing process including reactors, evaporators, coolers, crystallizers and distillation equipment with VOCs controlled by catalytic 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
Process stack emissions		
a.	OAC rule 3745-31-05(A)(3) (PTI P0120528 issued 3/29/2016)	Volatile organic compound (VOC) emissions from the stack serving this emissions unit shall not exceed 0.70 pound per hour and 3.07 tons per year, including formaldehyde.
		Formaldehyde emissions from the stack serving this emissions unit shall not exceed 0.11 pound per hour and 0.48 ton per year.
		See b)(2)a. thru b)(2)d.
b.	40 CFR Part 63, Subpart A (40 CFR 63.01-16)	See b)(2)e.
c.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subparts G and H.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	
d.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is existing in-process equipment with process vents, and subject to 63.149 within a source subject to 40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	See b)(2)f.
Process fugitive emissions		
e.	OAC rule 3745-31-05(A)(3) (PTI P0120528 issued 3/29/2016)	VOC fugitive emissions from this emissions unit shall not exceed 2.5 tons per year, including formaldehyde.
		See b)(2)d.
f.	OAC rule 3745-21-09(DD)	See b)(2)g.
g.	40 CFR Part 60, Subpart A (40 CFR 60.01-19)	See b)(2)h. and b)(2)i.
h.	40 CFR Part 60, Subpart VV (40 CFR 60.480-489) [In accordance with 40 CFR 63.480(a) and (b) this emissions unit is located at synthetic organic chemical manufacturing facility that commenced construction, reconstruction, or modification after January 5, 1981, and on or before November 7, 2006. The affected equipment in this emissions unit includes each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service and any devices or systems required by 40 CFR Part 60 Subpart VV.]	The permittee shall implement a VOC leak detection and repair program consistent with the applicable Sections of 40 CFR Part 60, Subpart VV. The permittee may elect to comply with the VOC leak detection and repair program requirements of 40 CFR Part 60, Subpart VV by maintaining compliance with the operational restrictions, monitoring, record keeping and reporting requirements of 40 CFR Part 63, Subpart H for all VOC process equipment leaks as provided in 40 CFR 63.160(c).
i	40 CFR Part 63, Subpart A (40 CFR 63.01-16)	See b(2)e.
j.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	Part 63, Subparts G and H.
k.	40 CFR Part 63, Subpart H (40 CFR 63.160-183) [In accordance with 63.160(a), the affected equipment in this emissions unit includes each pump, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver, closed-vent system with control devices that operate more than 300 hours per year in organic hazardous air pollutant service (i.e., formaldehyde, acetaldehyde or methanol)]	Except as otherwise provided, the permittee shall establish a hazardous air pollutant (HAP) leak detection and repair program for the affected sources, in compliance with the operational restrictions, monitoring, record keeping and reporting requirements of 40 CFR 63.162 through 63.170 and 63.172 through 63.174. Equipment to which this subpart applies that are also subject to the provisions of 40 CFR Part 60 Subpart VV shall be required to comply only with the provisions of this subpart as provided in 40 CFR 63.160(b).

(2) Additional Terms and Conditions

a. The emissions of VOC from emissions units P801 and P803 shall be vented to a catalytic incinerator that shall meet a minimum of 98% by weight destruction efficiency, when one or more of the emissions units are in operation.

b. The combined stack emissions from emissions units P004, P801, T004, T005 and T006 shall not exceed 3.07 tons of VOC per year.

c. These emission limitations were established for PTI purposes to reflect the potential to emit for this emissions unit at the maximum rate of production while controlled. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

d. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(DD) and 40 CFR Part 60, Subparts A and VV, and 40 CFR Part 63, Subparts A, F, G and H.

e. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F, G and H.

   i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F, G and H.

   ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

   iii. Table 4 to 40 CFR Part 63, Subpart H - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart H.

f. Sources subject to 40 CFR Part 63, Subpart G include the process vents which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110.

   i. The permittee shall maintain and operate a vapor collection system and control device to collect and control process vent emissions from affected sources in accordance with 40 CFR 63.113.

   ii. The control device shall reduce the total organic hazardous air pollutants by 98 weight percent or to a concentration of 20 ppm by volume, whichever is less stringent.

g. The permittee shall comply with the VOC leak detection and repair program requirements of OAC rule 3745-21-09(DD) by maintaining compliance with the operational restrictions, monitoring, recordkeeping and reporting requirements of 40 CFR Part 63, Subpart H for all VOC process equipment leaks.

h. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to emissions units affected by 40 CFR Part 60.

i. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency (U.S. EPA), 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency (Ohio EPA).

c) Operational Restrictions

(1) The maximum capacity of P801 shall not exceed the maximum production rates of trimethylolpropane (TMP) and of sodium formate stated in the application for PTI 04-01123.

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

(2) The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 60, Subpart VV— Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, including the following sections:

60.482-1(b)	compliance determination
60.482-1(d)	vacuum service exclusion
60.482-1(e)	300 hour VOC service exclusion
60.482-1(g)	shared storage vessel requirements
60.482-9(a) through (f)	delay of repair
60.482-10(a) through (d) and (m)	emissions control requirements

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

(3) The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.102(a)	startup, shutdown and malfunctions
63.104(a)	heat exchanger leak repair
63.105(a)	management procedures for wastewater

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

(4) The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.112(a) and (c)	emissions control requirements
63.113(a)	process vent control requirements
63.119(a)	storage vessel control requirements
63.120(d)	storage vessel control design
63.127(e)	establishing monitoring parameters
63.132(f)	restrictions on the discharge of liquid or solid organic materials
63.148(d) and (e)	leak repair requirements for vapor

	collection systems, closed-vent systems, fixed roofs, covers, or enclosures

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

(5) The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart H, NATIONAL EMISSION STANDARDS FOR ORGANIC HAZARDOUS AIR POLLUTANTS FOR EQUIPMENT LEAKS, including the following sections:

63.162(c)	identifying affected equipment
63.162(d)	vacuum service exemption
63.162(f)	identifying leaking equipment
63.162(h)	failure to repair leaks
63.163(a), (b)(2), (c) and (d)	detecting pump leaks
63.163(e), (f), (g), (i) and (j)	exemption from detecting pump leaks
63.164(a) through (c) and (e)(2) through (i)	compressor seal barrier fluid system requirements
63.164(h) and (i)	exemption from compressor seal barrier fluid system requirements
63.165(a) and (b)(1)	pressure relief device instrument reading requirements
63.165(c) and (d)	exemption from pressure relief device instrument reading requirements
63.166(a) through (c)	sampling connection system requirements
63.167(a)(1) through (e)	open-ended valves or lines requirements
63.168(b)(2), (f)(1), (f)(2) and (g)	determining monitoring intervals, leak detection and repair requirements for valves in gas/vapor service and in light liquid service
63.168(h) and (i)	exemption from requirements for valves in gas/vapor service and in light liquid service
63.169(b) through (c)	determining monitoring intervals, leak detection and repair requirements for pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service
63.170	requirements for surge control vessels and bottoms receivers.
63.171(a) through (e)	repair completion requirements
63.172(a) through (d) and (h) through (n)	requirements for closed-vent systems and control devices
63.173(a)(2) through (j)	determining monitoring intervals, leak detection and repair requirements for agitators in gas/vapor service and in light

	liquid service
63.174(a)(2) through (j)	determining monitoring intervals, leak detection and repair requirements for connectors in gas/vapor service and in light liquid service
Table 1 to Subpart H of Part 63	batch process monitoring frequency
Table 2 to Subpart H of Part 63	vapor pressure limitations for surge control vessels and bottoms receivers

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

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the pounds of TMP and the pounds of sodium formate produced in this emissions unit, the hours of operation of this emissions unit for each product, and the average hourly production rate for each product.

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

(2) In order to maintain compliance with the applicable emission limitation(s) of OAC rule 3745-31-05, the permittee shall maintain the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, at not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature during the most recent emission test that demonstrated the emission unit was in compliance. The average temperature across the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

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

(3) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record either the instantaneous data value at least once every 15 minutes or records 15-minute or more frequent block average values of the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions units are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit or Celsius. The device shall have an accuracy of the greater of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 Celsius degrees. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit is in operation:

a. all 3-hour blocks of time, when the emissions units controlled by the catalytic incinerator were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature measured

during the most recent performance test that demonstrated the emissions units were in compliance;

b. all 3-hour blocks of time, when the emissions units controlled by the catalytic incinerator were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions units were in compliance; and

c. a log (date and total time) of the downtime or bypass of the capture (collection) system and catalytic incinerator control, and/or downtime of the monitoring equipment, when the associated emissions unit was in operation.

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed.

[Authority for term: OAC rule 3745-21-09(B)(4)(b)(i) & (iii), OAC rule 3745-21-09(B)(4)(d) and OAC rule 3745-77-07(C)(1)]

(4) Whenever the monitored temperature deviates from the range or limit above, 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.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/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 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 temperature of the exhaust gases immediately before the catalyst and, if appropriate, the average temperature difference across the catalyst bed 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.

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

(5) The permittee shall comply with the applicable monitoring and record keeping required under 40 CFR Part 60, Subpart VV— Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, including the following sections:

60.482-2 Pumps in light liquid service	
60.482-2(a)	monthly and weekly monitoring
60.482-2(b)	leak detection requirements
60.482-2(c)	leak repair requirements
60.482-2(d) through (h)	monitoring exemptions
60.482-4 Pressure relief devices in gas/vapor service	
60.482-4(a)	monitoring for no detectable emissions
60.482-4(b)	monitoring after a pressure release
60.482-4(c) through (d)	monitoring exemptions
60.482-7 Valves in gas/vapor service and in light liquid service	
60.482-7(a)	monthly monitoring to detect leaks
60.482-7(b) and (c)	leak detection requirements
60.482-7(d) and (e)	leak repair requirements
60.482-7(f) through (h)	monitoring exemptions
60.482-8 Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors	
60.482-8(a) and (b)	leak detection requirements
60.482-8(c) and (d)	leak repair requirements
60.482-10 Closed vent systems and control devices	
60.482-10(e) and (f)	monitoring to detect leaks
60.482-10(g) and (h)	leak detection and repair requirements
60.482-10(i) through (k)	monitoring exemptions
60.482-10(l)	reporting requirements
60.485 Monitoring test methods and procedures	
60.485(a) through (c)	leak detection test methods and procedures
60.485(d)	not in VOC service exemption
60.485(e)	light liquid service determination
60.486 Recordkeeping requirements	
60.486(b) and (c)	when a leak is detected

60.486(d)	closed vent systems and control devices
60.486(e)	pertaining to all equipment
60.486(f) and (g)	pertaining to valves

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

(6) The permittee shall comply with the applicable monitoring and record keeping required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(7) The permittee shall comply with the applicable monitoring and record keeping required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.114(a) and 63.127(a)	requirement to install catalyst bed temperature monitoring devices
63.114(c) and 63.127(c)	authorization to monitor parameters other than temperature
63.114(d) and 63.127(d)	requirement to install monitoring devices for bypass line valves
63.118(a)	record keeping for process vent control devices
63.123(a), (f) and (h)	record keeping for storage tanks
63.129(a), 63.130(a) and TABLE 7	incinerator monitoring and record keeping
63.129(b)	monitoring and record keeping for alternate operating parameters
63.129(c)	requirement to establish monitoring parameter range
63.129(d), 63.130(b)	record keeping for valves and vents
63.148(a)	leak inspection provisions for vapor collection systems, closed-vent systems, fixed roofs, covers, or enclosures
63.152(f) and (g)	general record keeping requirements
Table 3 to Subpart G of Part 63	general monitoring and record keeping
Table 4 to Subpart G of Part 63	process vent monitoring and record keeping
Table 7 to Subpart G of Part 63	loading rack monitoring and record keeping
Table 11 to Subpart G of Part 63	wastewater inspection and monitoring

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

(8) The permittee shall comply with the applicable monitoring and record keeping required under 40 CFR Part 63, Subpart H, NATIONAL EMISSION STANDARDS FOR ORGANIC HAZARDOUS AIR POLLUTANTS FOR EQUIPMENT LEAKS, including the following sections:

63.163(b)(1), (b)(3), (d)(2) and (e) through (j)	monitoring requirements for leaks in light liquid service pump
63.164(d) and (e)(1)	monitoring requirements for compressor seal barrier fluid systems
63.165(b)(2)	monitoring requirements for pressure relief device
63.168(b), (d), (h) and (i)	monitoring requirements for valves in gas/vapor service and in light liquid service
63.169(a)	monitoring requirements for pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service
63.172(f), (g), (k) and (l)	monitoring requirements for closed-vent systems
63.173(a)(1) and (b)(4)	monitoring requirements for agitators in gas/vapor service and in light liquid service
63.174(a)(1)	monitoring requirements for connectors in gas/vapor service and in light liquid service
63.175(a) through (e)	quality improvement program for valves
63.176(a) through (d)	quality improvement program for pumps
63.177(a) through (e), 63.178(a) through (d) and 63.179	alternative means of emission limitation
63.180(a) through (d), (f) and (g)	test procedures for monitoring
63.181(a)	conditions for establishing compliance utilizing one recordkeeping system for multiple emission units
63.181(b)(1) and (2)	requirement to identify (list) subject equipment
63.181(c)	documentation of visual inspections
63.181(d)	documentation of leaks
63.181(f)	requirements for recording compressor compliance tests and monitoring following a pressure release for each pressure relief device
63.181(g)	requirements for closed-vent systems and control devices
63.181(h)	requirements for quality improvement programs
63.181(i)	requirements for equipment in heavy liquid service
63.181(j)	requirement to identify (list) equipment in

	organic HAP service less than 300 hours per year
63.181(k)	requirements for alternative means of emission limitation of 63.179

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the TMP and sodium formate production rate limitations, as well as the corrective actions that were taken to achieve compliance.

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

(2) The permittee shall submit quarterly summaries of the following records:

a. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature established during the most recent performance test that demonstrated the emissions unit was in compliance;

b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit was in compliance; and

c. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-21-09(B)(4)(c)]]

(3) The permittee shall submit quarterly deviation (excursion) reports which identify the following information concerning the operations of the catalytic incinerator:

a. each period of time (start time and date, and end time and date) when the temperature(s) established in d)(2) was (were) outside of the acceptable range(s);

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 catalytic incinerator;

c. each incident of deviation described in a. or b. (above) where a prompt investigation was not conducted;

d. each incident of deviation described in a. or b. (above) where prompt corrective action, that would bring the emissions unit into compliance and/or the

temperature of the exhaust gases immediately before the catalyst bed or the average temperature difference across the catalyst bed into compliance with the acceptable range(s) established in d)(2), was determined to be necessary and was not taken; and

e. each incident of deviation described in a. or b. (above) 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.

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

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(6) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 60, Subpart VV— Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, including the following sections:

60.487(a) through (c)	periodic reporting requirements

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

(7) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general periodic reporting requirements

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

(8) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.152(a)	descriptions of the required periodic reports
Table 3 to Subpart G of Part 63	general reporting
Table 4 to Subpart G of Part 63	process vent reporting

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

(9) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart H, NATIONAL EMISSION STANDARDS FOR ORGANIC HAZARDOUS AIR POLLUTANTS FOR EQUIPMENT LEAKS, per the following sections:

63.182(d)	descriptions of the required periodic reports

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

f) Testing Requirements

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

a. Emission Limitation:

0.70 pound of VOC per hour, including formaldehyde.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the methods and procedures specified in 3745-21-10(C). Alternate USEPA approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitation:

3.07 tons of VOC per year, including formaldehyde (process).

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable limitation (0.70 pound of VOC per hour, including formaldehyde) by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

c. Emission Limitation:

3.07 tons of VOC per year, combined emissions from emissions units P004, P801, T004, T005 and T006

Applicable Compliance Method:

The permittee shall demonstrate compliance by multiplying the VOC emissions rate, in pounds per hour, determined during the most recent emission test which demonstrated compliance with the short term VOC limitation, including formaldehyde, in pounds per hour, by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

d. Emission Limitation:

0.11 pound of formaldehyde per hour (process).

Applicable Compliance Method:

Compliance shall be demonstrated based upon the methods and procedures specified in Method 0011 of 40 CFR Part 266, Appendix IX. Alternately, any other method or data that has been validated according to the applicable procedures in Method 301 of Appendix A of 40 CFR Part 63, may be used with prior approval from the Ohio EPA.

e. Emission Limitation:

0.48 ton of formaldehyde per year (process).

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable limitation (0.11 pound of formaldehyde per hour) by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

f. Emission Limitation:

2.5 tons of VOC per year (fugitive).

Applicable Compliance Method:

Compliance shall be demonstrated by using the emission factors from "Control Techniques for Fugitive VOC Emissions from Chemical Process Facilities" EPA/625/R-93/005 March 1994 Table 7-2, or other approved alternate, and the number of pumps, valves, flanges, etc. to calculate the pounds per hour of fugitive VOC emissions. The annual fugitive VOC emissions (in tons VOC per year) shall be calculated by multiplying pounds per hour emission rate by the

maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton.

g. Emission Limitation:

VOC emissions reduction by at least 98%.

Applicable Compliance Method:

VOC concentration and the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10(C)(3), or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

h. Emission Limitation:

Emissions of total organic hazardous air pollutants reduced by 98 weight-percent or to a concentration of 20 parts per million by volume.

Applicable Compliance Method:

Pollutant concentration and the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c), or an alternative test protocol approved by the Ohio EPA.

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

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

a. The emissions testing shall be conducted within six months prior to the expiration of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the control efficiency limitation (or discharge concentration) and the allowable mass emission rates for TOC or organic hazardous air pollutants.

c. The concentration and control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c).

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum

material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

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

f. Using catalytic incinerator temperature chart recorder data obtained during emission testing, the permittee shall determine the 3-hour average temperature immediately upstream of the catalyst bed, the average temperature differential across the catalyst bed, and include the 3-hour average temperature values in the written test report. A copy of the temperature chart recorder data during emission testing shall also be included in the written test report.

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

h. 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.

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

g) Miscellaneous Requirements

(1) None.

4. P803, PE and Formate Mfg.

Operations, Property and/or Equipment Description:

Pentaerythritol, Sodium formate and Dipentaerythritol mfg. plant. and associated equipment

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
Process stack emissions		
a.	ORC 3704.03(T) (PTI P0119263 issued 9/17/2015)	Volatile organic compounds (VOC) emissions from the incinerator stack shall not exceed 1.25 pounds per hour and 5.5 tons per year.
		See b)(2)b.
b.	OAC rule 3745-31-05(A)(3) (PTI P0119263 issued 9/17/2015) June 30, 2003	Particulate matter less than or equal to 10 microns in diameter (PM_{10})emissions from scrubber stacks E-781 and E-1400 combined shall not exceed 2.25 pounds per hour and 9.9 tons per year.
		See b)(2)a. through b)(2)c.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (VE) from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by rule
d.	OAC rule 3745-17-11(B)	Particulate emissions (PE) shall not exceed 33 pounds per hour.
e.	OAC rule 3745-21-07(M)(2)	This emissions unit shall be equipped with a control system (i.e., capture and controlequipment) that reduces the organic compound emissions from the article,machine, equipment or other contrivance by an overall control efficiency of atleast eighty-five per cent, by weight. If the reductions are achieved byincineration, ninety per cent or more of the carbon in the organic material

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		beingincinerated shall be oxidized to carbon dioxide.
		See b)(2)d.
f.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)e.
g.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subparts G and H.
h.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is existing in-process equipment with process vents, and subject to 63.149 within a source subject to 40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	See b)(2)f.
Process fugitive emissions		
i.	ORC 3704.03(T)	Fugitive VOC emissions from this emissions unit shall not exceed 3.23 pounds per hour and 14.15 tons per year.
j.	OAC rule 3745-21-09(DD)	See b)(2)g.
k.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	See b)(2)h.
l.	40 CFR Part 60, Subpart VVa (40 CFR 60.480a-489a) [In accordance with 40 CFR 63.480a(a) and (b) this emissions unit is located at synthetic organic chemical manufacturing facility that	The permittee shall implement a VOC leak detection and repair program consistent with the applicable Sections of 40 CFR Part 60, Subpart VVa. The permittee may choose to comply with 40 CFR part 63 Subpart H, to satisfy the

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	commenced construction, reconstruction, or modification after November 7, 2006. The affected equipment in this emissions unit includes each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service and any devices or systems required by 40 CFR Part 60 Subpart VVa.]	requirements of §§60.482–1a through 60.487a for an affected facility. When choosing to comply with 40 CFR part 63, Subpart H, the requirements of §60.485a(d), (e), and (f), and §60.486a(i) and (j) still apply. [60.480a(e)(2)] See b)(2)i. and b)(2)j.
m.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)e.
n.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs].	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subparts G and H.
o.	40 CFR Part 63, Subpart H (40 CFR 63.160-183) [In accordance with 63.160(a), The affected equipment in this emissions unit includes each pump, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver, closed-vent system with control devices that operate more than 300 hours per year in organic hazardous air pollutant service (i.e., formaldehyde, acetaldehyde or methanol)]	Except as otherwise provided, the permittee shall establish a hazardous air pollutant (HAP) leak detection and repair program for the affected sources, in compliance with the operational restrictions, monitoring, record keeping and reporting requirements of 40 CFR 63.162 through 63.170 and 63.172 through 63.174. Equipment to which this subpart applies that are also subject to the provisions of 40 CFR Part 60 Subpart VV shall be required to comply only with the provisions of this subpart as provided in 40 CFR 63.160(b).

(2) Additional Terms and Conditions

a. The PM_{10} emissions from this emissions unit shall be vented to the wet scrubbers at all times the emissions unit is in operation.

b. These emission limitations were established for PTI purposes to reflect the potential to emit for this emissions unit at the maximum rate of production while controlled. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

c. Although allowablePM_{10} emissions are less than 10 tons per year, the permittee does not want to take voluntary restrictions for purposes of avoiding the less than 10 tons per year BAT exemption under OAC rule 3745-31-05(A)(3)(a)(ii) and has chosen to continue to comply with OAC rule 3745-05(A)(3) after approval of the less than 10 tons per year BAT exemption for purposes of maintaining federal enforceability of the PM_{10} emission limitation for New Source Review purposes.

d. The requirements of this rule are less stringent than the requirements of 40 CFR Part 63, Subpart G, provided the permittee continues to choose to comply with the 98% control option under 40 CFR 63.113(a)(2).

e. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F, G and H as follows:

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F, G and H.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

iii. Table 4 to 40 CFR Part 63, Subpart H - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart H.

f. Sources subject to 40 CFR Part 63, Subpart G include the process vents which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110.

i. The permittee shall maintain and operate a vapor collection system and control device to collect and control process vent emissions from affected sources in accordance with 40 CFR 63.113.

ii. The control device shall reduce the total organic hazardous air pollutants by 98 weight percent or to a concentration of 20 ppm by volume, whichever is less stringent.

g. The permittee shall comply with the VOC leak detection and repair program requirements of OAC rule 3745-21-09(DD) by maintaining compliance with the operational restrictions, monitoring, recordkeeping and reporting requirements of 40 CFR Part 63, Subpart H for all VOC process equipment leaks.

h. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to emissions units affected by 40 CFR Part 60.

i. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency (U.S. EPA), 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency (Ohio EPA).

j. Owners or operators who choose to comply with 40 CFR part 63, subpart H must also comply with §§60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for that equipment. All sections and paragraphs of 40 CFR Part 60, subpart A that are not mentioned in 60.480a(e)(2)(ii) do not apply to owners or operators of equipment subject to this subpart complying with 40 CFR part 63, subpart H, except that provisions required to be met prior to implementing 40 CFR part 63 still apply. Owners and operators who choose to comply with 40 CFR part 63, subpart H, must comply with 40 CFR part 63, subpart A.

c) Operational Restrictions

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 80 percent of the value established during the most recent emission test that demonstrated compliance.

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

(2) In order to maintain compliance with the applicable emission limitation(s) of ORC 3704.03(T) and OAC rule 3745-21-07(M)(2), the permittee shall maintain the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, at not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature during the most recent emission test that demonstrated the emission unit was in compliance. The average temperature across the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

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

(3) The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 60, Subpart VVa — Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, including the following sections:

60.482-1a(b)	compliance determination
60.482-1a(d)	vacuum service exclusion
60.482-1a(e)	300 hour VOC service exclusion
60.482-1a(g)	shared storage vessel requirements
60.482-9a(a) through (f)	delay of repair
60.482-10a(a) through (d) and (m)	emissions control requirements

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

(4) The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.102(a)	startup, shutdown and malfunctions
63.104(a)	heat exchanger leak repair
63.105(a)	management procedures for wastewater

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

(5) The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.112(a) and (c)	emissions control requirements
63.113(a)	process vent control requirements
63.119(a)	storage vessel control requirements
63.120(d)	storage vessel control design
63.127(e)	establishing monitoring parameters
63.132(f)	restrictions on the discharge of liquid or solid organic materials
63.148(d) and (e)	leak repair requirements for vapor collection systems, closed-vent systems, fixed roofs, covers, or enclosures

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

(6) The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart H, NATIONAL EMISSION STANDARDS FOR ORGANIC

HAZARDOUS AIR POLLUTANTS FOR EQUIPMENT LEAKS, including the following sections:

63.162(c)	identifying affected equipment
63.162(d)	vacuum service exemption
63.162(f)	identifying leaking equipment
63.162(h)	failure to repair leaks
63.163(a), (b)(2), (c) and (d)	detecting pump leaks
63.163(e), (f), (g), (i) and (j)	exemption from detecting pump leaks
63.164(a) through (c) and (e)(2) through (i)	compressor seal barrier fluid system requirements
63.164(h) and (i)	exemption from compressor seal barrier fluid system requirements
63.165(a) and (b)(1)	pressure relief device instrument reading requirements
63.165(c) and (d)	exemption from pressure relief device instrument reading requirements
63.166(a) through (c)	sampling connection system requirements
63.167(a)(1) through (e)	open-ended valves or lines requirements
63.168(b)(2), (f)(1), (f)(2) and (g)	determining monitoring intervals, leak detection and repair requirements for valves in gas/vapor service and in light liquid service
63.168(h) and (i)	exemption from requirements for valves in gas/vapor service and in light liquid service
63.169(b) through (c)	determining monitoring intervals, leak detection and repair requirements for pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service
63.170	requirements for surge control vessels and bottoms receivers.
63.171(a) through (e)	repair completion requirements
63.172(a) through (d) and (h) through (n)	requirements for closed-vent systems and control devices
63.173(a)(2) through (j)	determining monitoring intervals, leak detection and repair requirements for agitators in gas/vapor service and in light liquid service
63.174(a)(2) through (j)	determining monitoring intervals, leak detection and repair requirements for connectors in gas/vapor service and in light liquid service
Table 1 to Subpart H of Part 63	batch process monitoring frequency
Table 2 to Subpart H of Part 63	vapor pressure limitations for surge control vessels and bottoms receivers

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

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly install, operate, and maintain equipment to continuously monitor 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 scrubber liquid flow rate on daily 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.

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.

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 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:

f. a description of the corrective action;

g. the date the corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop and flow rate readings immediately after the corrective action was implemented; and

k. 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.

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 Toledo Division of Environmental Services. The permittee may request revisions to the permitted range or limit for the pressure drop or liquid flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable particulate emission rate for this/these emissions unit(s). 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.

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

(2) The permittee shall perform monthly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the scrubber stacks serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location of the emissions;

b. the color of the emissions;

c. whether the emissions are representative of normal operations;

d. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

e. the total duration of any visible emission incident; and

f. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (e) above or continue a daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(A)(3) and OAC rule 3745-17-07(A)]

(3) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable temperature of the exhaust gases immediately before the catalyst bed, during any period of time when the emissions units controlled by the catalytic incinerator are in operation, shall not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance. The acceptable

temperature difference across the catalyst bed (when the emissions unit is in operation), shall not be less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions units were in compliance.

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

(4) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record either the instantaneous data value at least once every 15 minutes or records 15-minute or more frequent block average values of the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions units are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit or Celsius. The device shall have an accuracy of the greater of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 Celsius degrees. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit is in operation:

a. all 3-hour blocks of time, when the emissions units controlled by the catalytic incinerator were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance;

b. all 3-hour blocks of time, when the emissions units controlled by the catalytic incinerator were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions units were in compliance; and

c. a log (date and total time) of the downtime or bypass of the capture (collection) system and catalytic incinerator control, and/or downtime of the monitoring equipment, when the associated emissions unit was in operation.

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed.

[Authority for term: OAC rule 3745-21-09(B)(4)(b)(i) & (iii), OAC rule 3745-21-09(B)(4)(d) and OAC rule 3745-77-07(C)(1)]

(5) Whenever the monitored temperature deviates from the range or limit established in c)(2), 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.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/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:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature of the exhaust gases immediately before the catalyst and, if appropriate, the average temperature difference across the catalyst bed immediately after the corrective action was implemented; and

k. 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.

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

(6) The permittee shall comply with the applicable monitoring and record keeping required under 40 CFR Part 60, Subpart VVa— Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, including the following sections:

60.482-2a Pumps in light liquid service	
60.482-2a(a)	monthly and weekly monitoring
60.482-2a(b)	leak detection requirements
60.482-2a(c)	leak repair requirements
60.482-2a(d) through (h)	monitoring exemptions
60.482-4a Pressure relief devices in gas/vapor service	
60.482-4a(a)	monitoring for no detectable emissions
60.482-4a(b)	monitoring after a pressure release
60.482-4a(c) through (d)	monitoring exemptions
60.482-7a Valves in gas/vapor service and in light liquid service	

60.482-7a(a)	monthly monitoring to detect leaks
60.482-7a(b) and (c)	leak detection requirements
60.482-7a(d) and (e)	leak repair requirements
60.482-7a(f) through (h)	monitoring exemptions
60.482-8a Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors	
60.482-8a(a) and (b)	leak detection requirements
60.482-8a(c) and (d)	leak repair requirements
60.482-10a Closed vent systems and control devices	
60.482-10a(e) and (f)	monitoring to detect leaks
60.482-10a(g) and (h)	leak detection and repair requirements
60.482-10a(i) through (k)	monitoring exemptions
60.482-10a(l)	reporting requirements
60.485a Monitoring test methods and procedures	
60.485a(a) through (c)	leak detection test methods and procedures.
60.485a(d)	not in VOC service exemption
60.485a(e)	light liquid service determination
60.486a Recordkeeping requirements	
60.486a(b) and (c)	when a leak is detected
60.486a(d)	closed vent systems and control devices
60.486a(e)	pertaining to all equipment
60.486a(f) and (g)	pertaining to valves

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

(7) The permittee shall comply with the applicable monitoring and record keeping required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(8) The permittee shall comply with the applicable monitoring and record keeping required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.114(a) and 63.127(a)	requirement to install catalyst bed temperature monitoring devices
63.114(c) and 63.127(c)	authorization to monitor parameters other than temperature
63.114(d) and 63.127(d)	requirement to install monitoring devices for bypass line valves
63.118(a)	record keeping for process vent control devices
63.123(a), (f) and (h)	record keeping for storage tanks
63.129(a), 63.130(a) and TABLE 7	incinerator monitoring and record keeping
63.129(b)	monitoring and record keeping for alternate operating parameters
63.129(c)	requirement to establish monitoring parameter range
63.129(d), 63.130(b)	record keeping for valves and vents
63.148(a)	leak inspection provisions for vapor collection systems, closed-vent systems, fixed roofs, covers, or enclosures
63.152(f) and (g)	general record keeping requirements
Table 3 to Subpart G of Part 63	general monitoring and record keeping
Table 4 to Subpart G of Part 63	process vent monitoring and record keeping
Table 7 to Subpart G of Part 63	loading rack monitoring and record keeping
Table 11 to Subpart G of Part 63	wastewater inspection and monitoring

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

(9) The permittee shall comply with the applicable monitoring and record keeping required under 40 CFR Part 63, Subpart H, NATIONAL EMISSION STANDARDS FOR ORGANIC HAZARDOUS AIR POLLUTANTS FOR EQUIPMENT LEAKS, including the following sections:

63.163(b)(1), (b)(3), (d)(2) and (e) through (j)	monitoring requirements for leaks in light liquid service pump
63.164(d) and (e)(1)	monitoring requirements for compressor seal barrier fluid systems
63.165(b)(2)	monitoring requirements for pressure relief device
63.168(b), (d), (h) and (i)	monitoring requirements for valves in gas/vapor service and in light liquid service
63.169(a)	monitoring requirements for pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service
63.172(f), (g), (k) and (l)	monitoring requirements for closed-vent systems

63.173(a)(1) and (b)(4)	monitoring requirements for agitators in gas/vapor service and in light liquid service
63.174(a)(1)	monitoring requirements for connectors in gas/vapor service and in light liquid service
63.175(a) through (e)	quality improvement program for valves
63.176(a) through (d)	quality improvement program for pumps
63.177(a) through (e), 63.178(a) through (d) and 63.179	alternative means of emission limitation
63.180(a) through (d), (f) and (g)	test procedures for monitoring
63.181(a)	conditions for establishing compliance utilizing one recordkeeping system for multiple emission units
63.181(b)(1) and (2)	requirement to identify (list) subject equipment
63.181(c)	documentation of visual inspections
63.181(d)	documentation of leaks
63.181(f)	requirements for recording compressor compliance tests and monitoring following a pressure release for each pressure relief device
63.181(g)	requirements for closed-vent systems and control devices
63.181(h)	requirements for quality improvement programs
63.181(i)	requirements for equipment in heavy liquid service
63.181(j)	requirement to identify (list) equipment in organic HAP service less than 300 hours per year
63.181(k)	requirements for alternative means of emission limitation of 63.179

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each period of time (start time and date, and end time and date) when the liquid flow rate was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;

b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;

c. each incident of deviation described in a. or b. where a prompt investigation was not conducted;

d. each incident of deviation described in a. or b. where prompt corrective action, that would bring 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 a. or 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.

[Authority for term: OAC rule 3745-15-03(B)(1)(a), OAC rule 3745-15-03(C) and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. all days during which any visible particulate emissions were observed from the stack(s) serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

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

(3) The permittee shall submit quarterly summaries of the following records:

a. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature established during the most recent performance test that demonstrated the emissions unit was in compliance;

b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit was in compliance; and

c. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-21-09(B)(4)(c)]]

(4) The permittee shall submit quarterly deviation (excursion) reports which identify the following information concerning the operations of the catalytic incinerator:

a. each period of time (start time and date, and end time and date) when the temperature(s) established in c)(2) was (were) outside of the acceptable range(s);

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 catalytic incinerator;

c. each incident of deviation described in a. or b. (above) where a prompt investigation was not conducted;

d. each incident of deviation described in a. or b. where prompt corrective action, that would bring the emissions unit into compliance and/or the temperature of the exhaust gases immediately before the catalyst bed or the average temperature difference across the catalyst bed into compliance with the acceptable range(s) established in c)(2), was determined to be necessary and was not taken; and

e. each incident of deviation described in a. or 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.

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

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(7) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 60, Subpart VVa— Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, including the following sections:

60.487a(a) through (c)	periodic reporting requirements

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

(8) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general periodic reporting requirements

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

(9) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.152(a)	descriptions of the required periodic reports
Table 3 to Subpart G of Part 63	general reporting
Table 4 to Subpart G of Part 63	process vent reporting

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

(10) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart H, NATIONAL EMISSION STANDARDS FOR ORGANIC HAZARDOUS AIR POLLUTANTS FOR EQUIPMENT LEAKS, per the following sections:

63.182(d)	descriptions of the required periodic reports	

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

f) Testing Requirements

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

a. Emission Limitation:

1.25 pounds of VOC per hour (incinerator stack).

Applicable Compliance Method:

If required, the permittee shall determine the VOC emissions rate from the catalytic incinerator stack using the methods and procedures specified in 3745-21-10(C). Alternate USEPA approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitation:

5.5 tons of VOC per year (incinerator stack).

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable limitation (1.25 pounds of VOC per hour) by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

c. Emission Limitation:

2.25 pounds of PM_{10} per hour from scrubber stacks E-781 and E-1400 combined.

Applicable Compliance Method:

If required, the permittee shall determine the hourly PM_{10} emission rate using Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. Emission Limitation:

9.9 tons of PM_{10} per year from scrubber stacks E-781 and E-1400 combined.

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable limitation (2.25 pounds of PM_{10} per hour) by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

e. Emission Limitation:

3.23 pounds of fugitive VOC per hour and 14.15 tons of fugitive VOC per year.

Applicable Compliance Method:

The VOC emissions from equipment leaks may be determined by using the emission factors from "Control Techniques for Fugitive VOC Emissions from Chemical Process Facilities" EPA/625/R-93/005 March 1994 Table 7-2, or other approved alternate, and the number of pumps, valves, flanges, etc. to calculate the pounds per hour of fugitive VOC emissions. The annual fugitive VOC emissions (in tons VOC per year) shall be calculated by multiplying pounds per hour emission rate by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton.

f. Emission Limitation:

20% opacity as a six-minute average

Applicable Compliance Method:

if required, compliance shall be demonstrated through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1). Alternate, equivalent methods may be used upon approval by the Toledo Environmental Service.

g. Emission Limitation:

33 pounds of PE per hour.

Applicable Compliance Method:

The permit application indicates that the maximum uncontrolled particulate emissions rate is 7.27 pounds per hour. If required, the permittee shall demonstrate compliance using Methods 1 through 5 of 40 CFR Part 60, Appendix A.

h. Emission Limitation:

reduce emissions of total organic HAP by 98 weight-percent or to a concentration of 20 parts per million by volume.

Applicable Compliance Method:

Pollutant concentration and the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c), or an alternative test protocol approved by the Ohio EPA.

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

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

a. The emissions testing shall be conducted within six months prior to the expiration of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the control efficiency limitation (or discharge concentration) and the allowable mass emission rates for TOC or organic hazardous air pollutants.

c. The concentration and control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c).

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or

approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Using catalytic incinerator temperature chart recorder data obtained during emission testing, the permittee shall determine the 3-hour average temperature immediately upstream of the catalyst bed, the average temperature differential across the catalyst bed, and include the 3-hour average temperature values in the written test report. A copy of the temperature chart recorder data during emission testing shall also be included in the written test report.

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

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

h. 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.

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

g) Miscellaneous Requirements

(1) None.

5. P812, Formaldehyde Mfg 2

Operations, Property and/or Equipment Description:

Formaldehyde manufacturing plant

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) c)(1), d)(1), and e)(1).

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
Process stack emissions		
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01397 issued 5/31/05)	Carbon monoxide (CO) emissions from the incinerator stack serving this emissions unit shall not exceed 3.13 pounds per hour and 13.7 tons per year.
		Volatile organic compounds (VOC) emissions from the incinerator stack serving this emissions unit shall not exceed 9.0 pounds per hour and 39.42 tons per year.
		See b)(2)a.
b.	OAC rule 3745-21-09(EE)	See b)(2)b.
c.	40 CFR Part 60, Subpart A (40 CFR 60.01-19)	See b)(2)c. and b)(2)d.
d.	40 CFR Part 60, Subpart III (40 CFR 60.610-618) [In accordance with 40 CFR 60.610(a)(2), this emissions unit is comprised of an air oxidation reactor with a recovery system constructed after October 21, 1983 that produces a chemical listed in 40 CFR 60.617.]	Except as otherwise allowed, the permittee shall reduce emissions of TOC (minus methane and ethane) by 98 weight-percent, or to a TOC (minus methane and ethane) concentration of 20 ppmv on a dry basis corrected to 3 percent oxygen, whichever is less stringent.
		See b)(2)e.
e.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)f.
f.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	Part 63, Subparts G and H
g.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is existing in-process equipment with process vents, and subject to 63.149 within a source subject to 40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	See b)(2)g.
h.	40 CFR Part 64 – Compliance Assurance Monitoring (CAM) (64.1 – 64.10) [In accordance with 40 CFR 64.2, this emission unit is a major source of VOC emissions controlled with a catalytic oxidizer]	Per the facility, all VOC emissions are also organic HAP and therefore compliance with 40 CFR Part 63 Subparts F and G will be sufficient to show compliance with 40 CFR Part 64 for VOC emissions.
Process fugitive emissions		
i.	OAC rule 3745-31-05(A)(3) (PTI 04-01397 issued 5/31/05)	Fugitive VOC emissions from this emissions unit shall not exceed 2.9 tons per year.
		See b)(2)a.
j.	OAC rule 3745-21-09(DD)	See b)(2)h.
k.	40 CFR Part 60, Subpart A (40 CFR 60.01-19)	See b)(2)c. and b)(2)d.
l.	40 CFR Part 60, Subpart VV (40 CFR 60.480-489) [In accordance with 40 CFR 63.480(a) and (b) this emissions unit is located at synthetic organic chemical manufacturing facility that	The permittee shall comply with the VOC leak detection and repair program requirements of 40 CFR Part 60, Subpart VV by maintaining compliance with the operational restrictions, monitoring, record keeping and reporting

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	commenced construction, reconstruction, or modification after January 5, 1981, and on or before November 7, 2006. The affected equipment in this emissions unit includes each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service and any devices or systems required by 40 CFR Part 60 Subpart VV.]	requirements of 40 CFR Part 63, Subpart H for all VOC process equipment leaks as provided in 40 CFR 63.160. See b)(2)d.
m.	40 CFR Part 63, Subpart A (40 CFR 63.01-16)	See b(2)f.
n.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subparts G and H.
o.	40 CFR Part 63, Subpart H (40 CFR 63.160-183) [In accordance with 63.160(a), The affected equipment in this emissions unit includes each pump, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver, closed-vent system with control devices that operate more than 300 hours per year in organic hazardous air pollutant service (i.e., formaldehyde, acetaldehyde or methanol)]	Except as otherwise provided, the permittee shall establish a hazardous air pollutant (HAP) leak detection and repair program for the affected sources, in compliance with the operational restrictions, monitoring, record keeping and reporting requirements of 40 CFR 63.162 through 63.170 and 63.172 through 63.174.

(2) Additional Terms and Conditions

a. The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-09(DD) and (EE), 40 CFR Part 60, Subparts VV and III, and 40 CFR Part 63, Subparts A, F, G and H.

b. The process vent stream(s) from this emissions unit shall be vented to a catalytic incinerator that is designed and operated either to reduce the VOC emissions vented to it with an efficiency of at least 98%, by weight, or to emit VOC at a concentration less than 20 ppm, by volume, on a dry basis.

c. This subpart provides applicability provisions, definitions, and other general provisions that are applicable to emissions units affected by 40 CFR Part 60.

d. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency (U.S. EPA), 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency (Ohio EPA).

e. As provided in PTI 04-01397 issued May 31, 2005, the permittee shall comply with the VOC restrictions of 40 CFR Part 60, Subpart III by maintaining compliance with the testing, monitoring, reporting, and recordkeeping requirements of 40 CFR Part 63, Subpart G for all air oxidation process vents as provided in 40 CFR 63.110(d)(3).

f. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F, G and H.

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F, G and H.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

iii. Table 4 to Subpart H of Part 63 - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart H.

g. Sources subject to 40 CFR Part 63, Subpart G include the process vents and transfer racks which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110:the permittee shall maintain and operate a vapor collection system and control device to collect and control process vent emissions from affected sources in accordance with 40 CFR 63.113;

i. the permittee shall maintain and operate a vapor balance system, or a vapor collection system and control device, to collect and control transfer rack emissions from affected sources in accordance with 40 CFR 63.126; and

ii. the control device shall reduce the total organic hazardous air pollutants by 98 weight percent or to a concentration of 20 ppm by volume, whichever is less stringent.

h. As provided in PTI 04-01397 issued May 31, 2005, the permittee shall comply with the VOC leak detection and repair program requirements of OAC rule 3745-21-09(DD) by maintaining compliance with the operational restrictions, monitoring, recordkeeping and reporting requirements of 40 CFR Part 63, Subpart H for all VOC process equipment leaks.

c) Operational Restrictions

(1) The permittee shall not employ water pumped from the Ottawa River to use as non-contact cooling water in this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 04-01397]

(2) In order to maintain compliance with the applicable emission limitation(s) of OAC rule 3745-31-05 and OAC rule 3745-21-09(EE), the permittee shall maintain the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, at not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature during the most recent emission test that demonstrated the emission unit was in compliance. The average temperature across the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

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

(3) The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.102(a)	startup, shutdown and malfunctions
63.104(a)	heat exchanger leak repair
63.105(a)	management procedures for wastewater

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

(4) The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process

Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.112(a) and (c)	emissions control requirements
63.113(a)	process vent control requirements
63.119(a)	storage vessel control requirements
63.120(d)	storage vessel control design
63.126(a) and (b)	transfer racks control requirements
63.126(e)	requirements for tank trucks and railcars
63.126(f) and (g)	requirements for transfer rack collection equipment design and use
63.126(h) and (i)	restrictions on transfer rack pressure-relief devices and diverter valves
63.127(e)	establishing monitoring parameters
63.132(f)	restrictions on the discharge of liquid or solid organic materials
63.148(d) and (e)	leak repair requirements for vapor collection systems, closed-vent systems, fixed roofs, covers, or enclosures

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

(5) The permittee shall comply with the applicable operational restrictions required under 40 CFR Part 63, Subpart H, NATIONAL EMISSION STANDARDS FOR ORGANIC HAZARDOUS AIR POLLUTANTS FOR EQUIPMENT LEAKS, including the following sections:

63.162(c)	identifying affected equipment
63.162(d)	vacuum service exemption
63.162(f)	identifying leaking equipment
63.162(h)	failure to repair leaks
63.163(a), (b)(2), (c) and (d)	detecting pump leaks
63.163(e), (f), (g), (i) and (j)	exemption from detecting pump leaks
63.164(a) through (c) and (e)(2) through (i)	compressor seal barrier fluid system requirements
63.164(h) and (i)	exemption from compressor seal barrier fluid system requirements
63.165(a) and (b)(1)	pressure relief device instrument reading requirements
63.165(c) and (d)	exemption from pressure relief device instrument reading requirements
63.166(a) through (c)	sampling connection system requirements
63.167(a)(1) through (e)	open-ended valves or lines requirements
63.168(b)(2), (f)(1), (f)(2) and (g)	determining monitoring intervals, leak detection and repair requirements for valves in gas/vapor service and in light liquid service

63.168(h) and (i)	exemption from requirements for valves in gas/vapor service and in light liquid service
63.169(b) through (c)	determining monitoring intervals, leak detection and repair requirements for pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service
63.170	requirements for surge control vessels and bottoms receivers.
63.171(a) through (e)	repair completion requirements
63.172(a) through (d) and (h) through (n)	requirements for closed-vent systems and control devices
63.173(a)(2) through (j)	determining monitoring intervals, leak detection and repair requirements for agitators in gas/vapor service and in light liquid service
63.174(a)(2) through (j)	determining monitoring intervals, leak detection and repair requirements for connectors in gas/vapor service and in light liquid service
Table 1 to Subpart H of Part 63	batch process monitoring frequency
Table 2 to Subpart H of Part 63	vapor pressure limitations for surge control vessels and bottoms receivers

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

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain daily records that document any time periods when water pumped from the Ottawa River was used as non-contact cooling water in this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 04-01397]

(2) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable temperature of the exhaust gases immediately before the catalyst bed, during any period of time when the emissions units controlled by the catalytic incinerator are in operation, shall not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance. The acceptable temperature difference across the catalyst bed (when the emissions unit is in operation), shall not be less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions units were in compliance.

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

(3) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record(s) the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

c. a log or record of the operating time for the capture (collection) system, catalytic incinerator, monitoring equipment, and the associated emissions unit(s).

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed. These records shall be maintained at the facility for a period of no less than 3 years.

[Authority for term: OAC rule 3745-21-09(B)(4)(b)(i) & (iii), OAC rule 3745-21-09(B)(4)(d) and OAC rule 3745-77-07(C)(1)]

(4) Whenever the monitored average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed deviates from the range or limit 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.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/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:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature of the exhaust gases immediately before the catalyst and, if appropriate, the average temperature difference across the catalyst bed immediately after the corrective action was implemented; and

k. 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.

The temperature ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range(s) based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s)of the controlled pollutant(s). In addition, approved revisions to the temperature range(s) 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.

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

(5) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 04-1397, issued on 5/31/2005: d)(2) thru d)(4). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii) and OAC rule 3745-77-07(C)(1)]

(6) The permittee shall comply with the applicable monitoring and record keeping required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous

Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(7) The permittee shall comply with the applicable monitoring and record keeping required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.114(a) and 63.127(a)	requirement to install catalyst bed temperature monitoring devices
63.114(c) and 63.127(c)	authorization to monitor parameters other than temperature
63.114(d) and 63.127(d)	requirement to install monitoring devices for bypass line valves
63.118(a)	record keeping for process vent control devices
63.123(a), (f) and (h)	record keeping for storage tanks
63.129(a), 63.130(a) and TABLE 7	incinerator monitoring and record keeping
63.129(b)	monitoring and record keeping for alternate operating parameters
63.129(c)	requirement to establish monitoring parameter range
63.129(d), 63.130(b)	record keeping for valves and vents
63.130(e)	verification of DOT tank certification
63.130(f)	annual record keeping for transfer racks
63.148(a)	leak inspection provisions for vapor collection systems, closed-vent systems, fixed roofs, covers, or enclosures
63.152(f) and (g)	general record keeping requirements
Table 3 to Subpart G of Part 63	general monitoring and record keeping
Table 4 to Subpart G of Part 63	process vent monitoring and record keeping
Table 7 to Subpart G of Part 63	loading rack monitoring and record keeping
Table 11 to Subpart G of Part 63	wastewater inspection and monitoring

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

(8) The permittee shall comply with the applicable monitoring and record keeping required under 40 CFR Part 63, Subpart H, NATIONAL EMISSION STANDARDS FOR ORGANIC HAZARDOUS AIR POLLUTANTS FOR EQUIPMENT LEAKS, including the following sections:

63.163(b)(1), (b)(3), (d)(2) and (e) through (j)	monitoring requirements for leaks in light liquid service pump
63.164(d) and (e)(1)	monitoring requirements for compressor seal barrier fluid systems
63.165(b)(2)	monitoring requirements for pressure relief device
63.168(b), (d), (h) and (i)	monitoring requirements for valves in gas/vapor service and in light liquid service
63.169(a)	monitoring requirements for pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service
63.172(f), (g), (k) and (l)	monitoring requirements for closed-vent systems
63.173(a)(1) and (b)(4)	monitoring requirements for agitators in gas/vapor service and in light liquid service
63.174(a)(1)	monitoring requirements for connectors in gas/vapor service and in light liquid service
63.175(a) through (e)	quality improvement program for valves
63.176(a) through (d)	quality improvement program for pumps
63.177(a) through (e), 63.178(a) through (d) and 63.179	alternative means of emission limitation
63.180(a) through (d), (f) and (g)	test procedures for monitoring
63.181(a)	conditions for establishing compliance utilizing one recordkeeping system for multiple emission units
63.181(b)(1) and (2)	requirement to identify (list) subject equipment
63.181(c)	documentation of visual inspections
63.181(d)	documentation of leaks
63.181(f)	requirements for recording compressor compliance tests and monitoring following a pressure release for each pressure relief device
63.181(g)	requirements for closed-vent systems and control devices
63.181(h)	requirements for quality improvement programs
63.181(i)	requirements for equipment in heavy liquid service
63.181(j)	requirement to identify (list) equipment in organic HAP service less than 300 hours per year
63.181(k)	requirements for alternative means of emission limitation of 63.179

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

e) Reporting Requirements

(1) The permittee shall notify the Toledo Division of Environmental Services, in writing, of any daily record showing that water pumped from the Ottawa River was used as non-contact cooling water in this emissions unit. The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days after the event occurs.

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

(2) The permittee shall submit quarterly summaries of the following records:

a. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

c. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and

d. a log of the operating time for the capture system, catalytic incinerator, monitoring equipment, and the emissions unit(s).

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-09(B)(4)(c)]

(3) The permittee shall submit quarterly deviation (excursion) reports which identify the following information concerning the operations of the catalytic incinerator:

a. each period of time (start time and date, and end time and date)when the average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed was outside of the acceptable ranges;

b. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the catalytic incinerator;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in "a"or "b" where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature of the exhaust gases immediately before the catalyst bed or the average temperature difference across the catalyst bed into compliance with the acceptable range(s), was determined to be necessary and was not taken; and

e. each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s).

The permittee shall submit the results of the catalyst activity test(s)in the last quarterly report for each year, along with a summary of the results of the annual inspection of the internal integrity of the catalytic incinerator.

[Authority for term: OAC rule 3745-15-03(B)(1)(a) and OAC rule 3745-15-03(C); and OAC rule 3745-77-07(C)(1)]

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(6) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-01397, issued on 5/31/2005: e)(1) thru e)(5). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

(7) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general periodic reporting requirements

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

(8) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart G, National Emission Standards for Organic

Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.152(a)	descriptions of the required periodic reports
Table 3 to Subpart G of Part 63	general reporting
Table 4 to Subpart G of Part 63	process vent reporting
Table 7 to Subpart G of Part 63	loading rack reporting

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

(9) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart H, NATIONAL EMISSION STANDARDS FOR ORGANIC HAZARDOUS AIR POLLUTANTS FOR EQUIPMENT LEAKS, per the following sections:

63.182(d)	descriptions of the required periodic reports

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

f) Testing Requirements

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

a. Emission Limitation:

3.13 pounds of CO per hour (stack).

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 10. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.

b. Emission Limitation:

13.7 tons of CO per year (stack).

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable limitation (3.13 pounds of CO per hour) by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton. Therefore, if

compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

c. Emission Limitation:

9.0 pounds of VOC per hour (stack).

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the methods and procedures specified in OAC rule 3745-21-10(C). Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.

d. Emission Limitation:

39.42 tons per year of VOC (stack).

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable limitation (9.0 pounds of VOC per hour) by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

e. Emission Limitation:

2.9 tons of VOC per year (fugitive equipment leaks).

Applicable Compliance Method:

Compliance shall be demonstrated by using the emission factors from "Protocol for Equipment Leak Emission Estimates" EPA-453/R-95-017 November 1995 Table 2-5, or other approved alternate method, and the number of pumps, valves, flanges, etc. to calculate the pounds per hour of fugitive VOC emissions. The annual fugitive VOC emissions (in tons VOC per year) shall be calculated by multiplying pounds per hour emission rate by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton.

f. Emission Limitation:

Reduce the VOC emissions vented to it with an efficiency of at least 98%, by weight, or to emit VOC at a concentration less than 20 ppm, by volume, on a dry basis.

Applicable Compliance Method:

VOC concentration and the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10(C), or an alternative test protocol approved by the Ohio EPA. The test

methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

g. Emission Limitation:

reduce emissions of TOC (minus methane and ethane) by 98 weight-percent, or to a TOC (minus methane and ethane) concentration of 20 ppmv on a dry basis corrected to 3 percent oxygen.

Applicable Compliance Method:

TOC concentration and the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 60.614, or an alternative test protocol approved by the Ohio EPA.

h. Emission Limitation:

Reduce emissions of total organic HAPs by 98 weight-percent or to a concentration of 20 parts per million by volume.

Applicable Compliance Method:

Organic HAP concentration and the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c), or an alternative test protocol approved by the Ohio EPA.

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #04-01397, issued on May 31, 2005: f)(1). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

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

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

a. The emissions testing shall be conducted within six months prior to the expiration of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the control efficiency limitation (or discharge concentration) and the allowable mass emission rates for TOC or organic HAPs.

c. The concentration and control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c).

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

e. Using catalytic incinerator temperature chart recorder data obtained during emission testing, the permittee shall determine the 3-hour average temperature immediately upstream of the catalyst bed, the average temperature differential across the catalyst bed, and include the 3-hour average temperature values in the written test report. A copy of the temperature chart recorder data during emission testing shall also be included in the written test report.

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

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

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

g) Miscellaneous Requirements

(1) None.

6. T001, Formic Acid Tank

Operations, Property and/or Equipment Description:

formic acid fixed roof tank with no controls

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01417 issued 9/1/05)	Fugitive volatile organic compound (VOC) emissions from this emissions unit shall not exceed 0.40 ton per year
		See b)(2)a. and b)(2)b.

(2) Additional Terms and Conditions

a. The permittee shall maintain and operate a submerged fill pipe for this emissions unit.

b. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing formic acid. Therefore, it is not necessary to develop additional monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information on a monthly basis:

a. the types of organic liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 04-01417]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the maximum true vapor pressure of any organic liquid stored exceeded that of formic acid.

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

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

[Authority for term: OAC rule 3745-15-03(B)(1)(a) and OAC rule 3745-15-03(C); and OAC rule 3745-77-07(A)(3)(c)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(4) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirement is as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-01417, issued on September 1, 2005: d)(1) through d)(3). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

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:

0.40 ton of VOC per year

Applicable Compliance Method:

The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a liquid with a maximum 0.56 psia vapor pressure at 5.8 million gallons per year throughput.

If required, VOC emissions shall be calculated using USEPA 's “Tanks Program 4.0" or subsequent version. AP-42, Section 7.1 (9/97) may be used in lieu of “Tanks Program 4.0.”

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 04-01417, issued on September 1, 2005: f)(1). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

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

g) Miscellaneous Requirements

(1) None.

2. T004, Formaldehyde Tank

Operations, Property and/or Equipment Description:

Formaldehyde Storage Tank (formalin, tank V-145), fixed roof tank, controlled by a closed vent system with a catalytic incinerator; this emissions unit is a Group 2 tank (<75 m3) that operates more than 300 hours per year in organic hazardous air pollutant service

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-479 as issued August 24, 1988)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 0 percent opacity as a six-minute average
		See b)(2)a. thru b)(2)c.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)d.
c.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subpart G.
d.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is an	The permittee shall comply with the Group 2 recordkeeping requirement in 40 CFR 63.123(a) and is not required to comply with any other provisions in 40

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	existing storage vessel, and subject to 63.149 within a source subject to 40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	CFR 63.119 through 63.123.

(2) Additional Terms and Conditions

a. The permittee shall maintain and operate a submerged fill pipe for this emissions unit.

b. Emissions from this emissions unit shall be vented to the catalytic incinerator controlling emissions from emissions unit P801.

c. The combined stack emissions from emissions units P004, P801, T004, T005 and T006 shall not exceed 3.07 tons of VOC per year.

d. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F and G.

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F and G.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

c) Operational Restrictions

(1) In order to maintain compliance with the applicable emission limitation(s) of OAC rule 3745-31-05, the permittee shall maintain the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, at not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature during the most recent emission test that demonstrated the emission unit was in compliance. The average temperature across the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information on a monthly basis:

a. the types of organic liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

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

(2) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable temperature of the exhaust gases immediately before the catalyst bed, during any period of time when the emissions units controlled by the catalytic incinerator are in operation, shall not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance. The acceptable temperature difference across the catalyst bed (when the emissions unit is in operation), shall not be less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions units were in compliance.

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

(3) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record either the instantaneous data value at least once every 15 minutes or records 15-minute or more frequent block average values of the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions units are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit or Celsius. The device shall have an accuracy of the greater of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 Celsius degrees. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit is in operation:

a. all 3-hour blocks of time, when the emissions units controlled by the catalytic incinerator were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance;

b. all 3-hour blocks of time, when the emissions units controlled by the catalytic incinerator were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions units were in compliance; and

c. a log (date and total time) of the downtime or bypass of the capture (collection) system and catalytic incinerator control, and/or downtime of the monitoring equipment, when the associated emissions unit was in operation.

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed.

[Authority for term: OAC rule 3745-21-09(B)(4)(b)(i) & (iii), OAC rule 3745-21-09(B)(4)(d) and OAC rule 3745-77-07(C)(1)]

(4) Whenever the monitored average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed deviates from the range or limit 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.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/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:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature of the exhaust gases immediately before the catalyst andthe average temperature difference across the catalyst bed immediately after the corrective action was implemented; and

k. 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.

The temperature ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range(s) based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s)of the controlled pollutant(s). In addition, approved revisions to the temperature range(s) 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.

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

(5) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 04-479 issued August 24, 1988: d)(1) thru d)(4). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

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

(6) The permittee shall comply with the applicable monitoring and record keeping for a Group 2 storage vessel required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

6363.103(c)	G General record keeping requirements

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

(7) The permittee shall comply with the applicable monitoring and record keeping for a Group 2 storage vessel required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

6363.123(a)	Ke Keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the maximum true vapor pressure of any organic liquid stored exceeded that of formalin.

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

(2) The permittee shall submit quarterly summaries of the following records:

a. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

c. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and

d. a log of the operating time for the capture system, catalytic incinerator, monitoring equipment, and the emissions unit(s).

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

[OAC rule 3745-21-09(B)(4)(c) and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall submit quarterly deviation (excursion) reports which identify the following information concerning the operations of the catalytic incinerator:

a. each period of time (start time and date, and end time and date)when the average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed was outside of the acceptable ranges;

b. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the catalytic incinerator;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a”or “b” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature of the exhaust gases immediately before the catalyst bed or the average temperature difference across the catalyst bed into compliance with the acceptable range(s), was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s).

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

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(6) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-479 issued August 24, 1988: e)(1) thru e)(5). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

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 emissions shall not exceed zero percent opacity as a six-minute average.

Applicable Compliance Method:

if required, compliance shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

b. Emission Limitation:

The combined emissions from emissions units P004, P801, T004, T005 and T006 shall not exceed 3.07 tons of VOC per year.

Applicable Compliance Method:

The permittee shall demonstrate compliance by multiplying the VOC emissions rate, in pounds per hour, determined during the most recent emission test which demonstrated compliance with the short term VOC limitation, including formaldehyde, in pounds per hour, by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton.

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 04-479 issued August 24, 1988: f)(1). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

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

g) Miscellaneous Requirements

(1) None.

7. T006, Formaldehyde Tank

Operations, Property and/or Equipment Description:

Fixed roof formaldehyde storage tank [85% water and 15% formaldehyde, Tank V-160], controlled by a closed vent system with a catalytic incinerator; Group 2 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) (PTI 04-479 as issued August 24, 1988)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 0 percent opacity as a six-minute average. See b)(2)a. thru b)(2)c.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)d.
c.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subpart G.
d.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is an existing storage vessel, and subject	The permittee shall comply with the Group 2 recordkeeping requirement in 40 CFR 63.123(a) and is not required to comply with any other provisions in 40 CFR 63.119 through 63.123.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	to 63.149 within a source subject to 40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	

(2) Additional Terms and Conditions

a. The permittee shall maintain and operate a submerged fill pipe for this emissions unit.

b. Emissions from this emissions unit shall be vented to the catalytic incinerator controlling emissions from emissions unit P801.

c. The combined stack emissions from emissions units P004, P801, T004, T005 and T006 shall not exceed 3.07 tons of VOC per year.

d. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F and G.

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F and G.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

c) Operational Restrictions

(1) In order to maintain compliance with the applicable emission limitation(s) of OAC rule 3745-31-05, the permittee shall maintain the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, at not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature during the most recent emission test that demonstrated the emission unit was in compliance. The average temperature across the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

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

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information on a monthly basis:

a. the types of organic liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

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

(2) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable temperature of the exhaust gases immediately before the catalyst bed, during any period of time when the emissions units controlled by the catalytic incinerator are in operation, shall not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance. The acceptable temperature difference across the catalyst bed (when the emissions unit is in operation), shall not be less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions units were in compliance.

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

(3) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record(s) the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within $\pm$ 1 percent of the temperature being measured or $\pm$ 5 degrees Fahrenheit, whichever is greater. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

c. a log or record of the operating time for the capture (collection) system, catalytic incinerator, monitoring equipment, and the associated emissions unit(s).

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed. These records shall be maintained at the facility for a period of no less than 3 years.

[Authority for term: OAC rule 3745-21-09(B)(4)(b)(i) & (iii), OAC rule 3745-21-09(B)(4)(d) and OAC rule 3745-77-07(C)(1)]

(4) Whenever the monitored average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed deviates from the range or limit 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.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/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:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature of the exhaust gases immediately before the catalyst andthe average temperature difference across the catalyst bed immediately after the corrective action was implemented; and

k. 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.

The temperature ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range(s) based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s)of the controlled pollutant(s). In addition, approved revisions to the temperature range(s) 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.

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

(5) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 04-479 issued August 24, 1988: d)(1) thru d)(4). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

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

(6) The permittee shall comply with the applicable monitoring and record keeping for a Group 2 storage vessel required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(7) The permittee shall comply with the applicable monitoring and record keeping for a Group 2 storage vessel required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the maximum true vapor pressure of any organic liquid stored exceeded that of a 15% solution of formaldehyde.

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

(2) The permittee shall submit quarterly summaries of the following records:

a. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

c. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and

d. a log of the operating time for the capture system, catalytic incinerator, monitoring equipment, and the emissions unit(s).

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

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

(3) The permittee shall submit quarterly deviation (excursion) reports which identify the following information concerning the operations of the catalytic incinerator:

a. each period of time (start time and date, and end time and date)when the average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed was outside of the acceptable ranges;

b. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the catalytic incinerator;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a”or “b” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature of the exhaust gases immediately before the catalyst bed or the average temperature difference across the catalyst bed into compliance with the acceptable range(s), was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s).

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

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(6) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-479 issued August 24, 1988: e)(1) through e)(5). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

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 emissions shall not exceed zero percent opacity as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

b. Emission Limitation:

The combined emissions from emissions units P004, P801, T004, T005 and T006 shall not exceed 3.07 tons of VOC per year.

Applicable Compliance Method:

The permittee shall demonstrate compliance by multiplying the VOC emissions rate, in pounds per hour, determined during the most recent emission test which demonstrated compliance with the short term VOC limitation, including formaldehyde, in pounds per hour, by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton.

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 04-479 issued August 24, 1988: f)(1). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

g) Miscellaneous Requirements

(1) None.

8. T016, Formaldehyde Tank

Operations, Property and/or Equipment Description:

Fixed roof formaldehyde storage tank (50% formaldehyde, Tank V-130), controlled by a closed vent system with a catalytic incinerator; Group 2 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) (PTI 04-652 issued 11/7/1990)	Organic compound (OC) emissions from this emissions unit shall not exceed 0.03 ton per year. See b)(2)a. thru b)(2)c.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)d.
c.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subpart G.
d.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) In accordance with 40 CFR 63.100(b) this emissions unit is an existing storage vessel, and subject to 63.149 within a source subject to	The permittee shall comply with the Group 2 recordkeeping requirement in 40 CFR 63.123(a) and is not required to comply with any other provisions in 40 CFR 63.119 through 63.123.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	

(2) Additional Terms and Conditions

a. The permittee shall maintain and operate a submerged fill pipe for this emissions unit. The submerged fill pipe is to extend within 6-inches of the bottom of the tank.

b. Emissions from this emissions unit shall be vented to the catalytic incinerator controlling emissions from emissions unit P801.

c. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a 50% formaldehyde solution.

d. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F and G.

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F and G.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

c) Operational Restrictions

(1) In order to maintain compliance with the applicable emission limitation(s) of OAC rule 3745-31-05, the permittee shall maintain the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, at not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature during the most recent emission test that demonstrated the emission unit was in compliance. The average temperature across the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

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

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information on a monthly basis:

a. the types of organic liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

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

(2) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable temperature of the exhaust gases immediately before the catalyst bed, during any period of time when the emissions units controlled by the catalytic incinerator are in operation, shall not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance. The acceptable temperature difference across the catalyst bed (when the emissions unit is in operation), shall not be less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions units were in compliance.

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

(3) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record(s) the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within $\pm$ 1 percent of the temperature being measured or $\pm$ 5 degrees Fahrenheit, whichever is greater. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

c. a log or record of the operating time for the capture (collection) system, catalytic incinerator, monitoring equipment, and the associated emissions unit(s).

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed. These records shall be maintained at the facility for a period of no less than 3 years.

[Authority for term: OAC rule 3745-21-09(B)(4)(b)(i) & (iii), OAC rule 3745-21-09(B)(4)(d) and OAC rule 3745-77-07(C)(1)]

(4) Whenever the monitored average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed deviates from the range or limit 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.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/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:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature of the exhaust gases immediately before the catalyst andthe average temperature difference across the catalyst bed immediately after the corrective action was implemented; and

k. 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.

The temperature ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range(s) based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s)of the controlled pollutant(s). In addition, approved revisions to the temperature range(s) 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.

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

(5) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 04-652 issued November 7, 1990: d)(1) thru d)(4). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

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

(6) The permittee shall comply with the applicable monitoring and record keeping for a Group 2 storage vessel required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(7) The permittee shall comply with the applicable monitoring and record keeping for a Group 2 storage vessel required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the maximum true vapor pressure of any organic liquid stored exceeded that of a 50% solution of formaldehyde.

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

(2) The permittee shall submit quarterly summaries of the following records:

a. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

c. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and

d. a log of the operating time for the capture system, catalytic incinerator, monitoring equipment, and the emissions unit(s).

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

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

(3) The permittee shall submit quarterly deviation (excursion) reports which identify the following information concerning the operations of the catalytic incinerator:

a. each period of time (start time and date, and end time and date)when the average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed was outside of the acceptable ranges;

b. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the catalytic incinerator;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a”or “b” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature of the exhaust gases immediately before the catalyst bed or the average temperature difference across the catalyst bed into compliance with the acceptable range(s), was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s).

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

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(6) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-652 issued November 7, 1990: e)(1) through e)(5). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

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:

0.03 ton of OC per year

Applicable Compliance Method:

The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a liquid with a maximum 0.81 psia vapor pressure at 10 million gallons per year throughput and 95% effective control.

If required, OC emissions shall be calculated using USEPA 's “Tanks Program 4.0" or subsequent version, utilizing the control efficiency determined during the most recent emission test which demonstrated compliance. AP-42, Section 7.1 (9/97) may be used in lieu of “Tanks Program 4.0.”

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 04-652 issued November 7, 1990: f)(1). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this

operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

g) Miscellaneous Requirements

(1) None.

9. T017, Methanol Tank

Operations, Property and/or Equipment Description:

Fixed roof methanol storage tank (V-146), controlled by a closed vent system with a catalytic incinerator; Group 2 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) (PTI 04-652 issued 11/7/1990)	Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 0.02 ton per year.
		see b)(2)a. thru b)(2)c.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	see b)(2)d.
c.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subpart G.
d.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is an existing storage vessel, and subject to 63.149 within a source subject to	The permittee shall comply with the Group 2 recordkeeping requirement in 40 CFR 63.123(a) and is not required to comply with any other provisions in 40 CFR 63.119 through 63.123.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	

(2) Additional Terms and Conditions

a. Emissions from this emissions unit shall be vented to the catalytic incinerator controlling emissions from emissions unit P801.

b. The permittee shall maintain and operate a submerged fill pipe for this emissions unit.

c. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing methanol.

d. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F, G and H.

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F and G.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

c) Operational Restrictions

(1) In order to maintain compliance with the applicable emission limitation(s) of OAC rule 3745-31-05, the permittee shall maintain the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, at not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature during the most recent emission test that demonstrated the emission unit was in compliance. The average temperature across the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

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

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information on a monthly basis:

a. the types of organic liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

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

(2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit(s) controlled by the catalytic incinerator is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance. The acceptable average temperature difference across the catalyst bed, for any 3-hour block of time (when the emissions unit(s) is/are in operation), shall not be less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance.

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

(3) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record either the instantaneous data value at least once every 15 minutes or records 15-minute or more frequent block average values of the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions units are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit or Celsius. The device shall have an accuracy of the greater of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 Celsius degrees. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit is in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

c. a log or record of the operating time for the capture (collection) system, catalytic incinerator, monitoring equipment, and the associated emissions unit(s).

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed. These records shall be maintained at the facility for a period of no less than 3 years.

[Authority for term: OAC rule 3745-21-09(B)(4)(b)(i) & (iii), OAC rule 3745-21-09(B)(4)(d) and OAC rule 3745-77-07(C)(1)]

(4) Whenever the monitored average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed deviates from the range or limit 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.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/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:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature of the exhaust gases immediately before the catalyst andthe average temperature difference across the catalyst bed immediately after the corrective action was implemented; and

k. 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.

The temperature ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted

temperature range(s) based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s)of the controlled pollutant(s). In addition, approved revisions to the temperature range(s) 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.

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

(5) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 04-652 issued November 7, 1990: d)(1) thru d)(4). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

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

(6) The permittee shall comply with the applicable monitoring and record keeping for a Group 2 storage vessel required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(7) The permittee shall comply with the applicable monitoring and record keeping for a Group 2 storage vessel required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the maximum true vapor pressure of any organic liquid stored exceeded that of methanol.

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

(2) The permittee shall submit quarterly summaries of the following records:

a. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

c. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and

d. a log of the operating time for the capture system, catalytic incinerator, monitoring equipment, and the emissions unit(s).

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

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

(3) The permittee shall submit quarterly deviation (excursion) reports which identify the following information concerning the operations of the catalytic incinerator:

a. each period of time (start time and date, and end time and date)when the average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed was outside of the acceptable ranges;

b. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the catalytic incinerator;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a”or “b” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature of the exhaust gases immediately before the catalyst bed or the average temperature difference across the catalyst bed into compliance with the acceptable range(s), was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s).

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

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(6) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-652 issued November 7, 1990: e)(1) through e)(5). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

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:

0.02 ton of VOC per year

Applicable Compliance Method:

The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a liquid with a maximum 1.45 psia vapor pressure at 0.35 million gallons per year throughput and 95% effective control.

If required, VOC emissions shall be calculated using USEPA 's “Tanks Program 4.0" or subsequent version, utilizing the control efficiency determined during the most recent emission test which demonstrated compliance. AP-42, Section 7.1 (9/97) may be used in lieu of “Tanks Program 4.0.”

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 04-652 issued November 7, 1990: f)(1). The testing requirements contained in the above-

referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

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

g) Miscellaneous Requirements

(1) None.

10. T023, Neopentylgylcol tank

Operations, Property and/or Equipment Description:

24,200 gal. fixed roof storage tank for TMP co-product.

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01251 issued 4/17/2001)	Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 0.59 ton per year
		See b)(2)a. and b)(2)b.

(2) Additional Terms and Conditions

a. The permittee shall maintain and operate a liquid seal filled with glycerine.

b. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a heated trimethylolpropane (TMP) co-product liquid. Therefore, it is not necessary to develop additional monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information on a monthly basis:

a. the types of organic liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirement is as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 04-01251 issued April 17, 2001: d)(1). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the maximum true vapor pressure of any organic liquid stored exceeded that of heated trimethylolpropane (TMP) co-product liquid.

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

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(4) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-01251 issued April 17, 2001: e)(1) through e)(3). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

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:

0.59 ton of VOC per year

Applicable Compliance Method:

The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a liquid with a maximum 0.021 psia vapor pressure at 500,000 gallons per year throughput.

If required, VOC emissions shall be calculated as the working losses only, of USEPA's "Tanks Program 4.0" or subsequent version. AP-42, Section 7.1 (9/97) may be used in lieu of "Tanks Program 4.0."

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 04-01251 issued April 17, 2001: f)(1). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

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

g) Miscellaneous Requirements

(1) None.

11. T024, TMP co-product tank

Operations, Property and/or Equipment Description:

24,200 gal. fixed roof storage tank for TMP co-product.

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01251 issued 4/17/2001)	Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 0.68 ton per year.
		See b)(2)a.

(2) Additional Terms and Conditions

a. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a heated TMP co-product liquid. Therefore, it is not necessary to develop additional monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information on a monthly basis:

a. the types of organic liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirement is as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 04-01251 issued April 17, 2001: d)(1). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the maximum true vapor pressure of any organic liquid stored exceeded that of heated TMP co-product liquid.

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

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(4) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-01251 issued April 17, 2001: e)(1) through e)(3). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

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:

0.68 ton of VOC per year

Applicable Compliance Method:

The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a liquid with a maximum 0.022 psia vapor pressure at 500,000 gallons per year throughput.

If required, VOC emissions shall be calculated using USEPA 's "Tanks Program 4.0" or subsequent version. AP-42, Section 7.1 (9/97) may be used in lieu of "Tanks Program 4.0."

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 04-1251 as modified on April 17, 2001: f)(1). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

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

g) Miscellaneous Requirements

(1) None.

12. T025, Formaldehyde Tank

Operations, Property and/or Equipment Description:

Fixed roof storage tank (Penta Plant, V-120) for 12% formaldehyde, no controls; Group 2 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.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)a.
b.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subpart G.
c.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is an existing storage vessel, and subject to 63.149 within a source subject to 40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	The permittee shall comply with the Group 2 recordkeeping requirement in 40 CFR 63.123(a) and is not required to comply with any other provisions in 40 CFR 63.119 through 63.123.

(2) Additional Terms and Conditions

a. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F and G.

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F and G.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the applicable monitoring and record keeping for a Group 2 storage vessel required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(2) The permittee shall comply with the applicable monitoring and record keeping for a Group 2 storage vessel required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel

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

e) Reporting Requirements

(1) None.

f) Testing Requirements

(1) None.

g) Miscellaneous Requirements

(1) None.

13. T104, Methanol tank

Operations, Property and/or Equipment Description:

internal floating roof storage tank for methanol, no controls

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)a.
b.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subpart G.
c.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is an existing storage vessel, and subject to 63.149 within a source subject to 40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	See b)(2)b. and b)(2)c.

(2) Additional Terms and Conditions

a. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F and G.

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F and G.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

b. Sources subject to 40 CFR Part 63, Subpart G include storage vessels which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110.

c. The permittee shall reduce hazardous air pollutants emissions to the atmosphere by operating and maintaining a fixed roof and internal floating roof, as provided in 40 CFR 63.119(b).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the applicable monitoring and record keeping for a Group 1 storage vessel required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(2) The permittee shall comply with the applicable monitoring and record keeping for a Group 1 storage vessel required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.120(a)	compliance demonstration inspections and monitoring
63.123(a)	keep records showing the dimensions of the storage vessel and an analysis

	showing the capacity of the storage vessel
63.123(c)	recordkeeping for monitoring and planned routine maintenance
63.123(g)	extension in emptying

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

e) Reporting Requirements

(1) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general periodic reporting requirements

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

(2) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.122(a)	general required periodic reports
63.122(d)	IFR required periodic reports
63.122(h)	refilling of a storage vessel
63.152(a)	descriptions of the required periodic reports
63.152(c)	periodic reporting
63.152(d)	notifications of inspections

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

f) Testing Requirements

(1) None.

g) Miscellaneous Requirements

(1) None.

14. T105, Blend tank

Operations, Property and/or Equipment Description:

Fixed roof storage tank (#202.102-1.1 for formaldehyde-methanol mixture controlled by a closed vent system with a catalytic incinerator; Group 1 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) (PTI 04-278, as issued 8/21/1985)	The combined emissions of formaldehyde and methanol from this emissions unit shall not exceed 0.08 ton per year.
		See b)(2)a. thru b)(2)e.
b.	40 CFR Part 60, Subpart Kb (40 CFR 60.110b-117b) [In accordance with 40 CFR 60.110b(a) this emissions unit is a storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984]	See b)(2)f. and b)(2)g.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)h.
d.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subpart G.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	
e.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is an existing storage vessel, and subject to 63.149 within a source subject to 40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	See b)(2)i.

(2) Additional Terms and Conditions

a. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a formaldehyde-methanol mixture.

b. The permittee shall maintain and operate a submerged fill pipe for this emissions unit.

c. The permittee shall maintain and operate a closed vent system and control device to collect and control the formaldehyde and methanol emissions from this emissions unit.

d. 97%, or more, of the carbon in the organic material introduced to the incinerator shall be oxidized to carbon dioxide.

e. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Kb.

f. In accordance with the provisions of 40 CFR 63.110(b)(1), the permittee shall demonstrate compliance with the applicable requirements of 40 CFR Part 60, Subpart Kb by compliance with the provisions of 40 CFR Part 63, Subpart G.

g. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

h. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F and G.

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F and G.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

i. Sources subject to 40 CFR Part 63, Subpart G include storage tanks which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110.

i. The permittee shall maintain and operate a closed vent system and control device to collect and control process emissions from affected sources in accordance with 40 CFR 63.119(e).

ii. The control device shall reduce the total organic hazardous air pollutants by 95 weight percent or greater.

c) Operational Restrictions

(1) In order to maintain compliance with the applicable emission limitation(s) of OAC rule 3745-31-05, the permittee shall maintain the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, at not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature during the most recent emission test that demonstrated the emission unit was in compliance. The average temperature across the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

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

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information on a monthly basis:

a. the types of organic liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

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

(2) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable temperature of the exhaust gases immediately before the catalyst bed, during any period of time when the emissions units controlled by the catalytic incinerator are in operation, shall not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance. The acceptable temperature difference across the catalyst bed (when the emissions unit is in operation), shall not be less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions units were in compliance.

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

(3) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record either the instantaneous data value at least once every 15 minutes or records 15-minute or more frequent block average values of the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions units are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit or Celsius. The device shall have an accuracy of the greater of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 Celsius degrees. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit is in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

c. a log or record of the operating time for the capture (collection) system, catalytic incinerator, monitoring equipment, and the associated emissions unit(s).

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed. These records shall be maintained at the facility for a period of no less than 3 years.

[Authority for term: OAC rule 3745-21-09(B)(4)(b)(i) & (iii), OAC rule 3745-21-09(B)(4)(d) and OAC rule 3745-77-07(C)(1)]

(4) Whenever the monitored average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed deviates from the range or limit 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.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/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:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature of the exhaust gases immediately before the catalyst andthe average temperature difference across the catalyst bed immediately after the corrective action was implemented; and

k. 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.

The temperature ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range(s) based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s)of the controlled pollutant(s). In addition, approved revisions to the temperature range(s) 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.

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

(5) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 04-278, issued on August 21, 1985: d)(1) thru d)(4). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

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

(6) The permittee shall comply with the applicable monitoring and record keeping for a Group 1 storage vessel required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(7) The permittee shall comply with the applicable monitoring and record keeping for a Group 1 storage vessel required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.119(e)	closed vent system and control device requirements
63.120(d)	compliance demonstration inspections and temperature monitoring
63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel
63.123(f)	recordkeeping for parameter monitoring and planned routine maintenance
63.152(f)	general record keeping requirements

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the maximum true vapor pressure of any organic liquid stored exceeded that of a formaldehyde/methanol mixture.

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

(2) The permittee shall submit quarterly summaries of the following records:

a. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

c. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and

d. a log of the operating time for the capture system, catalytic incinerator, monitoring equipment, and the emissions unit(s).

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-21-09(B)(4)(c)]

(3) The permittee shall submit quarterly deviation (excursion) reports which identify the following information concerning the operations of the catalytic incinerator:

a. each period of time (start time and date, and end time and date)when the average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed was outside of the acceptable ranges;

b. emissions unit(s) was/were in operation and the process emissions were not vented to the catalytic incinerator;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a”or “b” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature of the exhaust gases immediately before the catalyst bed or the average temperature difference across the catalyst bed into compliance with the acceptable range(s), was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s).

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

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(6) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-278, issued on August 21, 1985: e)(1) thru e)(5). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

(7) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general periodic reporting requirements

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

(8) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.122(a) through (c) and (g)	general periodic reporting requirements
63.152(a)	descriptions of the required periodic reports
63.152(c)	periodic reporting
63.152(d)	notifications of inspections

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

f) Testing Requirements

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

a. Emission Limitation:

0.08 ton of formaldehyde and methanol emissions per year

Applicable Compliance Method:

The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a liquid with a maximum 5.95 psia vapor pressure at 220,000 gallons per year throughput.

If required, VOC emissions shall be calculated as using USEPA 's "Tanks Program 4.0" or subsequent version, and the VOC control efficiency determined during the most recent stack test which demonstrated compliance with the emissions limitation. AP-42, Section 7.1 (9/97) may be used in lieu of "Tanks Program 4.0."

b. Emission Limitation:

97%, or more, of the carbon in the organic material introduced to the incinerator shall be oxidized to carbon dioxide.

Applicable Compliance Method:

VOC control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10(C)(3), or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

c. Emission Limitation:

reduce the total organic hazardous air pollutants by 95 weight percent or greater.

Applicable Compliance Method:

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c), or an alternative test protocol approved by the Ohio EPA.

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 04-278, issued on August 21, 1985: f)(1). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

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

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

a. The emissions testing shall be conducted within six months prior to the expiration of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the control efficiency limitation (or discharge concentration) and the allowable mass emission rates for TOC or organic hazardous air pollutants.

c. The concentration and control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c).

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

e. Using catalytic incinerator temperature chart recorder data obtained during emission testing, the permittee shall determine the 3-hour average temperature immediately upstream of the catalyst bed, the average temperature differential across the catalyst bed, and include the 3-hour average temperature values in the written test report. A copy of the temperature chart recorder data during emission testing shall also be included in the written test report.

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

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

h. 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.

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

g) Miscellaneous Requirements

(1) None.

15. T106, Blend tank

Operations, Property and/or Equipment Description:

Fixed roof storage tank (#202-103-1.1) for formaldehyde-methanol mixture controlled by a closed vent system with a catalytic incinerator; Group 1 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) (PTI 04-278, as issued 8/21/1985)	The combined emissions of formaldehyde and methanol from this emissions unit shall not exceed 0.14 ton per year
		See b)(2)a. thru b)(2)e.
b.	40 CFR Part 60, Subpart Kb (40 CFR 60.110b-117b) [In accordance with 40 CFR 60.110b(a) this emissions unit is a storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984]	See b)(2)f. and b)(2)g.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)h.
d.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subpart G.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	
e.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is an existing storage vessel, and subject to 63.149 within a source subject to 40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	See b)(2)i.

(2) Additional Terms and Conditions

a. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a formaldehyde-methanol mixture.

b. The permittee shall maintain and operate a submerged fill pipe for this emissions unit.

c. The permittee shall maintain and operate a closed vent system and control device to collect and control the formaldehyde and methanol emissions from this emissions unit.

d. 97%, or more, of the carbon in the organic material introduced to the incinerator shall be oxidized to carbon dioxide.

e. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Kb.

f. In accordance with the provisions of 40 CFR 63.110(b)(1), the permittee shall demonstrate compliance with the applicable requirements of 40 CFR Part 60, Subpart Kb by compliance with the provisions of 40 CFR Part 63, Subpart G.

g. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

h. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F and G.

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F and G.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

i. Sources subject to 40 CFR Part 63, Subpart G include storage tanks which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110.

i. The permittee shall maintain and operate a closed vent system and control device to collect and control process emissions from affected sources in accordance with 40 CFR 63.119(e).

ii. The control device shall reduce the total organic hazardous air pollutants by 95 weight percent or greater.

c) Operational Restrictions

(1) In order to maintain compliance with the applicable emission limitation(s) of OAC rule 3745-31-05, the permittee shall maintain the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, at not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature during the most recent emission test that demonstrated the emission unit was in compliance. The average temperature across the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

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

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information on a monthly basis:

a. the types of organic liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

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

(2) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable temperature of the exhaust gases immediately before the catalyst bed, during any period of time when the emissions units controlled by the catalytic incinerator are in operation, shall not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance. The acceptable temperature difference across the catalyst bed (when the emissions unit is in operation), shall not be less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions units were in compliance.

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

(3) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record either the instantaneous data value at least once every 15 minutes or records 15-minute or more frequent block average values of the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions units are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit or Celsius. The device shall have an accuracy of the greater of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 Celsius degrees. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit is in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time, when the emissions units controlled by the catalytic incinerator were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions units were in compliance; and

c. a log (date and total time) of the downtime or bypass of the capture (collection) system and catalytic incinerator control, and/or downtime of the monitoring equipment, when the associated emissions unit was in operation.

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed.

[Authority for term: OAC rule 3745-21-09(B)(4)(b)(i) & (iii), OAC rule 3745-21-09(B)(4)(d) and OAC rule 3745-77-07(C)(1)]

(4) Whenever the monitored average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed deviates from the range or limit 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.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/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:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature of the exhaust gases immediately before the catalyst andthe average temperature difference across the catalyst bed immediately after the corrective action was implemented; and

k. 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.

The temperature ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range(s) based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s)of the controlled pollutant(s). In addition, approved revisions to the temperature range(s) 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.

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

(5) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 04-278, issued on August 21, 1985: d)(1) thru d)(4). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

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

(6) The permittee shall comply with the applicable monitoring and record keeping for a Group 1 storage vessel required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(7) The permittee shall comply with the applicable monitoring and record keeping for a Group 1 storage vessel required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.119(e)	closed vent system and control device requirements
63.120(d)	compliance demonstration inspections and temperature monitoring
63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel
63.123(f)	recordkeeping for parameter monitoring and planned routine maintenance
63.152(f)	general record keeping requirements

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the maximum true vapor pressure of any organic liquid stored exceeded that of a formaldehyde-methanol mixture.

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

(2) The permittee shall submit quarterly summaries of the following records:

a. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

c. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and

d. a log of the operating time for the capture system, catalytic incinerator, monitoring equipment, and the emissions unit(s).

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and OAC rule 3745-21-09(B)(4)(c)]

(3) The permittee shall submit quarterly deviation (excursion) reports which identify the following information concerning the operations of the catalytic incinerator:

a. each period of time (start time and date, and end time and date)when the average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed was outside of the acceptable ranges;

b. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the catalytic incinerator;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a”or “b” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature of the exhaust gases immediately before the catalyst bed or the average temperature difference across the catalyst bed into compliance with the acceptable range(s), was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s).

[Authority for term: OAC rule 3745-15-03(B)(1)(a), OAC rule 3745-15-03(C) and OAC rule 3745-77-07(C)(1)]

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(6) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-278, issued on August 21, 1985: e)(1) thru e)(4). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

(7) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general periodic reporting requirements

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

(8) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.122(a) through (c) and (g)	required periodic reports
63.152(a)	descriptions of the required periodic reports
63.152(c)	periodic reporting
63.152(d)	notifications of inspections

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

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 ton of the combined emissions of formaldehyde and methanol from this emissions unit per year

Applicable Compliance Method:

The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a liquid with a maximum 5.95 psia vapor pressure at 100,000 gallons per year throughput.

If required, VOC emissions shall be calculated as using USEPA 's "Tanks Program 4.0" or subsequent version, and the VOC control efficiency determined during the most recent stack test which demonstrated compliance with the emissions limitation.. AP-42, Section 7.1 (9/97) may be used in lieu of "Tanks Program 4.0."

b. Emission Limitation:

97%, or more, of the carbon in the organic material introduced to the incinerator shall be oxidized to carbon dioxide.

Applicable Compliance Method:

VOC control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10(C)(3), or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

c. Emission Limitation:

reduce the total organic hazardous air pollutants by 95 weight percent or greater.

Applicable Compliance Method:

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c), or an alternative test protocol approved by the Ohio EPA.

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install

04-278, issued on August 21, 1985: f)(1). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

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

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

a. The emissions testing shall be conducted within six months prior to the expiration of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the control efficiency limitation (or discharge concentration) and the allowable mass emission rates for TOC or organic hazardous air pollutants.

c. The concentration and control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c).

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

e. Using catalytic incinerator temperature chart recorder data obtained during emission testing, the permittee shall determine the 3-hour average temperature immediately upstream of the catalyst bed, the average temperature differential across the catalyst bed, and include the 3-hour average temperature values in the written test report. A copy of the temperature chart recorder data during emission testing shall also be included in the written test report.

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

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

h. 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.

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

g) Miscellaneous Requirements

(1) None.

16. T108, Methanol tank V-100

Operations, Property and/or Equipment Description:

internal floating roof storage tank for methanol, no controls

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01442 issued 9/12/06)	Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 0.68 ton per year. See b)(2)a., b)(2)b and b)(2)c.
b.	40 CFR Part 60, Subpart Kb (40 CFR 60.110b-117b) [In accordance with 40 CFR 60.110b(a) this emissions unit is a storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984]	See b)(2)d. and b)(2)e.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)f.
d.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs)	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subpart G.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	
e.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is an existing storage vessel, and subject to 63.149 within a source subject to 40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	See b)(2)g. and b)(2)h.

(2) Additional Terms and Conditions

a. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing methanol. Therefore, it is not necessary to develop additional monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

b. The permittee shall maintain and operate a submerged fill pipe for this emissions unit.

c. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60 Subpart Kb and 40 CFR Part 63 Subparts A and F.

d. In accordance with the provisions of 40 CFR 63.110(b)(1), the permittee shall demonstrate compliance with the applicable requirements of 40 CFR Part 60, Subpart Kb by compliance with the provisions of 40 CFR Part 63, Subpart G.

e. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

f. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F and G.

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F and G.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

g. Sources subject to 40 CFR Part 63, Subpart G include storage vessels which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110.

h. The permittee shall reduce hazardous air pollutants emissions to the atmosphere by operating and maintaining a fixed roof and internal floating roof, as provided in 40 CFR 63.119(b).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information on a monthly basis:

a. the types of organic liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 04-01442]

(2) The permittee shall comply with the applicable monitoring and record keeping for a Group 1 storage vessel required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(3) The permittee shall comply with the applicable monitoring and record keeping for a Group 1 storage vessel required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.120(a)	compliance demonstration inspections and monitoring
63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel
63.123(c)	recordkeeping for monitoring and planned routine maintenance
63.123(g)	extension for emptying

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the maximum true vapor pressure of any organic liquid stored exceeded that of methanol.

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

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(4) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirement is as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-01447, issued on September 12, 2006: e)(1) through e)(3). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

(5) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general periodic reporting requirements

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

(6) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.122(a)	general required periodic reports
63.122(d)	IFR required periodic reports

63.122(h)	refilling of a storage vessel
63.152(a)	descriptions of the required periodic reports
63.152(c)	periodic reporting
63.152(d)	notifications of inspections

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

f) Testing Requirements

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

a. Emission Limitation:

0.68 ton of VOC per year

Applicable Compliance Method:

The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a liquid with a maximum 3.87 psia vapor pressure at 183 million gallons per year throughput.

If required, VOC emissions shall be calculated as using USEPA 's "Tanks Program 4.0" or subsequent version, and the VOC control efficiency determined during the most recent stack test which demonstrated compliance with the emissions limitation. AP-42, Section 7.1 (9/97) may be used in lieu of "Tanks Program 4.0."

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 04-01442, issued on September 12, 2006: f)(1). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

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

g) Miscellaneous Requirements

(1) None.

17. T111, Formaldehyde tank V-530

Operations, Property and/or Equipment Description:

Fixed roof storage tank (V-530) for formaldehyde controlled by a closed vent system with an electrically heated catalytic incinerator; Group 1 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) (PTI 04-1043 issued October 9, 1996)	Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 0.1 ton per year.
		See b)(2)a. through b)(2)c.
b.	40 CFR Part 60, Subpart Kb (40 CFR 60.110b-117b) [In accordance with 40 CFR 60.110b(a) this emissions unit is a storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984]	See b)(2)d. and b(2)e.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)f.
d.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subpart G.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	
e.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is an existing storage vessel, and subject to 63.149 within a source subject to 40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	see b)(2)g.

(2) Additional Terms and Conditions

a. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing formaldehyde.

b. The emissions from this emissions unit shall be vented to a catalytic incinerator with a minimum of 98% destruction efficiency.

c. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60 Subpart Kb, and 40 CFR Part 63 Subparts A, F and G.

d. In accordance with the provisions of 40 CFR 63.110(b)(1), the permittee shall demonstrate compliance with the applicable requirements of 40 CFR Part 60, Subpart Kb by compliance with the provisions of 40 CFR Part 63, Subpart G.

e. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

f. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F and G.

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F and G.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

g. Sources subject to 40 CFR Part 63, Subpart G include storage vessels which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110.

i. The permittee shall maintain and operate a closed vent system and control device to collect and control process emissions from affected sources in accordance with 40 CFR 63.119(e).

ii. The control device shall reduce the total organic hazardous air pollutants by 95 weight percent or greater.

c) Operational Restrictions

(1) In order to maintain compliance with the applicable emission limitation(s) of OAC rule 3745-31-05, the permittee shall maintain the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, at not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature during the most recent emission test that demonstrated the emission unit was in compliance. The average temperature across the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

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

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information on a monthly basis:

a. the types of organic liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid

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

(2) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable temperature of the exhaust gases immediately before the catalyst bed, during any period of time when the emissions units controlled by the catalytic incinerator are in operation, shall not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance. The acceptable temperature difference across the catalyst bed (when the emissions unit is in operation), shall not be less than 80 percent of the average temperature difference measured during

the most recent performance test that demonstrated the emissions units were in compliance.

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

(3) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record either the instantaneous data value at least once every 15 minutes or records 15-minute or more frequent block average values of the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions units are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit or Celsius. The device shall have an accuracy of the greater of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 Celsius degrees. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit is in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

c. a log or record of the operating time for the capture (collection) system, catalytic incinerator, monitoring equipment, and the associated emissions unit(s).

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed. These records shall be maintained at the facility for a period of no less than 3 years.

[Authority for term: OAC rule 3745-21-09(B)(4)(b)(i) & (iii), OAC rule 3745-21-09(B)(4)(d) and OAC rule 3745-77-07(C)(1)]

(4) Whenever the monitored average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed deviates from the range or limit 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.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/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:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature of the exhaust gases immediately before the catalyst andthe average temperature difference across the catalyst bed immediately after the corrective action was implemented; and

k. 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.

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

(5) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and recordkeeping requirements are as stringent as or more stringent than the monitoring and recordkeeping requirements contained in Permit to Install 04-1043, issued on October 9, 1996: d)(1) through d)(4). The monitoring and recordkeeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and recordkeeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

(6) The permittee shall comply with the applicable monitoring and record keeping for a Group 1 storage vessel required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(7) The permittee shall comply with the applicable monitoring and record keeping for a Group 1 storage vessel required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.119(e)	closed vent system and control device requirements
63.120(d)	compliance demonstration inspections and temperature monitoring
63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel
63.123(f)	recordkeeping for parameter monitoring and planned routine maintenance
63.152(f)	general record keeping requirements

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the maximum true vapor pressure of any organic liquid stored exceeded that of formaldehyde.

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

(2) The permittee shall submit quarterly summaries of the following records:

a. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature established during the most recent performance test that demonstrated the emissions unit was in compliance;

b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit was in compliance; and

c. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit was in operation; and

d. a log of the operating time for the capture system, catalytic incinerator, monitoring equipment, and the emissions unit(s).

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

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

(3) The permittee shall submit quarterly deviation (excursion) reports which identify the following information concerning the operations of the catalytic incinerator:

a. each period of time (start time and date, and end time and date)when the average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed was outside of the acceptable ranges;

b. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the catalytic incinerator;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a”or “b” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature of the exhaust gases immediately before the catalyst bed or the average temperature difference across the catalyst bed into compliance with the acceptable range(s), was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s).

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and (C)(1), and OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(B)(1)(a) and OAC rule 3745-15-03(C); and OAC rule 3745-77-07(A)(3)(c)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(6) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirement is as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-1043, issued on October 9, 1996: d)(1) through d)(5). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

(7) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general periodic reporting requirements

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

(8) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.122(a) through (c) and (g)	required periodic reports
63.152(a)	descriptions of the required periodic reports
63.152(c)	periodic reporting
63.152(d)	notifications of inspections

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

f) Testing Requirements

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

a. Emission Limitation:

0.1 ton of VOC per year

Applicable Compliance Method:

The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a liquid with a maximum 3.3 psia vapor pressure at 51 million gallons per year throughput and a destruction efficiency of 98%.

If required, VOC emissions shall be calculated as using USEPA 's "Tanks Program 4.0" or subsequent version, and the OC control efficiency determined during the most recent stack test which demonstrated compliance with the

emissions limitation. AP-42, Section 7.1 (9/97) may be used in lieu of "Tanks Program 4.0."

b. Emission Limitation:

The control device shall reduce the total organic hazardous air pollutants by 95 weight percent or greater.

Applicable Compliance Method:

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c), or an alternative test protocol approved by the Ohio EPA.

c. Emission Limitation:

minimum of 98% destruction efficiency.

Applicable Compliance Method:

VOC control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10(C)(3), or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 04-1043, issued on October 9, 1996: f)(1). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

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

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

a. The emissions testing shall be conducted within six months prior to the expiration of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the control efficiency limitation (or discharge concentration) and the allowable mass emission rates for TOC or organic hazardous air pollutants.

c. The concentration and control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c).

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

e. Using catalytic incinerator temperature chart recorder data obtained during emission testing, the permittee shall determine the 3-hour average temperature immediately upstream of the catalyst bed, the average temperature differential across the catalyst bed, and include the 3-hour average temperature values in the written test report. A copy of the temperature chart recorder data during emission testing shall also be included in the written test report.

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

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

h. 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.

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

g) Miscellaneous Requirements

(1) None.

18. Emissions Unit Group -<75 m3 fixed roof storage tanks: T020,T021,

EU ID	Operations, Property and/or Equipment Description
T020	Fixed roof trimethylolpropane storage tank (V-900), controlled by a pressure relief valve with a minimum setting of 2" water column and a liquid seal filled with glycerine
T021	Fixed roof trimethylolpropane storage tank (V910), controlled by a pressure relief valve with a minimum setting of 2" water column and a liquid seal filled with glycerine

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-949 issued 7/26/1995)	Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 0.24 ton per year.
		See b)(2)a. thru b)(2)c.

(2) Additional Terms and Conditions

a. The permittee shall maintain and operate a pressure relief valve with a minimum setting of 2" water column.

b. The permittee shall maintain and operate a liquid seal filled with glycerine.

c. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing heated trimethylolpropane liquid. Therefore, it is not necessary to develop additional monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information on a monthly basis:

a. the types of organic liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirement is as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 04-949 issued July 26, 1995: d)(1). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the maximum true vapor pressure of any organic liquid stored exceeded that of heated trimethylolpropane liquid.

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

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(4) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-949 issued July 26, 1995: e)(1) and e)(2). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

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:

0.24 ton of VOC per year

Applicable Compliance Method:

The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a liquid with a maximum 0.002 psia vapor pressure at 26.2 million gallons per year throughput.

If required, VOC emissions shall be calculated using USEPA 's "Tanks Program 4.0" or subsequent version. AP-42, Section 7.1 (9/97) may be used in lieu of "Tanks Program 4.0."

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 04-949 issued July 26, 1995: f)(1). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

g) Miscellaneous Requirements

(1) None.

19. Emissions Unit Group -<75 m3 fixed roof tank w/ incin: T026,T027,

EU ID	Operations, Property and/or Equipment Description
T026	Fixed roof storage tank (V-55) for formaldehyde-methanol mixture controlled by a closed vent system with a catalytic incinerator; Group 2 tank
T027	Fixed roof storage tank (V-56) for formaldehyde-methanol mixture controlled by a closed vent system with a catalytic incinerator; Group 2 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.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)a.
b.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subpart G.
c.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is an existing storage vessel, and subject to 63.149 within a source subject to 40 CFR Part 63 Subpart F which	The permittee shall comply with the Group 2 recordkeeping requirement in 40 CFR 63.123(a) and is not required to comply with any other provisions in 40 CFR 63.119 through 63.123.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	

(2) Additional Terms and Conditions

a. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F and G.

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F and G.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

c) Operational Restrictions

None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the applicable monitoring and record keeping for a Group 2 storage vessel required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(2) The permittee shall comply with the applicable monitoring and record keeping for a Group 2 storage vessel required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel

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

e) Reporting Requirements

None.

f) Testing Requirements

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

a. None.

g) Miscellaneous Requirements

(1) None.

20. Emissions Unit Group ->75 m3 fixed roof tanks w/ incin: T028,T029,

EU ID	Operations, Property and/or Equipment Description
T028	Fixed roof storage tank (V-57) for formaldehyde-methanol mixture controlled by a closed vent system with a catalytic incinerator; Group 1 tank
T029	Fixed roof storage tank (V-58) for formaldehyde-methanol mixture controlled by a closed vent system with a catalytic incinerator; Group 1 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.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)a.
b.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subpart G.
c.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is an existing storage vessel, and subject to 63.149 within a source subject to 40 CFR Part 63 Subpart F which	see b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	

(2) Additional Terms and Conditions

a. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F and G.

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F and G.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

b. Sources subject to 40 CFR Part 63, Subpart G include storage tanks which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110.

i. The permittee shall maintain and operate a closed vent system and control device to collect and control process emissions from affected sources in accordance with 40 CFR 63.119(e).

ii. The control device shall reduce the total organic hazardous air pollutants by 95%, by weight, or greater.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the applicable monitoring and record keeping for a Group 1 storage vessel required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(2) The permittee shall comply with the applicable monitoring and record keeping for a Group 1 storage vessel required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.119(e)	closed vent system and control device requirements
63.120(d)	compliance demonstration inspections and temperature monitoring
63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel
63.123(f)	recordkeeping for parameter monitoring and planned routine maintenance
63.119(e)	closed vent system and control device requirements

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

e) Reporting Requirements

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general periodic reporting requirements

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

(4) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry

for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.122(a) through (c) and (g)	general periodic reporting requirements
63.152(a)	descriptions of the required periodic reports
63.152(c)	periodic reporting
63.152(d)	notifications of inspections

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

f) Testing Requirements

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

a. Emission Limitation:

reduce the total organic hazardous air pollutants by 95 weight percent or greater.

Applicable Compliance Method:

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c), or an alternative test protocol approved by the Ohio EPA.

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

g) Miscellaneous Requirements

(1) None.

21. Emissions Unit Group -fixed roof storage tanks with incinerator: T109,T110.

EU ID	Operations, Property and/or Equipment Description
T109	fixed roof storage tank for formaldehyde controlled by a closed vent system with an electrically heated catalytic incincerator
T110	fixed roof storage tank for formaldehyde controlled by a closed vent system with an electrically heated catalytic 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(A)(3) (PTI 04-1397 issued May 31, 2005)	Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 0.007 ton per year. See b)(2)a. through b)(2)c.
b.	40 CFR Part 60, Subpart Kb (40 CFR 60.110b-117b) [In accordance with 40 CFR 60.110b(a) this emissions unit is a storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984]	See b)(2)d. and b)(2)e.
c.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	See b)(2)f.
d.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subpart G.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	
e.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is an existing storage vessel, and subject to 63.149 within a source subject to 40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	See b)(2)g.

(2) Additional Terms and Conditions

a. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing formaldehyde.

b. The emissions from this emissions unit shall be vented to a catalytic incinerator with a minimum of 98% destruction efficiency.

c. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60 Subpart Kb, and 40 CFR Part 63 Subparts A, F and G.

d. In accordance with the provisions of 40 CFR 63.110(b), the permittee shall demonstrate compliance with the applicable requirements of 40 CFR Part 60, Subpart Kb by compliance with the provisions of 40 CFR Part 63, Subpart G.

e. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

f. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F and G.

i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are

applicable to emissions units affected by 40 CFR Part 63 Subparts F and G.

ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.

g. Sources subject to 40 CFR Part 63, Subpart G include storage vessels which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110.

i. The permittee shall maintain and operate a closed vent system and control device to collect and control process emissions from affected sources in accordance with 40 CFR 63.119(e).

ii. The control device shall reduce the total organic hazardous air pollutants by 95 weight percent or greater.

c) Operational Restrictions

(1) In order to maintain compliance with the applicable emission limitation(s) of OAC rule 3745-31-05, the permittee shall maintain the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, at not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature during the most recent emission test that demonstrated the emission unit was in compliance. The average temperature across the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

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

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information on a monthly basis:

a. the types of organic liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

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

(2) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable temperature of the exhaust gases immediately before the catalyst bed, during any period of time when the emissions units controlled by the catalytic incinerator are in operation, shall not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance. The acceptable

temperature difference across the catalyst bed (when the emissions unit is in operation), shall not be less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions units were in compliance.

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

(3) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record(s) the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

c. a log or record of the operating time for the capture (collection) system, catalytic incinerator, monitoring equipment, and the associated emissions unit(s).

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed. These records shall be maintained at the facility for a period of no less than 3 years

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

(4) Whenever the monitored average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed deviates from the range or limit 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.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/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:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature of the exhaust gases immediately before the catalyst andthe average temperature difference across the catalyst bed immediately after the corrective action was implemented; and

k. 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.

The temperature ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range(s) based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s)of the controlled pollutant(s). In addition, approved revisions to the temperature range(s) 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.

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

(5) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and recordkeeping requirements are as stringent as or more stringent than the monitoring and recordkeeping requirements contained in Permit to Install 04-1397 issued May 31, 2005: d)(1) through d)(4). The monitoring and recordkeeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and recordkeeping requirements of this operating permit, so that compliance with these

requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

(6) The permittee shall comply with the applicable monitoring and record keeping for a Group 1 storage vessel required under 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general record keeping requirements

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

(7) The permittee shall comply with the applicable monitoring and record keeping for a Group 1 storage vessel required under 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.119(e)	closed vent system and control device requirements
63.120(d)	compliance demonstration inspections and temperature monitoring
63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel
63.123(f)	recordkeeping for parameter monitoring and planned routine maintenance
63.152(f)	general record keeping requirements

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the maximum true vapor pressure of any organic liquid stored exceeded that of formaldehyde.

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

(2) The permittee shall submit quarterly summaries of the following records:

a. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

c. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and

d. a log of the operating time for the capture system, catalytic incinerator, monitoring equipment, and the emissions unit(s).

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

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

(3) The permittee shall submit quarterly deviation (excursion) reports which identify the following information concerning the operations of the catalytic incinerator:

a. each period of time (start time and date, and end time and date)when the average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed was outside of the acceptable ranges;

b. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the catalytic incinerator;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a”or “b” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature of the exhaust gases immediately before the catalyst bed or the average temperature difference across the catalyst bed into compliance with the acceptable range(s), was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s).

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and (C)(1), and OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-77-07(A)(3)(c) and [OAC rule 3745-15-03(B) and (C)]

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

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(6) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirement is as stringent as or more stringent than the reporting requirements contained in Permit to Install 04-1397 issued on May 31, 2005: e)(1) through e)(5). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

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

(7) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

63.103(c)	general periodic reporting requirements

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

(8) The permittee shall submit semiannual reports and other such notifications and reports via the Air Services component of the Ohio EPA's eBusiness Center as are required pursuant to 40 CFR Part 63, Subpart G, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, including the following sections:

63.122(a) through (c) and (g)	required periodic reports
63.152(a)	descriptions of the required periodic reports
63.152(c)	periodic reporting
63.152(d)	notifications of inspections

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

f) Testing Requirements

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

a. Emission Limitation:

0.007 ton of VOC per year

Applicable Compliance Method:

The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a liquid with a maximum 3.3 psia vapor pressure at 51 million gallons per year throughput and a destruction efficiency of 98%.

If required, OC emissions shall be calculated as using USEPA 's "Tanks Program 4.0" or subsequent version, and the OC control efficiency determined during the most recent stack test which demonstrated compliance with the emissions limitation.. AP-42, Section 7.1 (9/97) may be used in lieu of "Tanks Program 4.0."

b. Emission Limitation:

The control device shall reduce the total organic hazardous air pollutants by 95 weight percent or greater.

Applicable Compliance Method:

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c), or an alternative test protocol approved by the Ohio EPA.

c. Emission Limitation:

minimum of 98% destruction efficiency.

Applicable Compliance Method:

VOC control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10(C)(3), or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 04-1397 issued on May 31, 2005: f)(1). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating

permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

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

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

a. The emissions testing shall be conducted within six months prior to the expiration of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the control efficiency limitation (or discharge concentration) and the allowable mass emission rates for TOC or organic hazardous air pollutants.

c. The concentration and control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c).

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

e. Using catalytic incinerator temperature chart recorder data obtained during emission testing, the permittee shall determine the 3-hour average temperature immediately upstream of the catalyst bed, the average temperature differential across the catalyst bed, and include the 3-hour average temperature values in the written test report. A copy of the temperature chart recorder data during emission testing shall also be included in the written test report.

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

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

h. 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.

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

g) Miscellaneous Requirements

(1) None.