Ohio Environmental Protection Agency
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

2/8/2011

Certified Mail

Facility ID: 0448010133
Permit Number: P0103993
County: Lucas

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

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 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 "Issued Air Pollution Control Permits" link. 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 in writing 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 W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

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

Lucas County

PUBLIC NOTICE
Issuance of Draft Air Pollution Title V Permit
Perstorp Polyols, Inc.

Issue Date:	2/8/2011
Permit Number:	P0103993
Permit Type:	Renewal
Permit Description:	Polyol and formaldehyde manufacturing facility
Facility ID:	0448010133
Facility Location:	Perstorp Polyols, Inc. 600 Matzinger Road, Toledo, OH 43612
Facility Description:	All Other Basic Organic Chemical Manufacturing

Scott J. Nally, Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio, has issued a draft action of an air pollution control Title V operating permit for the facility at the location identified above on the date indicated. Comments concerning this draft action, or a request for a public meeting, must be sent in writing no later than thirty (30) days from the date this notice is published. All comments, questions, requests for permit applications or other pertinent documentation, and correspondence concerning this action must be directed to Danny Pittman at Toledo Department of Environmental Services, 348 South Erie Street, Toledo, OH 43604 or (419)936-3015. The permit, which includes a detailed description of the operations, and associated statement of basis for the permit requirements, can be downloaded from the Web page: www.epa.ohio.gov/dapc

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 #:	P0103993, 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)

A. Standard Terms and Conditions

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

3745-77-08(E)	

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 VV requirements - NSPS VOC requirements for equipment leaks
B.3.	N	Y	40 CFR Part 60, Subpart A requirements - NSPS general requirements
B.4.	N	Y	40 CFR 63, subpart F, requirements - MACT requirements for process vents, storage vessels, transfer operations and wastewater
B.5.	N	Y	40 CFR Part 63, Subpart G requirements - MACT requirements for process vents, storage vessels, transfer operations and wastewater.
B.6.	N	Y	40 CFR Part 63, Subpart H requirements - MACT HAP requirements for equipment leaks
B.7.	N	Y	40 CFR Part 63, Subpart DDDDD requirements - MACT HAP requirements for boilers
B.8.	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.9.	N	Y	Policy statement for an out-of-service emissions unit
B.10.	N	Y	Insignificant (deminimis) sources with MACT applicability
B.11.	77	N	SIP. Insignificant emissions units are listed.
B.12	77	N	SIP. Insignificant emissions units which qualify as deminimis are listed.

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
St = streamlining term used to replace a PTI monitoring, record keeping, or reporting requirement with an equivalent or more stringent requirement
ENF = did noncompliance issues drive the monitoring requirements?
R = record keeping requirements
Rp = reporting requirements
ET = emission testing requirements (not including compliance method terms)
Misc = miscellaneous requirements

EU(s)	Limitation	Basis		ND	OR	M	St	ENF	R	St	Rp	St	ET	Misc	Comments
		SIP (3745-)	Other												
B001 - 85 mmBtu natural gas/Comparable Syngas Fuel (CSF= methanol)/#2 fuel oil fired boiler with no controls	20 percent opacity, as a 6-minute average.	17-07 (A)(1)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - clean fuel (mix of 95% natural gas and 5% CSF or #2 fuel oil and CSF). M,R,Rp&ET - OEPA clean fuel requirements
	0.020 pound/mmBtu PE	17-10 (B)(1)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	Basis - installed prior to 1974 (OAC rules 3745-31 not applicable), methanol added with restrictions as authorized in OAC rule 3745-51-38. OR - clean fuel. M,R&Rp - clean fuel requirements. ET - Stack testing performed September 3, 2003 gave 0.002 lb/mmBtu at 54 mmBtu/hr while firing methanol with natural gas. Annual emissions were estimated at 0.3 tpy for 2008. In compliance with

														engineering guide #16, no additional stack testing will be required at this time.
None	18-06 (A)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - exempt from OAC rule 3745-18-06(D) during any calendar day in which natural gas is the only fuel burned. Stack testing performed September 3, 2003 gave "none detected" for SO2 while firing methanol with natural gas. Engineering calculations estimate emissions as 0.016 lb/mmBtu at 54 mmBtu/hr and a methanol firing rate of 0.8 gpm (2.8 mmBtu/hr) . Annual emissions were estimated at 0.11 tpy for 2008. In compliance with engineering guide #16, no additional stack testing will be required at this time.
any oil-fired steam generating unit shall not cause exceed 1.6 pounds of SO2/ mmBtu actual heat input	18-06 (D)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	Basis - installed prior to 1974, SIP limitations are applicable. The company's permit applications indicate that #2 fuel is fired. OR - clean fuel requires "on spec" (0.5% S by weight) #2 distillate fuel oil. M,R&Rp - oil supplier's certification or site testing required. Certification of "on spec" #2 is adequate demonstration. ET - testing done by monitoring of the fuel oil sulfur content. Annual emissions were estimated at 0.3 tpy for 2008. In compliance with engineering guide #16, no

															additional stack testing will be required at this time.
	None	21-08	N	Y	N	N	N	N	N	N	N	N	N	N	ND - installed prior to 1974 (OAC rule 3745-21-08 not applicable),
	None	51-38	N	Y	N	N	N	N	N	N	N	N	N	N	ND - materials that meet the requirements of this section are not hazardous materials, e.g. CSF.
	None	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Basis - The historic SIP emissions limitation authorized by 40 CFR 52.1881(b)(29)(ii) of 1.00 lb SO2/mmBtu when fired with #2 fuel oil no longer applies as the SIP has been modified to remove this requirement.
	Case-by case MACT	N	Y	N	N	N	N	N	N	N	N	N	N	N	Basis - 40 CFR Part 63 Subparts A & DDDDD. If notified by the Ohio EPA or U.S. EPA, the permittee must submit an application for a revision to this Title V permit that meets the requirements of 40 CFR 63.52(a)(2) pertaining to case-by-case MACT determinations.
B002	None	N	N	Y	N	N	N	N	N	N	N	N	N	N	ND - not installed
B101: natural gas fired boilers with no controls.	None	N	N	Y	N	N	N	N	N	N	N	N	N	N	ND - this permit has been withdrawn
P004 material handling	0.48 lb/hr & 2.1 tpy	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Basis - OAC rule 3745-31-05(A)(3) established by PTI 04-1123. VOC emissions

drying and sodium formate bagging controlled by a wet scrubber	PE, and 5%opacity.														from the drying oven are exempt from 3745-21-07(G) requirements as the feed stock is a moist solid (crystal). 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 the 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. 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 Engineering Guide 16, no retesting is required.
	None	17-07 (A)(1)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - not as stringent as BAT.
	None	17-11	N	Y	N	N	N	N	N	N	N	N	N	N	ND - the BAT of 0.48#/hr is more stringent than the Table

		(A)(2)													1 minimum process weight rate requirement of 0.551 #/hr & 96% overall control efficiency used to develop the BAT. is greater than the maximum 90% efficiency required by Figure II.
	None	21-07 (G)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - Exempt, feed stock is not in a liquid state.
P101: formaldehyde manufacturing process	None	N	N	Y	N	N	N	N	N	N	N	N	N	N	ND - this permit has been withdrawn
P102: batch reactor with vent condenser insignificant source	exemption	15-05 (D)	N	N	N	N	N	N	N	N	N	N	N	N	Basis- deminimis. Listed as insignificant in the permit application, installed in 1958 (prior to applicability of OAC rule 3734-31-05), this emissions unit has no applicable requirements for BAT. Since it utilizes organic liquids it is subject to OAC rule 3745-21-07(G)(2): 8 lb/hr and 40 tpy or 85% reduction of emissions. This emissions unit utilizes a condenser for control which may be an essential part of the process. The company submitted calculations demonstrating a controlled potential emissions rate of 5.4#VOC/day. LDAR, NSPS and MACT do not apply.
P801: TMP & sodium formate manufacturing process including reactors, evaporators,	reduce TOC/HAP 98% or to 20 ppmv TOC/HAP	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	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

coolers, crystallizers and distillation equipment controlled by a catalytic incinerator. including fugitive leaks.															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 - minimum temperature restrictions M,R,Rp- continuously monitor the throughput and incinerator performance to maintain stack test compliance level, or monitor temp per State library terms and conditions. St - updated terms in

															conformance with the OEPA permit terms and conditions library. 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 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.
	leak detection and repair program	N	Y	N	N	Y	N	N	Y	N	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 appropriate MACT section.
other applicable requirements	N	Y	N	Y	Y	N	N	Y	N	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 (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.100. OR,M.R,Rp - incorporated by table reference to the appropriate MACT section.
0.70 lb/hr & 3.07 tpy VOC, 0.11 lb/hr & 0.48 tpy	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Basis - OAC rule 3745-31-05(A)(3) established by PTI 04-949. OR - temperature and

formaldehyde (process) 2.5 tpy VOC (fugitive)														throughput restrictions. 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. St - Added terms and conditions consistent with the current language of the State's library of terms and conditions. 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 lb/hr and <<0.01 lb/hr for formaldehyde. Based on the guidance of Engineering Guide 16, no retesting is required, however a mass rate of emissions will be determined during stack testing performed within 6 months of expiration for VOC.
combined emissions from emissions units P801, T004 and T006 shall not exceed 3.07 tons of VOC per year.	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Basis - OAC rule 3745-31-05(A)(3) established by default in PTI 04-949. In the original permit for these sources, PTI 04-479 dated 8/24/88, 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 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 lb/hr limitation of P801. OR - temperature and throughput restrictions. M,R&Rp - continuously monitor the throughput and 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 - stack testing performed over a range of process conditions during the period of time from August 14th thru 20th of 2007 demonstrated a maximum discharge rate for VOC of <.04 lb/hr for a PTE of 0.18 tpy. Based on the guidance of Engineering Guide 16, no retesting is required.
leak detection and repair program	21-09 (DD)	N	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	OR,M,R,Rp - The permittee must comply with the VOC leak detection and repair program requirements of 21-

															09(DD) library terms and conditions. St - Added terms and conditions consistent with the current language of the State's library of terms and conditions.
	leak detection and repair program	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Basis - 40 CFR Part 60, Subpart VV. The permittee must comply with the VOC leak detection and repair program requirements of 40 CFR Part 60, Subpart VV. The permittee may comply 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 and specified in PTI 04-949. OR,M.R,Rp - incorporated by table reference to the appropriate MACT section.
	None	21-07 (G)(2), (G)(6) (a)	N	Y	N	N	N	N	N	N	N	N	N	N	Basis - stack emissions from a process utilizing organic liquids are subject to the applicable 21-07(G) requirements of 8#/hr, 40#/d or control by 90% efficient incineration. The requirements of OAC rule3745-31-05(A)(3) are more stringent
	None	N	Y	Y	N	N	N	N	N	N	N	N	N	N	ND - 40 CFR Part 60 Subpart III is not applicable - the process does not involve the combination of organic reactants with air or a

															combination of air and oxygen to produce one or more chemicals.
P803: pentaerythritol and sodium formate manufacturing process including fugitive leaks, and material handling controlled by wet scrubbers and in-process tanks vented to a catalytic incinerator	reduce TOC/HAP 98% or to 20 ppmv TOC/HAP	N	Y	N	Y	Y	N	N	Y	N	Y	N	Y	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 - minimum temperature restrictions or catalyst testing at the option of the permittee. M,R,Rp- appropriate tables cited. 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 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 19% for VOC, 0.03 ppm for formaldehyde and 0.27 ppm for HON. Retesting will be required within 6 months of expiration.
	leak detection and repair program	N	Y	N	Y	Y	N	N	Y	N	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	N	Y	N	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.
1.25 lb/hr & 5.5 tpy OC from the	N	Y	N	N	Y	Y	N	Y	Y	Y	Y	N	N	Basis - OAC rule 3745-31-05(A)(3) as established by PTI 04-1232.

incinerator stack, 4.5 lb/hr & 19.71 tpy PE from the scrubber stack(s), 14.15 tpy VOC (fugitive).														M,R,Rp - continuously monitor the scrubber liquid flow 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 - incinerator testing performed over a range of process conditions 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 19% for VOC, 0.03 ppm for formaldehyde and 0.27 ppm for HON. Scrubber stack testing performed on April 1, 2008 on the two scrubbers associated with this emissions unit (E-781 and E-1400) resulted in emissions rates of 0.24 and 0.05 lb PE/hr with 2.6 and 3.1 gpm of water to the scrubbers, respectively. Based on the guidance of Engineering Guide 16, no retesting for PE is required. Retesting will be required within 6 months of expiration for hourly mass rate of emisisons.
leak detection and repair program	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Basis - 40 CFR Part 60, Subpart VV. Where a leak is subject to both VV and Part 63 subpart H, the permittee must demonstrate compliance by the monitoring of H. 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 and specified in PTI 04-1232. OR,M.R,Rp - incorporated by table reference to the appropriate NSPS section.
20 percent opacity .	17-07 (A)(1)	N	N	N	Y	Y	N	Y	Y	Y	Y	N	N	M,R&Rp- monthly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks serving this emissions unit. St - Added terms and conditions consistent with the current language of the State's library of terms and conditions. *PTI requires both; could do VE or scrubber pressure drop and flow and VE could be dropped for the incinerator, but would require a PTI modification.*
None	17-11 (A)(2)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - 4.5 #/hr is less than the Table 1 requirement & 90% overall control efficiency is equivalent to the maximum 90% efficiency required by

															Figure II.
	None	21-07 (G)(2), (G)(6) (a)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - less stringent than those established pursuant to OAC rule 3745-31-05(A)(3).
	LDAR program	21-09 (DD)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - In accordance with PTI 04-1232 as modified 3/15/01, 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, record keeping and reporting requirements of 40 CFR Part 63, Subpart H for all VOC process equipment leaks
	None	N	Y	Y	N	N	N	N	N	N	N	N	N	N	ND - 40 CFR Part 60 Subpart III is not applicable - the process does not involve the combination of organic reactants with air or a combination of air and oxygen to produce one or more chemicals.
P812: Formaldehyde manufacturing with catalytic incinerator and fugitive leaks	reduce TOC/HAP 98% or to 20 ppmv TOC/HAP	N	Y	N	N	Y	N	N	Y	N	Y	N	Y	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 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. The permittee must 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. 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 63.126.. M - continuous monitoring of the incinerator performance to maintain stack test compliance level (228oF inlet

															and 460oF outlet test average per company). ET - stack testing performed February 22, 2000 indicated a destruction efficiency of 99.9% at a throughput rate of 86% of maximum. Retesting will be required within 6 months of permit expiration.
	leak detection and repair program	N	Y	N	N	Y	N	N	Y	N	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, or methanol), as provided in 40 CFR 63.160. 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.). OR,M.R,Rp - incorporated by table reference to the

														appropriate MACT section.
applicable requirements	N	Y	N	Y	Y	N	N	Y	N	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 (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.100. OR,M.R,Rp - incorporated by table reference to the appropriate MACT section.
3.13 lb/hr & 13.7 tpy CO, 9.0 lb/hr & 39.42 tpy VOC (process), 2.9 tpy VOC (fugitive). Reduce VOC 98% or to 20 ppmv	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Basis - OAC rule 3745-31-05(A)(3) as established by PTI 04-1397. OR - added after heat exchanger leakage contaminated the Ottawa River. For VOC minimum temperature restrictions or catalyst testing at the option of the permittee. M,R,Rp- appropriate terms and conditions consistent with the current language of the State's library of terms and conditions. St - Added terms and conditions consistent with the current language of the State's library of terms and conditions. ET - stack testing performed February 22, 2000 indicated:

														a CO emission rate of 0.44 lb/hr, a dimethyl ether emission rate of 0.28 lb/hr, a methanol emission rate of 0.2 lb/hr, a formaldehyde emission rate of 0.03 lb/hr, and a VOC emission rate of 0.23 lb/hr as CH4, at a throughput rate of 86% of maximum. Retesting will be required within 6 months of expiration.
None	21-09 (B)(4)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - comply with the catalytic incinerator monitoring, record keeping and reporting requirements of OAC rule 3745-21-09(B)(4) .
None.	21-09 (DD)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - 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, record keeping and reporting requirements of 40 CFR Part 63, Subpart H for all VOC process equipment leaks. The company states that all VOC leaks for this process are also HAPs.
None	21-09 (EE)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - comply with the VOC restrictions of OAC rule 3745-21-09(EE) by maintaining compliance with the operational restrictions, monitoring, record keeping

															and reporting requirements of 40 CFR Part 63, Subpart G for all air oxidation process vents. The company states that all VOC emissions from this process are also HAPs.
	leak detection and repair program	N	Y	Y	N	N	N	N	N	N	N	N	N	N	ND - 40 CFR Part 60, Subpart VV. The permittee must 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 and specified in PTI 04-1232. The company states that all VOC leaks for this process are also HAPs.
	None	N	Y	Y	N	N	N	N	N	N	N	N	N	N	ND - comply with the VOC restrictions of 40 CFR Part 60, Subpart III by maintaining compliance with the operational restrictions, monitoring, record keeping and reporting requirements of 40 CFR Part 63, Subpart G for all air oxidation process vents. The company states that all VOC emissions from this process are also HAPs.
T001: <75 m^3, >40 m^3 fixed roof tank with no control.	0.40 tpy VOC, submerged fill, record keeping requirements	N	Y	N	N	Y	N	N	Y	N	Y	Y	N	N	Basis - Established by the BAT determination of PTI 04-01417 issued 9/1/05 (superseded PTI 04-479). M&R - record on a monthly

															basis types of liquids to determine any increase in actual emissions, submerged fill confirmed by one time compliance inspection on start-up. Rp - quarterly reporting of potential VP (emissions) increase. St - Added terms and conditions consistent with the current language of the State's library of terms and conditions. ET - Tanks calculation.
	None	21-07 (D)(2)	N	N	Y	N	N	N	N	N	N	N	N	N	ND - not applicable. Formic acid is not a volatile photochemically reactive material.
	None	N	Y	Y	N	N	N	N	N	N	N	N	N	N	ND - 40 CFR Part 60, Subpart Kb requirements no longer apply to this size tank.
T002, Tank V-110 sodium hydroxide tank w/ no control insignificant source	None	N	Y	Y	N	N	N	N	N	N	N	N	N	N	Basis- listed as insignificant in the permit application, installed in 1989 , under PTI 04-479 dated 8/24/88, OAC rule 3734-31-05 applied although this emissions unit has no applicable requirements for BAT. Since this tank stores inorganic liquids it is exempt from OAC rule 3745-21-07.
T003 Tank V-120 N-Butyraldehyde, submerged fill and pressurized tank	None	N	Y	N	N	N	N	N	N	N	N	N	N	N	Basis- listed as deminimis in the permit application, installed in 1989, under PTI 04-479 dated 8/24/88. OAC rule 3734-31-05 applies, although this emissions unit

deminimis source															has no applicable allowable emissions limitation, requirements for control were set as BAT requiring submerged fill, vapor balance during loading and maintenance of a 30 psig pressure relief valve setting. Since this tank stores organic liquids it may be subject to OAC rule 3745-21-07.
T004: <75m^3 fixed roof tank with catalytic incinerator	3.07 tpy VOC from P801, P004 T004 and T006	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Basis - OAC rule 3745-31-05(A)(3) in the original permit for these sources, PTI 04-479 dated 8/24/88, 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 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 lb/hr limitation of P801. Tank is equipped with submerged fill confirmed by one time compliance inspection on start-up. OR - minimum temperature

															restrictions M,R,Rp- continuously monitor the throughput and incinerator performance to maintain stack test compliance level 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. ET - stack testing performed over a range of process conditions during the period of time from August 14th thru 20th of 2007 demonstrated a maximum discharge rate for VOC of <.04 lb/hr for a PTE of 0.18 tpy. Based on the guidance of Engineering Guide 16, no retesting is required.
	0% opacity	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Basis - 3745-31-05(A)(3) as established in PTI 04-479. Requires use of a collection system and catalytic incinerator. OR - minimum temperature restrictions M,R,Rp,ET- continuously monitor the 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 requirements	N	Y	N	N	N	N	N	Y	N	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	N	Y	N	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 systems which contact hazardous air pollutants (i.e., formaldehyde), as provided in 40 CFR 63.100..
	applicable requirements	N	Y	N	N	Y	N	N	Y	N	Y	N	N	N	Basis - 40 CFR Part 63 Subpart H does not apply.
	None	21-07 (D)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - Does not apply as formaldehyde is not a volatile photochemically reactive material.
	None	N	Y	Y	N	N	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.
T005 Tank V-150 - condensate tank controlled by a catalytic incinerator insignificant source	None	N	Y	N	N	N	N	N	N	N	N	N	N	N	Basis- listed as insignificant in the permit application, installed in 1989, under PTI 04-479 dated 8/24/88. OAC rule 3734-31-05 applies. Allowable VOC emissions are stated as being included in the P003 (now P801) due to shared control by catalytic incinerator. BAT also required submerged fill. Since this tank stores condensate; it is most likely

															exempt from OAC rule 3745-21-07.
T006: <75 m^3 fixed roof tank with catalytic incinerator	3.07 tpy VOC from P004, P801, T004 and T006	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Basis - OAC rule 3745-31-05(A)(3) in the original permit for these sources, PTI 04-479 dated 8/24/88, 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 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 lb/hr limitation of P801. Tank is equipped with submerged fill confirmed by one time compliance inspection on start-up. OR - minimum temperature restrictions or catalyst testing at the option of the permittee. M,R,Rp- 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. ET - stack testing performed over a range of process conditions during the period of time from August 14th thru 20th of 2007 demonstrated a maximum discharge rate for VOC of <.04 lb/hr for a PTE of 0.18 tpy. Based on the guidance of Engineering Guide 16, no retesting is required.
	0% opacity	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Basis - 3745-31-05(A)(3) as established in PTI 04-479. Requires use of a collection system and catalytic incinerator. OR - minimum temperature restrictions or catalyst testing at the option of the permittee. M,R,Rp,ET- continuously monitor the 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 requirements	N	Y	N	N	N	N	N	Y	N	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	N	Y	N	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	21-07 (D)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - Does not apply as formaldehyde is not a volatile photochemically reactive material.
	None	N	Y	Y	N	N	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.
T007, sodium hydroxide tank#V210 w/no control insignificant source	None	N	Y	N	N	N	N	N	N	N	N	N	N	N	Basis- listed as insignificant in the permit application, installed in 1989 , under PTI 04-479 dated 8/24/88, OAC rule 3734-31-05 applied although this emissions unit has no applicable requirements for BAT. Since this tank stores inorganic liquids it is exempt from OAC rule 3745-21-07.
T008, n-butyraldehyde tank#V220 w/no control deminimis source	None	N	Y	N	Y	N	N	N	N	N	N	N	N	N	Basis- listed as deminimis in the permit application, installed in 1989, under PTI 04-479 dated 8/24/88. OAC rule 3734-31-05 applies, although this emissions unit has no applicable allowable emissions limitation. Since this tank stores organic liquids it may have been subject to OAC rule 3745-21-07.

															OR- requirements for control were set as BAT requiring submerged fill and maintenance of a 60 psig pressure relief valve setting.
T016 <75 m^3 fixed roof tank with catalytic incinerator	0.03 tpy of organic compounds	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	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 - minimum temperature restrictions at the option of the permittee. M,R,Rp,ET- continuously monitor the 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 requirements	N	Y	N	N	N	N	N	Y	N	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	N	Y	N	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	N	N	ND - NSPS 40 CFR Part 60 Subpart Kb is not applicable as the tank is <75 m^3.
	None	21-07 (D)(2)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - not applicable. Formaldehyde is not a volatile photochemically reactive material.
T017 <75 m^3 fixed roof tank with catalytic incinerator	0.02 tpy of volatile organic compounds	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Basis - 3745-31-05(A)(3) as established in PTI 04-652. Requires the use of submerged fill and a collection system and catalytic incinerator shared with P801. OR - minimum temperature restrictions or catalyst testing at the option of the permittee. 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.
	None	21-07 (D)	N	N	N	N	N	N	N	N	N	N	N	N	Basis - less stringent than BAT, requires either submerged fill confirmed by one time compliance

															inspection on start-up or control by 95%.
	applicable requirements	N	Y	N	N	N	N	N	Y	N	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	N	Y	N	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	N	N	ND - NSPS 40 CFR Part 60 Subpart Kb is not applicable as the tank is <75 m^3.
T018 FR reactor product tank V290 controlled by a catalytic incinerator <151 m3 >75 m3 <13.1 kPa <15 kPa insignificant source	0.01 ton OC per year, with 98% effective control and maintain record of tank dimensions	N	Y	N	N	N	N	N	N	N	N	N	N	N	Basis - 3745-31-05(A)(3) as established in PTI 04-918 issued 8/3/94. Requires the use of a catalytic incinerator with 98% control efficiency.
		N	Y	N	N	N	N	N	N	N	N	N	N	N	40 CFR Part 63 Subpart G Group II is applicable with the sole requirement to maintain tank dimensions. NSPS Kb is not applicable as <151 m3, >75 m3 & <15 kPa.
T019 FR neopentyl glycol tank V2100 with no control	6.64 tons VOC per year, submerged	N	Y	N	N	N	N	N	N	N	N	N	N	N	Basis - 3745-31-05(A)(3) as established in PTI 04-930 issued 12/7/94 with the requirement to maintain tank

<151 m3 >75 m3 <13.1 kPa <15 kPa insignificant source	fill, maintain record of tank dimensions														dimensions and install submerged fill within 6 inches of the bottom of the tank.. NSPS Kb is not applicable as <151 m3, >75 m3 & <15 kPa.
T020 & T021 <75 m^3 Fixed roof storage tank for trimethylolpropane, with liquid seal filled with glycerine	0.24 tpy VOC	N	Y	N	N	Y	Y	N	Y	Y	Y	Y	N	N	Basis - 3745-31-05(A)(3) as established in PTI 04-949. 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	21-07 (D)(2)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - not a volatile photochemically reactive material; actual vapor pressure is less than 1.5 psia.and TMP is a solid at standard conditions.
	None	N	Y	Y	N	N	N	N	N	N	N	N	N	N	ND - 40 CFR Part 63 is not applicable as TMP is not a listed HAP.
	None	N	Y	Y	N	N	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.
T022 ethanol															never installed

T023 fixed roof tank with glycerine seal, >75 m^3 <151 m^3 <15 kPa	0.59 tpy VOC	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Basis - 3745-31-05(A)(3) as established in PTI 04-01251. 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.
	None	21-07 (D)(2)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - not a volatile photochemically reactive material, actual vapor is less than 1.5 psia.
	None	N	Y	Y	N	N	N	N	N	N	N	N	N	N	ND - NSPS 40 CFR Part 60 Subpart Kb is not applicable as the VP is <15 kPa.
T024 fixed roof tank with no controls, >75 m^3 <151 m^3 < 15 kPa	0.68 tpy of VOC	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Basis - 3745-31-05(A)(3) as established in PTI 04-01251. M,R,Rp - - record types of liquids to allow to insure no increase in PTE.
	None	21-07 (D)(2)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - not a volatile photochemically reactive material, actual vapor pressure is less than 1.5 psia.
	None	N	Y	Y	N	N	N	N	N	N	N	N	N	N	ND - NSPS 40 CFR Part 60 Subpart Kb is not applicable as the VP is <15 kPa.
T025 fixed roof tank with no controls,	applicable requirements	N	Y	N	N	Y	N	N	N	N	N	N	N	N	Basis - 40 CFR Part 63, Subpart G for Formaldehyde as a Group 2 due to volume and vapor pressure. (>75 m^3,

>75 m^3 <151 m^3 < 15 kPa <13.1 kPa															<151 m^3, <13.1 kPa) R - Sole requirement is to maintain tank dimension
	applicable requirements	N	Y	N	N	Y	N	N	Y	N	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	Y	N	N	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	21-07 (D)(2)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - Formaldehyde is not a volatile photochemically reactive material.
	None	N	Y	Y	N	N	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 roof tank with a catalytic incinerator <75 m^3 >13.1 kp <65,000 gal	applicable requirements	N	Y	N	N	N	N	N	Y	N	N	N	N	N	Basis - 40 CFR Part 63, Subpart G for formaldehyde and methanol as a Group 2 due to volume. (<75 m^3) R - Sole requirement is to maintain tank dimension
	applicable requirements	N	Y	N	N	Y	N	N	Y	N	Y	N	N	N	Basis - 40 CFR Part 63 Subparts A& F. Sources subject to Subparts G are

>500 gal																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	N	N		ND - exempt from OAC rule 3745-31-05(A)(3), installed before January 1 1974.
	submerged fill	21-07 (D)(2)	N	N	N	Y	N	N	Y	N	Y	N	N	N		Basis - requires submerged fill confirmed by one time compliance inspection on start-up or 90 % effective control. OR,M,R,Rp - allow an election of the method of compliance demonstration. These requirements "go away" if the SIP is modified. ET - If compliance is demonstrated throgh the use of the incinerator, periodic compliance testing will be required. If the SIP is modified this requirement will be eliminated.
	None	N	Y	Y	N	N	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 tank with a catalytic incinerator >75 m^3	applicable requirements	N	Y	N	Y	Y	N	N	Y	N	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

<151m^3 >13.1 kp <76.1 kPa <65,000 gal *EAC form shows these tanks to be group 2Perstorp to submit a revised Notification of Compliance to correct.*															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	Y	Y	N	N	Y	N	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	Y	N	N	N	N	N	N	N	N	N	N	ND - exempt from OAC rule 3745-31-05(A)(3), installed before January 1 1974.
	None	N	Y	Y	N	N	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).
	submerged fill or 90% effective control	21-07 (D)(2)	N	N	N	N	N	N	N	N	N	N	N	N	Basis - requires submerged fill confirmed by one time compliance inspection on start-up or 90 % effective control. OR,M,R,Rp - allow an election of the method of compliance demonstration. These requirements "go away" if the SIP is modified. ET - If compliance is demonstrated through the use

															of the incinerator, periodic compliance testing will be required. If the SIP is modified this requirement will be eliminated.
T101 & T102: fixed roof tank with a catalyltic incinerator >151 m^3	applicable requirements	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Basis - 40 CFR Part 63, Subpart G for formaldehyde. 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.
	applicable requirements	N	Y	N	Y	Y	N	N	Y	N	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	Y	N	N	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 installed before May 18, 1978 and Subpart K installed before June 11, 1973.
	None	21-07 (D)(2)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - formaldehyde is not a volatile photochemically reactive material.

T104 IFR tank with no controls >151 m^3 <12.5 psia] >5.2kPa <76.6 kPa	applicable requirements	N	Y	N	Y	Y	N	N	Y	N	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 VP <76.6 kPa. Group I.
	applicable requirements	N	Y	N	Y	Y	N	N	Y	N	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..
	None	N	Y	Y	N	N	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.
	None	N	Y	Y	N	N	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.
	IFR	21-07 (D)(1), (D)(1)(a)	N	N	N	N	N	N	N	N	N	N	N	N	Basis - requires control based on volume>151 m^3, <12.5 psia in this case an IFR confirmed by one time compliance inspection on start-up plus these requirements "go away" if the SIP is modified
T105 fixed roof tank with a catalyltic incinerator, >75 m^3 <151 m^3 >13.1 kPa >500 gal <65,000 gallons	0.08 tpy formaldehyde/ methanol, submerged fill, and closed vent system and 97% effective control	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Basis - OAC rule 3745-31-05(A)(3) as established in PTI 04-278. OR - requires minimum temperature in the thermal incinerator. 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 - stack testing performed February 22, 2000 indicated a destruction efficiency of 99.9%. Retesting will be required within 6 months of permit expiration.
	applicable requirements	N	Y	N	Y	Y	N	N	Y	N	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	Y	Y	N	N	Y	N	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.
	submerged fill	21-07 (D)(2)	N	N	N	N	N	N	N	N	N	N	N	N	Basis - <65,000 gallons >500, OAC requires submerged fill confirmed by one time compliance inspection on start-up or 90% effective control. BAT of submerged fill and 97% is more stringent.
	None	N	Y	N	N	N	N	N	N	N	N	N	N	N	Basis -NSPS 40 CFR Part 60 Subpart Kb >75 m^3 <151 m^3 > 15 kPa: compliance demonstrated through compliance with 40 CFR Part 63 Subpart F & G per 63.110(b)
T106: <40,000 gallons >75 m^3 fixed roof tank with a catalytic incinerator. >13.1 kPa > 15 kPa <76.6 kPa	0.14 tpy formaldehyde/ methanol, submerged fill, and closed vent system and 97% effective control	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Basis - OAC rule 3745-31-05(A)(3) as established in PTI 04-278. OR - requires minimum temperatures in the catalytic incinerator. 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 - stack testing performed February 22, 2000 indicated a destruction efficiency of 99.9%. Retesting will be required within 6 months of permit expiration.
	applicable requirements	N	Y	N	Y	Y	N	N	Y	N	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	Y	Y	N	N	Y	N	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.
	submerged fill	21-07 (D)(2)	N	N	N	N	N	N	N	N	N	N	N	N	Basis - <65,000 gallons >500, OAC requires submerged fill confirmed by one time compliance inspection on start-up or 90% effective control. BAT of submerged fill and 97% is more stringent.
	None	N	Y	N	N	N	N	N	N	N	N	N	N	N	Basis -NSPS 40 CFR Part 60 Subpart Kb >75 m^3 <151 m^3 > 15 kPa: compliance demonstrated through compliance with 40 CFR Part 63 Subpart F & G per

															63.110(b)
T108 IFR tank with no other controls >151 m^3 >5.2 kPa >3.5 kPa	0.68 tpy VOC Submerged fill	N	Y	N	Y	Y	N	N	Y	N	Y	Y	N	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. ET - not appropriate for a storage tank
	applicable requirements	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Basis - 40 CFR Part 63, Subpart G Group 1 (>151 m^3 > 5.2 kp) 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. M,R,Rp,ET - per OEPA policy
	applicable requirements	N	Y	N	Y	Y	N	N	Y	N	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 systems which contact hazardous air

															pollutants (i.e., methanol), as provided in 40 CFR 63.100. M,R,Rp,ET - per OEPA policy
		N	Y	Y	N	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 assued 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.
	IFR	21-07 (D)(1), (D)(1)(a)	N	N	N	N	N	N	N	N	N	N	N	N	Basis - requires control based on volume>151 m^3, <12.5 psia in this case an IFR confirmed by one time compliance inspection on start-up plus MR&Rp - OAC rule 3745-21-07(D)(1) does not specify inspection requirements for on-going compliance, therefore a one-time inspection will be adequate for demonstration of compliance. The inspection procedures of 40 CFR Part 63, Subpart G will assure adequate compliance with any required IFR maintenance.
T109 & T110 fixed roof tank with an electrically heated catalytic incinerator. >75 m^3 >151 m^3	0.007 tpy OC, 98% control efficency	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Basis - OAC rule 3745-31-05(A)(3) as established by PTI 04-1397 issued May 31, 2005 M,R,Rp - record types of liquids and throughputs 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 - not appropriate for a storage tank
	applicable requirements	N	Y	N	Y	Y	N	N	Y	N	Y	N	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. OR,M,R,Rp - continuously monitor the incinerator performance to maintain stack test compliance level. ET - within 6 mo of expiration
	applicable requirements	N	Y	N	Y	Y	N	N	Y	N	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	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.
	None	21-07 (D)(2)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - formaldehyde is not a volatile photochemically reactive material.
T111 fixed roof tank with an electrically heated catalytic incinerator. >75 m^3 >151 m^3	0.1 tpy OC, 98% destruction efficiency	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Basis - OAC rule 3745-31-05(A)(3) as established by PTI 04-1043. M,R,Rp - record types of liquids and throughputs 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 -within 6 mo of permit expiration
	applicable requirements	N	Y	N	Y	Y	N	N	Y	N	Y	N	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. OR,M,R,Rp - continuously monitor the incinerator performance to maintain stack test compliance level. ET - within 6 mo of expiration
	applicable requirements	N	Y	N	Y	Y	N	N	Y	N	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	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.
	None	21-07 (D)(2)	N	Y	N	N	N	N	N	N	N	N	N	N	ND - formaldehyde is not a volatile photochemically reactive material.
T112 V-50 insignificant source	40 CFR Part 63, subpart G, group II.	N	Y	N	N	N	N	N	Y	N	N	N	N	N	Basis - insignificant source - formaldehyde product working tank V-50, 40 CFR Part 63, subpart G, group II. R - Sole requirement is to maintain tank dimensions

Ohio | Environmental Protection Agency

DRAFT

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

Facility ID:	0448010133
Permit Number:	P0103993
Permit Type:	Renewal
Issued:	2/8/2011
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
Perstorp Polyols, Inc.

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Authorization

Facility ID: 0448010133
Facility Description: Polyol and formaldehyde manufacturing facility
Application Number(s): A0036077
Permit Number: P0103993
Permit Description: Polyol and formaldehyde manufacturing facility
Permit Type: Renewal
Issue Date: 2/8/2011
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Superseded Permit Number: P0088098

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

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

Ohio 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 (540 days) and no later than 6 months (180 days) prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
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

(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

(Authority for term: ORC 3704.036(A))

2. Monitoring and Related Record Keeping and Reporting Requirements

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

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

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

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

(4) The analytical techniques or methods used.

(5) The results of such analyses.

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

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

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

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

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

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

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted (i.e., postmarked) 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 scheduled maintenance, 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 promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted (i.e., postmarked) 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 (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency 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."

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

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

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

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

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

c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with Standard Term and Condition 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 contaminent 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency) 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 (i.e., postmarked) on or before April 30th of each year during the permit term.

(2) Compliance certifications shall include the following:

a. An identification of each term or condition of this permit that is the basis of the certification.

b. The permittee's current compliance status.

c. Whether compliance was continuous or intermittent.

d. The method(s) used for determining the compliance status of the source currently and over the required reporting period.

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 appropriate Ohio EPA District Office or local air agency 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 appropriate District Office of the Ohio EPA or local air agency 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 Fed. Reg. 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 has 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.

No emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.
(Authority for term: OAC rule 3745-77-01)

23. Title VI Provisions

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

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

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

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

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

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

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

25. 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 appropriate Ohio EPA District Office or local air agency. 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 (i.e., postmarked) 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.)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

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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency 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 (i.e., postmarked) 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 potentials to emit; or

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

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) B.9., B.11. and B.12.

2. The following emissions units contained in this permit are subject to the applicable requirements of 40 CFR Part 60, Subparts A and VV: P801, P803 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.

3. The following emissions units contained in this permit are subject to the applicable requirements of 40 CFR Part 63, Subpart A (General Provisions) as identified in Table 3 of 40 CFR Part 63, Subpart F: P801, P803, P812, T004, T006, T016, T017, T018, T025, T026, T027, T028, T029, T101, T102, T104, T105, T106, T108, T109, T110 and 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.

4. The following emissions units contained in this permit are subject to 40 CFR 63, subpart F: P801, P803, P812, T004, T006, T016, T017, T018, T025, T026, T027, T028, T029, T101, T102, T104, T105, T106, T108, T109, T110 and T111. 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.

5. The following emissions units contained in this permit are subject to 40 CFR 63, subpart G: P801, P803, P812, T004, T006, T016, T017, T018, T025, T026, T027, T028, T029, T101, T102, T104, T105, T106, T108, T109, T110 and T112. 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.

6. The following emissions units contained in this permit are subject to 40 CFR 63, subpart H: P801, P803 and P812. The following insignificant emissions units are also subject to this subpart: 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.

7. The following emissions unit contained in this permit is subject to 40 CFR 63, subpart DDDDD: B001. 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. 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.

9. Emissions unit P101 (formaldehyde manufacturing process) is currently inactive and, therefore, is not included in this Title V operating permit. If the emissions unit remains shut down for more than 5 years, before the permittee recommences operation, the permittee may be required to comply with all federal and Ohio EPA new source review requirements and federal New Source Performance Standards that are applicable, and demonstrate compliance with all applicable emission limitations and control

requirements by performing emission testing in accordance with the approved USEPA methods and procedures. The permittee shall notify the Toledo Division of Environmental Services at least 60 days prior to recommencing operation of the emissions unit.

10. The following insignificant emissions units contained in this permit are subject to 40 CFR 63, subpart G: J001 and J002 as Group 1 transfer load racks using closed-vent system with a catalytic incinerator as control. 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.

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

    T002 - caustic tank (PTI 04-479);

    T005 - condensate tank (PTI 04-479);

    T007 - caustic tank (PTI 04-479);

    T018 - reactor product tank (PTI 04-918);

    T019 - neopentylglycol tank (PTI 04-930); and

    T112 - formaldehyde product working tank V-50, 40 CFR Part 63, subpart G, group II.

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

12. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

    P102 - batch reactor with vent condenser

    T003 - butyraldehyde tank;

    T008 - butyraldehyde tank;

    Z020 - acetaldehyde tank; and

    Z021 - acetaldehyde tank

C. Emissions Unit Terms and Conditions

1. B001, Boiler

Operations, Property and/or Equipment Description:

85 mmBtu per hour boiler fired by natural gas, #2 fuel oil and comparable syngas fuel (methanol) 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 3745-17-07(A)(1)	visible particulate emissions 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 of 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.
e.	OAC rule 3745-51-38	establishes the methanol generated at this facility as a comparable syngas fuel (CSF) suitable for combustion
f.	40 CFR Part 63, Subpart A (40 CFR 63.1 thru 63.16)	see b)(2)c.
g.	40 CFR 63.52(a)(2) This emissions unit is a boiler located at a facility which is a major source of hazardous air pollutants (HAPs) and will be subject to 40 CFR Part 63, Subpart DDDDD (63.7480 through 63.7575)	see b)(2)d.

(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 SO2 emission limitations for the fuel burning equipment associated with this emissions unit because the emissions unit only employs natural gas as fuel. However, OAC rule 3745-18-06(A) requires that the fuel

being combusted meet certain fuel quality restrictions (a heat content greater than 950 Btu per standard cubic foot and a sulfur content less than 0.6 pound per million standard cubic feet). Because the natural gas being burned in this emissions unit is the standard, pipeline quality natural gas supplied to industrial, commercial, and residential users throughout the State, it is assumed that it meets the fuel quality restrictions; and no monitoring, record keeping or reporting requirements are necessary to ensure ongoing compliance with OAC rule 3745-18-06(A).

On September 1, 2003, OAC rule 3745-18-06 was revised to delete the following phrase: "having a heat content greater than 950 Btu per standard cubic foot and a sulfur content less than 0.6 pounds per million standard cubic feet". Therefore, this phrase is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-18-06, the requirements still exists as part of the federally-approved SIP for Ohio.

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 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.

d. This emissions unit is subject to a case-by-case MACT determination pursuant to section 112(j) of the Clean Air Act (CAA) due to the June 8, 2007 D.C. Circuit Court of Appeals decision to vacate the Boiler MACT (40 CFR Part 63, Subpart DDDDD).

If notified by the Ohio EPA or U.S. EPA, the permittee shall submit an application for a revision to this Title V permit that meets the requirements of 40 CFR 63.52(a)(2) pertaining to case-by-case MACT determinations. The 30-day clock for submittal of a 112(j) application does not begin until such notification is made by Ohio EPA or U.S. EPA.

c) Operational Restrictions

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

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

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, CSF 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 <u>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</u>, or equivalent methods as approved by the Director.

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

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)]

f) Testing Requirements

(1) Compliance with the emission limitations 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 Btus 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 mmBtus 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)]

g) Miscellaneous Requirements

(1) None.

2. P004, Formate handling

Operations, Property and/or Equipment Description:

material handling including sodium formate drying and sodium formate bagging controlled by a wet scrubber

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) g)(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
a.	OAC rule 3745-31-05(A)(3) (PTI 04-1123 as modified 1/27/2004)	visible particulate emissions from the stack serving this emissions unit shall not exceed 5 percent opacity as a three-minute average particulate emissions from the stack serving this emissions unit shall not exceed 0.48 pound per hour and 2.1 tons per rolling 12-month period 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 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, 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, 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) 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). 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 emission limitations in 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 per hour of particulate emissions

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 per rolling,12-month period of particulate emissions

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.

[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 04-01123, 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 04-1123.

[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 04-949 issued 7/26/1995)	emissions of volatile organic compounds (VOC) from the stack serving this emissions unit shall not exceed 0.70 pound per hour and 3.07 tons per year, including formaldehyde emission of formaldehyde 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.	OAC rule 3745-21-07(G)(2), (G)(6)(a)	see b)(2)e. and b)(2)f.
c.	40 CFR Part 63, Subpart A (40 CFR 63.01-16)	see b)(2)g.
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	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
	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 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)h.
Process fugitive emissions		
f.	OAC rule 3745-31-05(A)(3) (PTI 04-949 issued 7/26/1995)	fugitive emissions of VOC from this emissions unit shall not exceed 2.5 tons per year, including formaldehyde see b)(2)d.
g.	OAC rule 3745-21-09(DD)	see b)(2)i.
h.	40 CFR Part 60, Subpart A (40 CFR 60.01-19)	see b)(2)j. and b)(2)k.
i.	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	The permittee shall implement a volatile organic compound (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).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	other connector in VOC service and any devices or systems required by 40 CFR Part 60 Subpart VV.]	
j.	40 CFR Part 63, Subpart A (40 CFR 63.01-16)	see b(2)g.
k.	40 CFR Part 63, Subpart F see b)(1)d.	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subparts G and H.
l.	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 3745-21-07(G)(2), OAC rule 3745-21-07(G)(6)(a), 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. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

f. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio.

g. 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.

h. 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.

i. The permittee shall implement a volatile organic compound (VOC) leak detection and repair program consistent with the applicable Sections of OAC rule 3745-21-09(DD)(2).

j. 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.

k. 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 04-1123.

[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:

a.	60.482-1(b)	compliance determination
b.	60.482-1(d)	vacuum service exclusion
c.	60.482-1(e)	300 hour VOC service exclusion
d.	60.482-1(g)	shared storage vessel requirements
e.	60.482-9(a) through (f)	delay of repair
f.	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:

a.	63.102(a)	startup, shutdown and malfunctions
b.	63.104(a)	heat exchanger leak repair
c.	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:

a.	63.112(a) and (c)	emissions control requirements
b.	63.113(a)	process vent control requirements
c.	63.119(a)	storage vessel control requirements
d.	63.120(d)	storage vessel control design
e.	63.127(e)	establishing monitoring parameters
f.	63.132(f)	restrictions on the discharge of liquid or solid organic materials
g.	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:

a.	63.162(c)	identifying affected equipment
b.	63.162(d)	vacuum service exemption
c.	63.162(f)	identifying leaking equipment
d.	63.162(h)	failure to repair leaks
e.	63.163(a), (b)(2), (c) and (d)	detecting pump leaks
f.	63.163(e), (f), (g), (i) and (j)	exemption from detecting pump leaks
g.	63.164(a) through (c) and (e)(2) through (i)	compressor seal barrier fluid system requirements
h.	63.164(h) and (i)	exemption from compressor seal barrier fluid system requirements
i.	63.165(a) and (b)(1)	pressure relief device instrument reading requirements
j.	63.165(c) and (d)	exemption from pressure relief device instrument reading requirements
k.	63.166(a) through (c)	sampling connection system requirements
l.	63.167(a)(1) through (e)	open-ended valves or lines requirements
m.	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
n.	63.168(h) and (i)	exemption from requirements for valves in gas/vapor service and in light liquid service
o.	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
p.	63.170	requirements for surge control vessels and bottoms receivers.
q.	63.171(a) through (e)	repair completion requirements
r.	63.172(a) through (d) and (h) through (n)	requirements for closed-vent systems and control devices
s.	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
t.	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
u.	Table 1 to Subpart H of Part 63	batch process monitoring frequency
v.	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(C)(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 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. 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 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 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 3745-77-07(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) For purposes of compliance with OAC rule 3745-21-09(DD), the permittee shall maintain monthly records that document the following:

a. The process unit identification.

b. The number of pumps in light liquid service excluding those pumps designated for no detectable emissions under the provision of paragraph (DD)(2)(d)(i) of this rule and those pumps complying with paragraph (DD)(2)(d)(iii) of this rule.

c. The number of valves in gas/vapor service or in light liquid service excluding those valves designated for no detectable emission under the provision of paragraph (DD)(2)(d)(iv) of this rule and those valves subject to the alternative standard for monitoring under the provision of paragraph (DD)(2)(d)(v) of this rule.

d. The number of compressors excluding those compressors designated for no detectable emission under the provision of paragraph (DD)(3)(c) of this rule and those compressors complying with paragraph (DD)(3)(d) or (DD)(3)(e) of this rule.

e. The number of pumps in light liquid service for which leaks were detected as described in paragraph (DD)(2)(g) of this rule.

f. The number of pumps in light liquid service for which leaks were not repaired within fifteen calendar days after the date of leak detection.

g. The number of valves in gas/vapor service or in light liquid service for which leaks were detected as described in paragraph (DD)(2)(g) of this rule.

h. The number of valves in gas/vapor service or in light liquid service for which leaks were not repaired within fifteen calendar days after the date of leak detection.

i. The number of compressors for which leaks were detected as described in paragraph (DD) of this rule.

j. The number of compressors for which leaks were not repaired within fifteen calendar days after the date of leak detection.

k. The facts that explain each delay of repair allowed pursuant to paragraph (DD)(11) of this rule.

l. The dates of process unit shutdowns that occurred.

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

(6) 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)(1) thru d)(5). 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)]

(7) 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		
a.	60.482-2(a)	monthly and weekly monitoring
b.	60.482-2(b)	leak detection requirements
c.	60.482-2(c)	leak repair requirements
d.	60.482-2(d) through (h)	monitoring exemptions
60.482-4 Pressure relief devices in gas/vapor service		
e.	60.482-4(a)	monitoring for no detectable emissions
f.	60.482-4(b)	monitoring after a pressure release
g.	60.482-4(c) through (d)	monitoring exemptions
60.482-7 Valves in gas/vapor service and in light liquid service		
h.	60.482-7(a)	monthly monitoring to detect leaks
i.	60.482-7(b) and (c)	leak detection requirements
j.	60.482-7(d) and (e)	leak repair requirements
k.	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		
l.	60.482-8(a) and (b)	leak detection requirements
m.	60.482-8(c) and (d)	leak repair requirements
60.482-10 Closed vent systems and control devices		
n.	60.482-10(e) and (f)	monitoring to detect leaks
o.	60.482-10(g) and (h)	leak detection and repair requirements
p.	60.482-10(i) through (k)	monitoring exemptions
q.	60.482-10(l)	reporting requirements
r.		
60.485 Monitoring test methods and procedures		
s.	60.485(a) through (c)	leak detection test methods and procedures.
t.	60.485(d)	not in VOC service exemption
u.	60.485(e)	light liquid service determination
60.486 Recordkeeping requirements		
v.	60.486(b) and (c)	when a leak is detected
w.	60.486(d)	closed vent systems and control devices
x.	60.486(e)	pertaining to all equipment
y.	60.486(f) and (g)	pertaining to valves

[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 F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

a.	63.103(c)	general record keeping requirements

[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 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:

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

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

(10) 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:

a.	63.163(b)(1), (b)(3), (d)(2) and (e) through (j)	monitoring requirements for leaks in light liquid service pump
b.	63.164(d) and (e)(1)	monitoring requirements for compressor seal barrier fluid systems
c.	63.165(b)(2)	monitoring requirements for pressure relief device
d.	63.168(b), (d), (h) and (i)	monitoring requirements for valves in gas/vapor service and in light liquid

		service
e.	63.169(a)	monitoring requirements for pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service
f.	63.172(f), (g), (k) and (l)	monitoring requirements for closed-vent systems
g.	63.173(a)(1) and (b)(4)	monitoring requirements for agitators in gas/vapor service and in light liquid service
h.	63.174(a)(1)	monitoring requirements for connectors in gas/vapor service and in light liquid service
i	63.175(a) through (e)	quality improvement program for valves
j.	63.176(a) through (d)	quality improvement program for pumps
k.	63.177(a) through (e), 63.178(a) through (d) and 63.179	alternative means of emission limitation
l.	63.180(a) through (d), (f) and (g)	test procedures for monitoring
m.	63.181(a)	conditions for establishing compliance utilizing one recordkeeping system for multiple emission units
n.	63.181(b)(1) and (2)	requirement to identify (list) subject equipment
o.	63.181(c)	documentation of visual inspections
p.	63.181(d)	documentation of leaks
q.	63.181(f)	requirements for recording compressor compliance tests and monitoring following a pressure release for each pressure relief device
r.	63.181(g)	requirements for closed-vent systems and control devices
s.	63.181(h)	requirements for quality improvement programs
t.	63.181(i)	requirements for equipment in heavy liquid service
u.	63.181(j)	requirement to identify (list) equipment in organic HAP service less than 300 hours per year
v.	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 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. 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. 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) For purposes of compliance with OAC rule 3745-21-09(DD):

a. Semiannual reports shall be submitted to the Director by the first day of February and August and shall include the following information for each preceding semiannual period of operations:

i. the process unit identification;

ii. the number of pumps "in light liquid service" associated with the process unit, excluding:

(a) pumps that have no externally actuated shaft penetrating the pump housing and designated for "no detectable emissions"; and

(b) pumps equipped with a closed vent system capable of capturing and transporting leakage from the pump seal to control equipment meeting the requirements of OAC 3745-21-09(DD)(9) and (DD)(10);

iii. the number of valves "in gas/vapor service" or "in light liquid service" associated with the process unit, excluding:

(a) valves that have no externally actuated stem penetrating the valve and designated for "no detectable emission"; and

(b) valves qualified for the alternative monitoring standard based on the percentage of valves leaking, under the provision of OAC 3745-21-09(DD)(13);

iv. the number of compressors associated with the process unit, excluding:

(a) compressors designated for and meeting the requirements for "no detectable emissions";

(b) compressors equipped with a closed vent system capable of capturing and transporting leakage from the compressor seal to control equipment meeting the requirements of OAC 3745-21-09(DD)(9) and (DD)(10); and/or

(c) reciprocating compressors installed prior to 5/9/86, where it can be demonstrated that recasting or replacing the compressor would be the only means of complying with the requirement to equip it with a seal with a barrier fluid system and sensor;

v. for each month during the semiannual period:

(a) the number of pumps "in light liquid service" for which leaks were detected (as required in this permit);

(b) the number of pumps "in light liquid service" for which leaks were not repaired within 15 calendar days after the date of leak detection;

(c) the number of valves "in gas/vapor service" or "in light liquid service" for which leaks were detected (as required in this permit);

(d) the number of valves "in gas/vapor service" or "in light liquid service" for which leaks were not repaired within 15 calendar days after the date of leak detection;

(e) the number of compressors for which leaks were detected (as required in this permit);

(f) the number of compressors for which leaks were not repaired within 15 calendar days after the date of leak detection; and

(g) for each delay of repair allowed pursuant to OAC 3745-21-09(DD)(11), the reason for the delay;

vi. the dates of process unit shutdowns that occurred within the semiannual period; and

vii. the results of compliance tests for equipment identified as having "no detectable emissions", along with the associated equipment identification numbers from the compliance log.

Semiannual reports shall be submitted by the first day of February and August and shall include information for the preceding semiannual period.

[Authority for term: OAC rules 3745-21-09(DD)(2)(m) and (DD)(15)(a), (c), and (d)]

b. The permittee shall notify the appropriate Ohio EPA district office or local air agency of the intent-to-test the process control equipment not less than 30 days before the proposed initiation of the testing. The following information shall be included in the notification:

i. a statement indicating the purpose of the proposed test and the applicable paragraph of OAC 3745-21-09 for which compliance will be demonstrated;

ii. a detailed description of the process unit and control device to be tested;

iii. a detailed description of the test procedures, equipment and sampling sites; and

iv. a timetable, setting forth the dates on which:

(a) the testing will be conducted; and

(b) the final test report will be submitted.

The results of such compliance tests shall be reported to the appropriate Ohio EPA district office or local air agency within 30 days following the test date.

[Authority for term: OAC rule 3745-21-10(A)(3) and (4)] and [OAC 3745-21-09(DD)(15)(a) and (b)]

[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) 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 on 7/26/1995: 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 60, Subpart VV— Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, including the following sections:

a.	60.487(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:

a.	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:

a.	63.152(a)	descriptions of the required periodic reports
b.	Table 3 to Subpart G of Part 63	general reporting
c.	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:

a.	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 emission limitations in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

0.70 pound per hour VOC, 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 per hour VOC, 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:

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. 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 per hour of formaldehyde (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 per year of formaldehyde (process).

Applicable Compliance Method:

this emission limitation was developed by multiplying the hourly allowable limitation (0.11 pound per hour of 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.

f. Emission Limitation:

2.5 tons 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:

reduction of VOC emissions 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:

reduce emissions of total organic hazardous air pollutants 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) For purposes of compliance with OAC rule 3745-21-09(DD):

a. The process unit pumps, valves, and compressors identified and designated as having “no detectable emissions” shall be operated and maintained to comply with the following requirements:

i. The equipment shall be operated with “no detectable emissions” as indicated by an instrument reading of less than 500 ppmv above background as measured by OAC 3745-21-10(F); and shall be tested for compliance with this limitation initially upon designation and annually thereafter.

ii. The designation of the equipment as having “no detectable emissions” shall be signed by the operator (permittee) of the equipment in the log kept as required per OAC 3745-21-09(DD)(14)(b). The log shall list each piece of equipment, by an identification number, as having “no detectable emissions” and shall include the dates and readings from the last time they were monitored.

[Authority for term: OAC rules 3745-21-09(DD)(7)(a) through (d), (DD)(2)(d)(i), (DD)(2)(d)(iv) and (DD)(3)(c)]

b. Any closed vent system, that is used to comply with the collection and control requirements of this permit, shall be operated and maintained to comply with the following requirements:

i. The closed vent system shall be designed and operated with “no detectable emissions”, as indicated by an instrument reading of less than 500 ppmv above background, as measured by the method specified in OAC 3745-21-10(F). The closed vent system shall be tested for compliance with this limitation initially upon designation and annually thereafter.

ii. The closed vent system shall be operated at all times when emissions may be vented to it.

[Authority for term: OAC rule 3745-21-09(DD)(9)(a) through (d), (DD)(2)(d)(iii), (DD)(3)(d), (DD)(4)(e) and (DD)(8)(b)(ii)]

c. The detection of leaks of VOC into the ambient air from the chemical manufacturing equipment shall be determined as follows:

i. The detection of leaks shall be determined in accordance with the test procedure set forth in U.S. EPA Method 21.

ii. The following calibration gases shall be used:

(a) zero air, which consists of less than ten ppmv of hydrocarbon in air; and

(b) a mixture of air and methane or n-hexane at a concentration of approximately, but less than, 10,000 ppmv of methane or n-hexane.

iii. The leak detection instrument shall be calibrated before each use.

[Authority for term: OAC rule 3745-21-10(F)]

d. Any piece of equipment is presumed to be "in VOC service", unless the permittee demonstrates that the piece of equipment is "not in VOC service" according to the following provisions:

i. The piece of equipment is considered "not in VOC service" if it can be determined that the VOC content of the process fluid, which is contained in or contacts the piece of equipment, can be reasonably expected never to exceed 10% by weight.

ii. Procedures that conform to the general methods described in ASTM E168-99(2004), ASTM E169-04, and ASTM E260-73 shall be used to determine the VOC content of a process fluid.

iii. The permittee may use engineering judgment rather than the above ASTM methods, where it can be clearly demonstrated that the VOC content of a process fluid does not exceed 10% by weight. In the event the Ohio environmental protection agency or the U.S. EPA has a disagreement with an engineering judgment, the appropriate ASTM method shall be used to resolve the disagreement.

[Authority for term: OAC rule 3745-21-10(O)(2)]

e. A piece of equipment is "in light liquid service" if it contains or is in contact with a process fluid that meets all of the following conditions:

i. The process fluid is a liquid at operating conditions.

ii. The vapor pressure of one or more of the pure components within the process fluid is greater than 0.04 pound per square inch at 68 degrees Fahrenheit.

iii. The total concentration of the pure components having a vapor pressure greater than 0.04 pound per square inch at 68 degrees Fahrenheit is equal to or greater than 20% by weight.

Vapor pressures may be obtained from standard reference texts or may be determined by the method in ASTM D2879-70.

[Authority for term: OAC rule 3745-21-10(O)(3)]

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

(3) 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 on 7/26/1995: f)(1) and f)(2). 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)]

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

a. The emissions testing shall be conducted 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 tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Toledo Division of Environmental Services.

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.

Not later than 30 days prior to the proposed test dates, the permittee shall submit an "Intent to Test" notification to the Toledo Division of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the persons who will be conducting the tests. Failure to submit such notification for review

and approval prior to the tests may result in the Director's refusal to accept the results of the emission tests.

Personnel from the Toledo Division of Environmental Services shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Toledo Division of Environmental Services within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services.

[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, dipentaerythitol and sodium formate manufacturing process including 1 reactor, evaporators, crystallizers, belt filters, centrifuges, dryers and baggers. Dry powdered product handling equipment is controlled by 2 wet scrubbers, and in-process tanks which contain formaldehyde are vented to a 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 04-1232 as modified 3/15/01)	emissions of organic compounds (OC) from the incinerator stack serving this emissions unit shall not exceed 1.25 pounds per hour and 5.5 tons per year particulate emissions (PE) from the scrubber stack serving this emissions unit shall not exceed 4.5 pounds per hour and 19.71 tons per year see b)(2)a. through b)(2)c.
b.	OAC rule 3745-17-07(A)(1)	visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by rule
c.	OAC rule 3745-17-11(A)(2)	see b)(2)d.
d.	OAC rule 3745-21-07(G)(2), (G)(6)(a)	see b)(2)d. and b)(2)e.
e.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	see b)(2)f.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	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.
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.
Process fugitive emissions		
h.	OAC rule 3745-31-05(A)(3) (PTI 04-1232 as modified 3/15/01)	fugitive emissions of OC from this emissions unit shall not exceed 14.15 tons per year
i.	OAC rule 3745-21-09(DD)	see b)(2)h.
j.	40 CFR Part 60, Subpart A	see b)(2)i. and b)(2)j.
k.	40 CFR Part 60, Subpart VV (40 CFR 60.480-489) [In accordance with 40 CFR	The permittee shall implement a volatile organic compound (VOC) leak detection and repair program consistent with the applicable Sections of 40 CFR Part 60, Subpart VV. The permittee may elect to

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	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.]	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). see b)(2)j.
l.	40 CFR Part 63, Subpart A (40 CFR 63.01-16)	see b)(2)f.
m.	40 CFR Part 63, Subpart F see b)(1)f.	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subparts G and H.
n.	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 particulate 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 to ensure compliance with these limitations.

c. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), 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.

d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

e. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the USEPA as a revision to Ohio's State Implementation Plan (SIP); however, until the USEPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio.

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 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.

g. 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.

h. As provided in PTI 04-1232 as modified March 15, 2001, 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.

i. 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.

j. 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) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable pressure drop across the scrubber, that must be maintained in order to demonstrate compliance, shall not be less than 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) 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) and PTI 04-01232]

(3) 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 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)]

(4) 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:

a.	60.482-1(b)	compliance determination
b.	60.482-1(d)	vacuum service exclusion
c.	60.482-1(e)	300 hour VOC service exclusion

d.	60.482-1(g)	shared storage vessel requirements
e.	60.482-9(a) through (f)	delay of repair
f.	60.482-10(a) through (d) and (m)	emissions control requirements

[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 F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

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

[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 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:

a.	63.112(a) and (c)	emissions control requirements
b.	63.113(a)	process vent control requirements
c.	63.119(a)	storage vessel control requirements
d.	63.120(d)	storage vessel control design
e.	63.127(e)	establishing monitoring parameters
f.	63.132(f)	restrictions on the discharge of liquid or solid organic materials
g.	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)]

(7) 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:

a.	63.162(c)	identifying affected equipment
b.	63.162(d)	vacuum service exemption
c.	63.162(f)	identifying leaking equipment
d.	63.162(h)	failure to repair leaks
e.	63.163(a), (b)(2), (c) and (d)	detecting pump leaks
f.	63.163(e), (f), (g), (i) and (j)	exemption from detecting pump leaks
g.	63.164(a) through (c) and (e)(2) through (i)	compressor seal barrier fluid system requirements
h.	63.164(h) and (i)	exemption from compressor seal barrier fluid system requirements
i.	63.165(a) and (b)(1)	pressure relief device instrument reading

		requirements
j.	63.165(c) and (d)	exemption from pressure relief device instrument reading requirements
k.	63.166(a) through (c)	sampling connection system requirements
l.	63.167(a)(1) through (e)	open-ended valves or lines requirements
m.	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
n.	63.168(h) and (i)	exemption from requirements for valves in gas/vapor service and in light liquid service
o.	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
p.	63.170	requirements for surge control vessels and bottoms receivers.
q.	63.171(a) through (e)	repair completion requirements
r.	63.172(a) through (d) and (h) through (n)	requirements for closed-vent systems and control devices
s.	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
t.	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
u.	Table 1 to Subpart H of Part 63	batch process monitoring frequency
v.	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 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 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/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. The permittee shall maintain monthly records of the hours of operation of this emissions unit as a rolling, 12-month summation.

[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 stack 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 PTI 04-01232]

(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 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. 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 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 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 3745-77-07(C)(1)]

(5) Whenever the monitored temperature deviates from the range or limit established in c)(3), 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)]

(6) 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 04-01232 as modified on May 31, 2005: d)(1) thru d)(5). 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)]

(7) 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		
a.	60.482-2(a)	monthly and weekly monitoring
b.	60.482-2(b)	leak detection requirements
c.	60.482-2(c)	leak repair requirements
d.	60.482-2(d) through (h)	monitoring exemptions
60.482-4 Pressure relief devices in gas/vapor service		
e.	60.482-4(a)	monitoring for no detectable emissions
f.	60.482-4(b)	monitoring after a pressure release
g.	60.482-4(c) through (d)	monitoring exemptions
60.482-7 Valves in gas/vapor service and in light liquid service		
h.	60.482-7(a)	monthly monitoring to detect leaks
i.	60.482-7(b) and (c)	leak detection requirements
j.	60.482-7(d) and (e)	leak repair requirements
k.	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		
l.	60.482-8(a) and (b)	leak detection requirements
m.	60.482-8(c) and (d)	leak repair requirements
60.482-10 Closed vent systems and control devices		
n.	60.482-10(e) and (f)	monitoring to detect leaks
o.	60.482-10(g) and (h)	leak detection and repair requirements
p.	60.482-10(i) through (k)	monitoring exemptions
q.	60.482-10(l)	reporting requirements
r.		
60.485 Monitoring test methods and procedures		
s.	60.485(a) through (c)	leak detection test methods and procedures.

t.	60.485(d)	not in VOC service exemption
u.	60.485(e)	light liquid service determination
60.486 Recordkeeping requirements		
v.	60.486(b) and (c)	when a leak is detected
w.	60.486(d)	closed vent systems and control devices
x.	60.486(e)	pertaining to all equipment
y.	60.486(f) and (g)	pertaining to valves

[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 F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

a.	63.103(c)	general record keeping requirements

[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 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:

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

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

(10) 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:

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

u.	63.181(j)	requirement to identify (list) equipment in organic HAP service less than 300 hours per year
v.	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 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(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 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.

[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) and PTI 04-01232]

(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 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)(3) 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)(3), 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) 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 04-01232, issued on March 15, 2001: 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 60, Subpart VV— Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, including the following sections:

a.	60.487(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:

a.	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:

a.	63.152(a)	descriptions of the required periodic reports
b.	Table 3 to Subpart G of Part 63	general reporting
c.	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:

a.	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 emission limitations in b) of these terms and conditions shall be determined with the following methods:

a. Emission Limitation:

1.25 pounds per hour of OC (process).

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:

5.5 tons per year of OC (process).

Applicable Compliance Method:

this emission limitation was developed by multiplying the hourly allowable limitation (1.25 pounds per hour of OC) 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:

4.5 pounds per hour of particulate emissions.

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). Alternate, equivalent methods may be used upon approval by the TDOES.

d. Emission Limitation:

19.71 tons per year of particulate emissions.

Applicable Compliance Method:

this emission limitation was developed by multiplying the hourly allowable limitation (4.5 pounds per hour of particulate emissions) 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:

14.15 tons 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.

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 TDOES.

g. Emission Limitation:

reduce emissions of total organic hazardous air pollutants 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) 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 04-01232 as modified on March 15, 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)]

(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 tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Toledo Division of Environmental Services.

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.

Not later than 30 days prior to the proposed test dates, the permittee shall submit an "Intent to Test" notification to the Toledo Division of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the persons who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Director's refusal to accept the results of the emission tests.

Personnel from the Toledo Division of Environmental Services shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Toledo Division of Environmental Services within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services.

[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 with 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) 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)	emissions of carbon monoxide (CO) from the incinerator stack serving this emissions unit shall not exceed 3.13 pounds per hour and 13.7 tons per year emissions of volatile organic compounds (VOC) 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.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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 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
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.
Process fugitive emissions		
h.	OAC rule 3745-31-05(A)(3) (PTI 04-01397 issued 5/31/05)	fugitive emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 2.9 tons per year see b)(2)a.
i.	OAC rule 3745-21-09(DD)	see b)(2)h.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
j.	40 CFR Part 60, Subpart A (40 CFR 60.01-19)	see b)(2)c. and b)(2)d.
k.	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 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. see b)(2)d.
l.	40 CFR Part 63, Subpart A (40 CFR 63.01-16)	see b(2)f.
m.	40 CFR Part 63, Subpart F see b)(1)f.	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subparts G and H.
n.	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	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.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	methanol)]	

(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:

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 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

iii. 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, 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 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:

a.	63.102(a)	startup, shutdown and malfunctions
b.	63.104(a)	heat exchanger leak repair
c.	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:

a.	63.112(a) and (c)	emissions control requirements
b.	63.113(a)	process vent control requirements
c.	63.119(a)	storage vessel control requirements
d.	63.120(d)	storage vessel control design
e.	63.126(a) and (b)	transfer racks control requirements
f.	63.126(e)	requirements for tank trucks and railcars
g.	63.126(f) and (g)	requirements for transfer rack collection equipment design and use
h.	63.126(h) and (i)	restrictions on transfer rack pressure-relief devices and diverter valves
i.	63.127(e)	establishing monitoring parameters
j.	63.132(f)	restrictions on the discharge of liquid or solid organic materials
k.	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:

a.	63.162(c)	identifying affected equipment
b.	63.162(d)	vacuum service exemption
c.	63.162(f)	identifying leaking equipment
d.	63.162(h)	failure to repair leaks
e.	63.163(a), (b)(2), (c) and (d)	detecting pump leaks
f.	63.163(e), (f), (g), (i) and (j)	exemption from detecting pump leaks
g.	63.164(a) through (c) and (e)(2) through (i)	compressor seal barrier fluid system requirements
h.	63.164(h) and (i)	exemption from compressor seal barrier fluid system requirements
i.	63.165(a) and (b)(1)	pressure relief device instrument reading requirements
j.	63.165(c) and (d)	exemption from pressure relief device instrument reading requirements
k.	63.166(a) through (c)	sampling connection system requirements
l.	63.167(a)(1) through (e)	open-ended valves or lines requirements
m.	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
n.	63.168(h) and (i)	exemption from requirements for valves in gas/vapor service and in light liquid service
o.	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
p.	63.170	requirements for surge control vessels and bottoms receivers.
q.	63.171(a) through (e)	repair completion requirements
r.	63.172(a) through (d) and (h) through (n)	requirements for closed-vent systems and control devices
s.	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
t.	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
u.	Table 1 to Subpart H of Part 63	batch process monitoring frequency
v.	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 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. 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 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 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 3745-77-07(C)(1)]

(4) 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:

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) 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)]

(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:

a.	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:

a.	63.114(a) and 63.127(a)	requirement to install catalyst bed temperature monitoring devices
b.	63.114(c) and 63.127(c)	authorization to monitor parameters other than temperature
c.	63.114(d) and 63.127(d)	requirement to install monitoring devices for bypass line valves
d.	63.118(a)	record keeping for process vent control devices
e.	63.123(a), (f) and (h)	record keeping for storage tanks

f.	63.129(a), 63.130(a) and TABLE 7	incinerator monitoring and record keeping
g.	63.129(b)	monitoring and record keeping for alternate operating parameters
h.	63.129(c)	requirement to establish monitoring parameter range
i.	63.129(d), 63.130(b)	record keeping for valves and vents
j.	63.130(e)	verification of DOT tank certification
k.	63.130(f)	annual record keeping for transfer racks
l.	63.148(a)	leak inspection provisions for vapor collection systems, closed-vent systems, fixed roofs, covers, or enclosures
m.	63.152(f) and (g)	general record keeping requirements
n.	Table 3 to Subpart G of Part 63	general monitoring and record keeping
o.	Table 4 to Subpart G of Part 63	process vent monitoring and record keeping
p.	Table 7 to Subpart G of Part 63	loading rack monitoring and record keeping
q.	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:

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

(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) 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)(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)]

(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 F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

a.	63.103(c)	general 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 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:

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

[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 H, NATIONAL EMISSION STANDARDS FOR ORGANIC HAZARDOUS AIR POLLUTANTS FOR EQUIPMENT LEAKS, per the following sections:

a.	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 emission limitations in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

3.13 pounds per hour of carbon monoxide (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 per year of carbon monoxide (stack).

Applicable Compliance Method:

the annual emission limitation is based on the hourly emission limitation (3.13 pounds per hour) multiplied by the number of hours in a year (8,760 hours per year) and divided by 2,000 pounds per ton. Therefore, compliance with the hourly emission limitation constitutes compliance with the annual emission limitation.

c. Emission Limitation:

9.0 pounds per hour of VOC (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:

the annual emission limitation is based on the hourly emission limitation (9.0 pounds per hour) multiplied by the number of hours in a year (8,760 hours per year) and divided by 2,000 pounds per ton. Therefore, compliance with the hourly emission limitation constitutes compliance with the annual emission limitation.

e. Emission Limitation:

2.9 tons per year of VOC (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.

Emission Limitation:

reduce emissions of total organic hazardous air pollutants 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) 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 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 tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Toledo Division of Environmental Services.

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.

Not later than 30 days prior to the proposed test dates, the permittee shall submit an "Intent to Test" notification to the Toledo Division of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the persons who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Director's refusal to accept the results of the emission tests.

Personnel from the Toledo Division of Environmental Services shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Toledo Division of Environmental Services within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services.

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

g) Miscellaneous Requirements

(1) None.

6. T001, Formic Acid Tank

Operations, Property and/or Equipment Description:

Fixed roof formic acid tank with no controls [Tank V-100]

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 emissions of volatile organic compounds (VOC) 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) 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) and d)(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 emission limitation in b) of these terms and conditions shall be determined in accordance with the following method:

a. Emission Limitation

0.40 ton per year of VOC

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.

7. 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 m^3) 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)d.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	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 63 - Organic Hazardous Air Pollutants" and located at a plant site	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
	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 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. 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. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing formalin.

e. 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 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 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. 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 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 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 3745-77-07(C)(1)]

(4) Whenever the monitored temperature deviates from the range or limit established in c)(1), 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) 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:

a.	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:

a.	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 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 was 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 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)]

(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 c)(1) 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)(1), 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)]

(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) 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)(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)]

f) Testing Requirements

(1) Compliance with the emission limitations in b) of these terms and conditions shall be determined in accordance with the following method:

a. Emission Limitation:

visible emissions shall not exceed zero percent opacity.

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.

8. 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)d.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	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 63 - Organic Hazardous Air Pollutants" and located at a plant site	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
	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 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. 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. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit while storing a 15% solution of formaldehyde.

e. 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 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 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. 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 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 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 3745-77-07(C)(1)]

(4) Whenever the monitored temperature deviates from the range or limit established in c)(1), 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) 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:

a.	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:

a.	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 was 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 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)]

(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 c)(1) 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)(1), 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)]

(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) 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)(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)]

f) Testing Requirements

(1) Compliance with the emission limitations in b) of these terms and conditions shall be determined in accordance with the following method:

a. Emission Limitation:

visible emissions shall not exceed zero percent opacity.

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.

9. 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)	0.03 ton per year of organic compounds (OC) 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	The permittee shall comply with the

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(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]	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. 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 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 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. 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 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 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 3745-77-07(C)(1)]

(4) Whenever the monitored temperature deviates from the range or limit established in c)(1), 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) 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:

a.	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:

a.	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 was 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 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 c)(1) 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)(1), 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)]

(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) 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) 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)]

f) Testing Requirements

(1) Compliance with the emission limitation in b) of these terms and conditions shall be determined in accordance with the following method:

a. Emission Limitation

0.03 ton per year of OC

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.

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

g) Miscellaneous Requirements

(1) None.

10. 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)	0.02 ton per year of volatile organic compounds (VOC) see b)(2)a. thru b)(2)c.
b.	OAC rule 3745-21-07(D)(2)	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) 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.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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]	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. 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. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

e. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the USEPA as a revision to Ohio's State Implementation Plan (SIP); however, until the USEPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio.

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 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 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 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. 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 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 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 3745-77-07(C)(1)]

(4) Whenever the monitored temperature deviates from the range or limit established in c)(1), 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) 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:

a.	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:

a.	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 was 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 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)]

(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 c)(1) 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)(1), 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)]

(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) 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) 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)]

f) Testing Requirements

(1) Compliance with the emission limitation in b) of these terms and conditions shall be determined in accordance with the following method:

a. Emission Limitation

0.02 ton per year of VOC

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 3.8 psia vapor pressure at 0.2 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.

11. T023, Neopentylgylcol tank

Operations, Property and/or Equipment Description:

fixed roof storage tank (V-980) for Trimethylolpropane (TMP) co-product with a glycerine seal.

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)	0.59 ton per year of volatile organic compounds (VOC) 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.

(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) 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) 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 emission limitation in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

0.59 ton per year of VOC

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 300,000 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.

12. T024, TMP co-product tank

Operations, Property and/or Equipment Description:

24,200 gallon 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)	0.68 ton per year of volatile organic compounds (VOC) 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.

(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) 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) 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 emission limitation in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

0.68 ton per year of VOC

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 400,000 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(A)(3)(a)(ii)]

g) Miscellaneous Requirements

(1) None.

13. 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	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. 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:

a.	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:

a.	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.

14. T104, Methanol tank

Operations, Property and/or Equipment Description:

Internal floating roof storage tank (V-10) for methanol, no controls; Group 1

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-21-07(D)(1)(a)	see b)(2)a. and b)(2)b.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	see b)(2)c.
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	see b)(2)d. and b)(2)e.

	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]	

(2) Additional Terms and Conditions

a. The permittee shall install the following control equipment and shall maintain tank vents, seals, and or covers as follows:

i. A floating pontoon or double-deck type cover equipped with closure seals to enclose any space between the cover's edge and compartment wall.

ii. All tank gauging or sampling devices shall be gas-tight except when tank gauging or sampling is taking place.

b. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the USEPA as a revision to Ohio's State Implementation Plan (SIP); however, until the USEPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. . The following terms and conditions shall become void after U.S. EPA approves the rule revision: b)(2)a. and b)(2)b.

c. 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.

d. 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.

e. 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:

a.	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:

a.	63.120(a)	compliance demonstration inspections and monitoring
b.	63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel
c.	63.123(c)	recordkeeping for monitoring and planned routine maintenance
d.	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:

a.	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:

a.	63.122(a)	general required periodic reports
b.	63.122(d)	IFR required periodic reports
c.	63.122(h)	refilling of a storage vessel
d.	63.152(a)	descriptions of the required periodic reports
e.	63.152(c)	periodic reporting
f.	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.

15. 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.	OAC rule 3745-21-07(D)(2)	see b)(2)f. and b)(2)g.
c.	40 CFR Part 60, Subpart Kb	see b)(2)h. and b)(2)i.
d.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	see b)(2)j.
e.	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	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
	Pollutants" and located at a plant site that is a major source for HAPs]	
f.	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)k.

(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. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

g. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the USEPA as a revision to Ohio's State Implementation Plan (SIP); however, until the USEPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio.

h. 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.

i. 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.

j. 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.

k. 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 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 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. 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 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 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 3745-77-07(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) 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:

a.	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:

a.	63.119(e)	closed vent system and control device requirements
b.	63.120(d)	compliance demonstration inspections and temperature monitoring
c.	63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel
d.	63.123(f)	recordkeeping for parameter monitoring and planned routine maintenance
e.	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 was 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 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 c)(1) 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)(1), 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)]

(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) 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)]

(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 F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

a.	63.103(c)	general 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 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:

a.	63.122(a) through (c) and (g)	general periodic reporting requirements
b.	63.152(a)	descriptions of the required periodic reports
c.	63.152(c)	periodic reporting
d.	63.152(d)	notifications of inspections

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

f) Testing Requirements

(1) Compliance with the emission limitation in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

the combined emissions of formaldehyde and methanol from this emissions unit shall not exceed 0.08 ton 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 tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Toledo Division of Environmental Services.

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.

Not later than 30 days prior to the proposed test dates, the permittee shall submit an "Intent to Test" notification to the Toledo Division of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the

persons who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Director's refusal to accept the results of the emission tests.

Personnel from the Toledo Division of Environmental Services shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Toledo Division of Environmental Services within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services.

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

g) Miscellaneous Requirements

(1) None.

16. 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.	OAC rule 3745-21-07(D)(2)	see b)(2)f. and b)(2)g.
c.	40 CFR Part 60, Subpart Kb	see b)(2)h. and b)(2)i.
d.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	see b)(2)j.
e.	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	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
	Pollutants" and located at a plant site that is a major source for HAPs]	
f.	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)k.

(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 OAC rule 3745-21-07(D)(2) and 40 CFR Part 60, Subpart Kb.

f. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

g. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the USEPA as a revision to Ohio's State Implementation Plan (SIP); however, until the USEPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio.

h. 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.

i. 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.

j. 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.

k. 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 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 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. 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 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 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 3745-77-07(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) 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:

a.	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:

a.	63.119(e)	closed vent system and control device requirements
b.	63.120(d)	compliance demonstration inspections and temperature monitoring
c.	63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel
d.	63.123(f)	recordkeeping for parameter monitoring and planned routine maintenance
e.	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 was 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 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 c)(1) 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)(1), 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)]

(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) 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)]

(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 F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

a.	63.103(c)	general 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 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:

a.	63.122(a) through (c) and (g)	required periodic reports
b.	63.152(a)	descriptions of the required periodic reports
c.	63.152(c)	periodic reporting
d.	63.152(d)	notifications of inspections

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

f) Testing Requirements

(1) Compliance with the emission limitation in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

the combined emissions of formaldehyde and methanol from this emissions unit shall not exceed 0.14 ton 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 tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Toledo Division of Environmental Services.

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.

Not later than 30 days prior to the proposed test dates, the permittee shall submit an "Intent to Test" notification to the Toledo Division of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the

persons who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Director's refusal to accept the results of the emission tests.

Personnel from the Toledo Division of Environmental Services shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Toledo Division of Environmental Services within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services.

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

g) Miscellaneous Requirements

(1) None.

17. T108, Methanol tank V-100

Operations, Property and/or Equipment Description:

Internal floating roof storage tank (V-100) for methanol, no other controls; 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 04-01417 issued 9/1/05)	0.68 ton of volatile organic compound (VOC) per year see b)(2)a., b)(2)b. b)(2)c. and b)(2)d.
b.	OAC rule 3745-21-07(D)(1)(a)	see b)(2)d. and b)(2)e.
c.	40 CFR Part 60, Subpart Kb	see b)(2)f. and b)(2)g.
d.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	see b)(2)h.
e.	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	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
	that is a major source for HAPs]	
f.	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. and b)(2)j.

(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 OAC rule 3745-21-07(D)(1)(a), 40 CFR Part 60 Subpart Kb, and 40 CFR Part 63 Subparts A and F.

d. The permittee shall install the following control equipment and shall maintain tank vents, seals, and or covers as follows:

i. A floating pontoon or double-deck type cover equipped with closure seals to enclose any space between the cover's edge and compartment wall.

ii. All tank gauging or sampling devices shall be gas-tight except when tank gauging or sampling is taking place.

e. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the USEPA as a revision to Ohio's State Implementation Plan (SIP); however, until the USEPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio.

f. 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.

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 vessels which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110.

j. 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 04-01417]

(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:

a.	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:

a.	63.120(a)	compliance demonstration inspections and monitoring
b.	63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel
c.	63.123(c)	recordkeeping for monitoring and planned routine maintenance
d.	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) 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: e)(1). 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)]

(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:

a.	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:

a.	63.122(a)	general required periodic reports
b.	63.122(d)	IFR required periodic reports
c.	63.122(h)	refilling of a storage vessel
d.	63.152(a)	descriptions of the required periodic reports
e.	63.152(c)	periodic reporting
f.	63.152(d)	notifications of inspections

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

f) Testing Requirements

(1) Compliance with the emission limitation in b) of these terms and conditions shall be determined in accordance with the following method:

a. Emission Limitation

0.68 ton per year of VOC

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 04-01417, 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.

18. 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	0.1 ton per year of organic compounds (OC) see b)(2)a. through b)(2)c.
b.	40 CFR Part 60, Subpart Kb	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) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site	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
	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 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 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. 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 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 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 3745-77-07(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) 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:

a.	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:

a.	63.119(e)	closed vent system and control device requirements
b.	63.120(d)	compliance demonstration inspections and temperature monitoring
c.	63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel
d.	63.123(f)	recordkeeping for parameter monitoring and planned routine maintenance
e.	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 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(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 temperature(s) established in c)(1) 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)(1), 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(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) 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)(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)]

(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 F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

a.	63.103(c)	general 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 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:

a.	63.122(a) through (c) and (g)	required periodic reports
b.	63.152(a)	descriptions of the required periodic reports

c.	63.152(c)	periodic reporting
d.	63.152(d)	notifications of inspections

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

f) Testing Requirements

(1) Compliance with the emission limitation in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

0.1 ton per year of organic compounds (OC)

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:

OC 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 tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Toledo Division of Environmental Services.

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.

Not later than 30 days prior to the proposed test dates, the permittee shall submit an "Intent to Test" notification to the Toledo Division of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the persons who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Director's refusal to accept the results of the emission tests.

Personnel from the Toledo Division of Environmental Services shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Toledo Division of

Environmental Services within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services.

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

g) Miscellaneous Requirements

(1) None.

19. Emissions Unit Group - 2<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)	0.24 ton per year of organic compounds (OC), each 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.

(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) 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 emission limitation in b) of these terms and conditions shall be determined in accordance with the following method:

a. Emission Limitation:

0.24 ton per year of OC, each

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.

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

g) Miscellaneous Requirements

(1) None.

20. Emissions Unit Group - 2<75 m3 fixed roof tanks 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 tanks

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-21-07(D)(2)	see b)(2)a. and b)(2)b.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	see b)(2)c.
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	The permittee shall comply with the Group 2 recordkeeping requirement in 40 CFR 63.123(a) and is not required to

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(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]	comply with any other provisions in 40 CFR 63.119 through 63.123.

(2) Additional Terms and Conditions

a. The permittee shall maintain and operate either:

i. a submerged fill pipe for this emissions unit. The submerged fill pipe is to extend within 6-inches of the bottom of the tank; or

ii. a vapor recovery system which reduces the emission of organic materials into the atmosphere by at least ninety per cent by weight. All tank gauging or sampling devices shall be gas tight except when tank gauging or sampling is taking place.

b. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the USEPA as a revision to Ohio's State Implementation Plan (SIP); however, until the USEPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision: b)(2)a., c)(1), d)(1), e(1) and f)(1) through f)(3).

c. 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) Should the permittee elect to maintain compliance with the applicable requirements of OAC rule 3745-21-07(D)(2) through the utilization of a vapor recovery system, 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 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) Should the permittee elect to maintain compliance with the applicable requirements of OAC rule 3745-21-07(D)(2) through the utilization of a vapor recovery system:

a. 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 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;

b. 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. 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 is in operation:

i. 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 below the average temperature

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

ii. 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

iii. 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.

c. 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:

i. the date and time the deviation began;

ii. the magnitude of the deviation at that time;

iii. the date the investigation was conducted;

iv. the name(s) of the personnel who conducted the investigation; and

v. 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:

i. a description of the corrective action;

ii. the date corrective action was completed;

iii. the date and time the deviation ended;

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

v. 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

vi. 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)]

(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 F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

a.	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 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:

a.	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) Should the permittee elect to maintain compliance with the applicable requirements of OAC rule 3745-21-07(D)(2) through the utilization of a vapor recovery system.

a. The permittee shall submit quarterly summaries of the following records:

i. 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 below the average temperature established during the most recent performance test that demonstrated the emissions unit was in compliance;

ii. 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

iii. 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.

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

i. each period of time (start time and date, and end time and date) when the temperature(s) established in c)(1) was (were) outside of the acceptable range(s);

ii. 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;

iii. each incident of deviation described in i. or ii. (above) where a prompt investigation was not conducted;

iv. each incident of deviation described in i. or ii. 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)(1), was determined to be necessary and was not taken; and

v. each incident of deviation described in i. or ii. 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.

c. 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 (C)(1), and OAC rule 3745-15-03(B) and (C)]

f) Testing Requirements

(1) Compliance with the emission limitations in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

reduction of VOC emissions by at least 90%.

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) Should the permittee elect to maintain compliance with the applicable requirements of OAC rule 3745-21-07(D)(2) through the utilization of a vapor recovery system.

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

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

ii. 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.

iii. 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).

b. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Toledo Division of Environmental Services.

c. 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.

d. Not later than 30 days prior to the proposed test dates, the permittee shall submit an "Intent to Test" notification to the Toledo Division of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the persons who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Director's refusal to accept the results of the emission tests.

e. Personnel from the Toledo Division of Environmental Services shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

f. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Toledo Division of Environmental Services within 30 days following completion of

the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services.

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

g) Miscellaneous Requirements

(1) None.

21. Emissions Unit Group - two >151m3 storage tanks with a catalytic incinerator: T101, T102,

EU ID	Operations, Property and/or Equipment Description
T101	Fixed roof formaldehyde (formalin) storage tanks (#54) controlled by a closed vent system with a catalytic incinerator; Group 1 tank
T102	Fixed roof formaldehyde (formalin) storage tanks (#59) 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)	see b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[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]	

(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.

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) 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:

a.	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:

a.	63.119(e)	closed vent system and control device requirements
b.	63.120(d)	compliance demonstration inspections and temperature monitoring
c.	63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel
d.	63.123(f)	recordkeeping for parameter monitoring and planned routine maintenance
e.	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 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:

a.	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:

a.	63.122(a) through (c) and (g)	required periodic reports
b.	63.152(a)	descriptions of the required periodic reports
c.	63.152(c)	periodic reporting
d.	63.152(d)	notifications of inspections

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

f) Testing Requirements

(1) Compliance with the emission limitation in 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.

22. Emissions Unit Group - 2>75 m3 tanks w cataly. 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.	OAC rule 3745-21-07(D)(2)	see b)(2)a. and b)(2)b.
b.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	see b)(2)c.
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	see b)(2)d.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(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]	

(2) Additional Terms and Conditions

a. The permittee shall maintain and operate either:

i. a submerged fill pipe for this emissions unit. The submerged fill pipe is to extend within 6-inches of the bottom of the tank; or

ii. a vapor recovery system which reduces the emission of organic materials into the atmosphere by at least ninety per cent by weight. All tank gauging or sampling devices shall be gas tight except when tank gauging or sampling is taking place.

b. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the USEPA as a revision to Ohio's State Implementation Plan (SIP); however, until the USEPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision: b)(2)a., c)(1), d)(1), e(1) and f)(1) through f)(3).

c. 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.

d. 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) Should the permittee elect to maintain compliance with the applicable requirements of OAC rule 3745-21-07(D)(2) through the utilization of a vapor recovery system, 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 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) Should the permittee elect to maintain compliance with the applicable requirements of OAC rule 3745-21-07(D)(2) through the utilization of a vapor recovery system:

a. 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 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;

b. 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. 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 is in operation:

i. 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 below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance;

ii. 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

iii. 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.

c. 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:

i. the date and time the deviation began;

ii. the magnitude of the deviation at that time;

iii. the date the investigation was conducted;

iv. the name(s) of the personnel who conducted the investigation; and

v. 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:

i. a description of the corrective action;

ii. the date corrective action was completed;

iii. the date and time the deviation ended;

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

v. 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

vi. 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)]

(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:

a.	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:

a.	63.119(e)	closed vent system and control device requirements
b.	63.120(d)	compliance demonstration inspections and temperature monitoring
c.	63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel
d.	63.123(f)	recordkeeping for parameter monitoring and planned routine maintenance
e.	63.152(f)	general record keeping requirements

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

e) Reporting Requirements

(1) Should the permittee elect to maintain compliance with the applicable requirements of OAC rule 3745-21-07(D)(2) through the utilization of a vapor recovery system.

a. The permittee shall submit quarterly summaries of the following records:

i. 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 below the average temperature established during the most recent performance test that demonstrated the emissions unit was in compliance;

ii. 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

iii. 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.

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

i. each period of time (start time and date, and end time and date) when the temperature(s) established in c)(1) was (were) outside of the acceptable range(s);

ii. 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;

iii. each incident of deviation described in i. or ii. (above) where a prompt investigation was not conducted;

iv. each incident of deviation described in i. or ii. 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)(1), was determined to be necessary and was not taken; and

v. each incident of deviation described in i. or ii. 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.

c. 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 (C)(1), and OAC rule 3745-15-03(B) and (C)]

(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 F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

a.	63.103(c)	general periodic reporting requirements

[Authority for term: 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 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:

a.	63.122(a) through (c) and (g)	general periodic reporting requirements
b.	63.152(a)	descriptions of the required periodic reports
c.	63.152(c)	periodic reporting
d.	63.152(d)	notifications of inspections

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

f) Testing Requirements

(1) Compliance with the emission limitation in 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.

b. Emission Limitation:

reduction of VOC emissions by at least 90%.

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) Should the permittee elect to maintain compliance with the applicable requirements of OAC rule 3745-21-07(D)(2) through the utilization of a vapor recovery system.

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

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

ii. 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.

iii. 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).

b. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Toledo Division of Environmental Services.

c. 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.

d. Not later than 30 days prior to the proposed test dates, the permittee shall submit an "Intent to Test" notification to the Toledo Division of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the persons who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Director's refusal to accept the results of the emission tests.

e. Personnel from the Toledo Division of Environmental Services shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

f. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Toledo Division of Environmental Services within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services.

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

g) Miscellaneous Requirements

(1) None.

23. Emissions Unit Group - two >75m3 and >151m3 tanks with a catalytic incinerator: T109, T110,

EU ID	Operations, Property and/or Equipment Description
T109	fixed roof storage tank for formaldehyde (V-510) controlled by a closed vent system with an electrically heated catalytic incinerator; Group 1 tank
T110	fixed roof storage tank for formaldehyde (V-520) 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 04-1397 issued May 31, 2005	0.007 ton per year of organic compounds (OC) See b)(2)a. through b)(2)c.
b.	40 CFR Part 60, Subpart Kb	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) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air	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
	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 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 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. 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 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 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 3745-77-07(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) 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:

a.	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:

a.	63.119(e)	closed vent system and control device requirements
b.	63.120(d)	compliance demonstration inspections and temperature monitoring
c.	63.123(a)	keep records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel
d.	63.123(f)	recordkeeping for parameter monitoring and planned routine maintenance
e.	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 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(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 temperature(s) established in c)(1) 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)(1), 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(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) 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)(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)]

(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 F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, including the following sections:

a.	63.103(c)	general 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 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:

a.	63.122(a) through (c) and (g)	required periodic reports
b.	63.152(a)	descriptions of the required periodic reports

c.	63.152(c)	periodic reporting
d.	63.152(d)	notifications of inspections

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

f) Testing Requirements

(1) Compliance with the emission limitation in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

0.007 ton per year of organic compounds (OC)

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:

OC 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 tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Toledo Division of Environmental Services.

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.

Not later than 30 days prior to the proposed test dates, the permittee shall submit an "Intent to Test" notification to the Toledo Division of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the persons who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Director's refusal to accept the results of the emission tests.

Personnel from the Toledo Division of Environmental Services shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Toledo Division of Environmental Services within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services.

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

g) Miscellaneous Requirements

(1) None.