

10/21/2011

Certified Mail

Charles Gasperetti  
ISP  
1220 South Metcalf Street  
Lima, OH 45804

Facility ID: 0302020343  
Permit Number: P0105167  
County: Allen

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

Dear Permit Holder:

A draft of the OAC Chapter 3745-77 Title V permit for the referenced facility has been issued. The purpose of this draft is to solicit public comments. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, The Lima News. A copy of the public notice, the Statement of Basis, and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://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 Ohio EPA DAPC, Northwest District Office  
347 North Dunbridge Road  
Bowling Green, OH 43402

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified 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 Ohio EPA DAPC, Northwest District Office at (419)352-8461.

Sincerely,

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

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



PUBLIC NOTICE  
10/21/2011 Issuance of Draft Air Pollution Title V Permit

ISP

1220 South Metcalf Street,

Lima, OH 45804

Allen County

FACILITY DESC.: All Other Basic Organic Chemical Manufacturing

PERMIT #: P0105167

PERMIT TYPE: Renewal

PERMIT DESC: Renewal Title V Permit for an Industrial Organic Chemicals (n.e.c.) Facility

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: [epa.ohio.gov/dapc/permit](http://epa.ohio.gov/dapc/permit) by entering the permit # or: Andrea Moore, Ohio EPA DAPC, Northwest District Office, 347 North Dunbridge Road, Bowling Green, OH 43402. Ph: (419)352-8461





## Statement of Basis For Air Pollution Title V Permit

Facility ID:	0302020343
Facility Name:	ISP Lima, LLC
Facility Description:	Industrial Organic Chemicals, n.e.c.
Facility Address:	1220 South Metcalf Street, Lima, OH 45804
Permit #:	P0105167, Renewal
<p>This facility is subject to Title V because it is major for:</p> <p> <input type="checkbox"/> Lead              <input type="checkbox"/> Sulfur Dioxide              <input checked="" type="checkbox"/> Carbon Monoxide              <input checked="" type="checkbox"/> Volatile Organic Compounds              <input checked="" type="checkbox"/> Nitrogen Oxides  <input type="checkbox"/> Particulate Matter ≤ 10 microns              <input type="checkbox"/> Single Hazardous Air Pollutant              <input type="checkbox"/> Combined Hazardous Air Pollutants  <input checked="" type="checkbox"/> Maximum Available Control Technology Standard(s)       </p>	

### A. Standard Terms and Conditions

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



Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a reopening per OAC rule 3745-77-08(D)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document resulting from a renewal per OAC rule 3745-77-08(E)	<p>N006 and P801 – PTI No. P0107710: Chapter 31 modification to account for increased emissions from the scrubber offgas boiler, and flare associated with the butanediol manufacturing plant, associated with the installation of the new tetrahydrofuran recovery process and storage tanks (originally permitted under PTI No. P0103657). New allowable emissions:</p> <p>N006 – VOC 63 lbs/hr, CO 205.4 lbs/hr, NOx 25.4 lbs/hr, SO2 5.5 lbs/hr and PE 6.4 lbs/hr</p> <p>P801 - VOC 7.58 lbs/hr (process vented to flare), fugitive VOC 11.89 tons/yr, CO 4.85 lbs/hr, NOx 0.89 lb/hr, SO2 0.48 lb/hr and PE 0.04 lb/hr</p>

**B. Facility-Wide Terms and Conditions**

Term and Condition (paragraph)	Basis		<u>Comments</u>
	SIP (3745- )	Other	
B.1			Lists Facility wide terms and conditions that are enforceable under state law only.
B.2	77-07(A)(13)	N	Lists insignificant emissions units subject to one or more applicable requirements contained in a permit to install or in the SIP-approved versions of OAC Chapters 3745-17, 3745-18, 3745-21; 40 CFR, Part 60, Subpart VV; and 40 CFR, Part 63, Subpart H.
B.3	N	40 CFR, Part 63, Subpart F	Lists applicability of 40 CFR, Part 63, Subpart F
B.4	N	40 CFR, Part 63, Subpart G	Lists applicability of 40 CFR, Part 63, Subpart G
B.5	N	40 CFR, Part 63, Subpart H	Lists applicability of 40 CFR, Part 63, Subpart H
B.6	N	40 CFR, Part 60,	Lists applicability of 40 CFR, Part 60, Subpart Db



		Subpart Db	
B.7	N	40 CFR, Part 60, Subpart VV	Lists applicability of 40 CFR, Part 60, Subpart VV
B.8	N	40 CFR, Part 60, Subpart III	Lists applicability of 40 CFR, Part 60, Subpart III
B.9	N	40 CFR, Part 60, Subpart NNN	Lists applicability of 40 CFR, Part 60, Subpart NNN
B.10	N	40 CFR, Part 60, Subpart RRR	Lists applicability of 40 CFR, Part 60, Subpart RRR
B.11	21-09(DD)	40 CFR, Part 60, Subpart VV and 40 CFR, Part 63, Subpart H	Addresses overlap provisions for insignificant emissions units subject to leak detection and repair requirements

**C. Emissions Unit Terms and Conditions**

<p><b>Key:</b>          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</p>	<p>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</p>
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EU(s)	Limitation	Basis		ND	OR	M	St	ENF	R	St	Rp	St	ET	Misc	Comments
		SIP (3745- )	Other												
J002	No visible emissions from the flare, except for 5 min during any 2 consec. hrs	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05 OR-Flare parametric monitoring. CAM is not applicable. M/R-Flare monitoring and recordkeeping as required by 40 CFR, Part 63, Subpart H provides indication of ongoing compliance. A CEM is not economically justified. ET-The M, R &Rp requirements are sufficient to demonstrate compliance without requiring formal Method 22 readings being conducted.
N006	Visible PE shall not exceed 10%, as a 6-minute average	31-05(D)	N	N	N	Y	N	N	Y	N	Y	N	N	N	M/R-Records of weekly visible emissions checks provide indication of ongoing compliance. ET-The M, R &Rp requirements are sufficient to demonstrate compliance without requiring formal Method 9 readings being conducted.
P076	Visible PE shall not exceed 20%, as a 6-minute average, except as provided by rule	17-07(A)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Maintenance of an average total dissolved solids content of 3500 mg/l or less in the cooling water. CAM is not applicable. M/R-Records of TDS provide indication of ongoing compliance. COM is not economically justified. ET-The M, R &Rp requirements are sufficient to demonstrate compliance without requiring formal Method 9 readings being conducted.
P801	No visible emissions from the flare	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05(D) OR-Flare and incinerator parametric monitoring. CAM is not applicable. M/R-Flare and incinerator monitoring and recordkeeping as required by 40 CFR 63.11(b), OAC 3745-21-09(DD), 40 CFR, Part 60, Subpart III, 40 CFR, Part 60, Subpart NNN, 40 CFR, Part 60, Subpart



																RRR and 40 CFR, Part 63, Subpart G provides indication of ongoing compliance. A CEM is not economically justified. ET-The M, R &Rp requirements are sufficient to demonstrate compliance without requiring formal Method 22 readings being conducted.
P905	Visible PE shall not exceed 20%, as a 6-minute average, except as provided by rule	17-07(A)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	N	OR-dry filter parametric monitoring. CAM is not applicable. M/R-Records of pressure drop across dry filter provide indication of ongoing compliance. COM is not economically justified. ET-The M, R &Rp requirements are sufficient to demonstrate compliance without requiring formal Method 9 readings being conducted.
P905	Visible emissions of fugitive PE shall not exceed 20%, as a 3-minute average	31-05(A) (3)	N	N	N	Y	N	N	Y	N	Y	N	N	N	N	M/R-Records of weekly visible emissions checks provide indication of ongoing compliance. ET-The M, R &Rp requirements are sufficient to demonstrate compliance without requiring formal Method 9 readings being conducted.
N006	None	17-07(A)	N	Y	N	N	N	N	N	N	N	N	N	N	N	ND-The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05. M, R, Rp& ET-There are no emissions limitations established pursuant to this rule, therefore, no monitoring, recordkeeping, reporting or emissions testing is required.
N006	None	17-09	N	Y	N	N	N	N	N	N	N	N	N	N	N	ND-The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).



															M, R, Rp& ET-There are no emissions limitations established pursuant to this rule, therefore, no monitoring, recordkeeping, reporting or emissions testing is required.
P076, P905	None	17-11(B)	N	Y	N	N	N	N	N	N	N	N	N	N	ND-The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). M, R, Rp& ET-There are no emissions limitations established pursuant to this rule, therefore, no monitoring, recordkeeping, reporting or emissions testing is required.
P905	Exempt	17-07(B)	N	Y	N	N	N	N	N	N	N	N	N	N	ND-This emissions unit is exempt from the visible emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e). M, R, Rp& ET-There are no emissions limitations established pursuant to this rule, therefore, no monitoring, recordkeeping, reporting or emissions testing is required.
P905	Exempt	17-08(B)	N	Y	N	N	N	N	N	N	N	N	N	N	ND-This facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B). M, R, Rp& ET-There are no emissions limitations established pursuant to this rule, therefore, no monitoring, recordkeeping, reporting or emissions testing is required.
N006	6.4 lbs PE/hr	N	Y	N	N	N	N	N	N	N	N	N	N	N	Other-OAC 3745-31-05(D) M, R, Rp& ET-The hourly limitation is based on the emissions unit's potential to emit (a 99% reduction in the liquid organic streams – 2,100 lbs/hr - fed to the incinerator), therefore, no monitoring, recordkeeping, reporting or emissions testing is necessary.



N006	28.0 tons PE/yr	N	Y	N	N	N	N	N	N	N	N	N	N	N	Other-OAC 3745-31-05(D) M, R, Rp& ET-The TPY limitation is based on the emissions unit's PTE (maximum hourly emission rate times the maximum annual hours of operation), therefore, if compliance is shown with the hourly emission rate, compliance will also be shown with the annual limitation. Therefore, no monitoring, recordkeeping or reporting is necessary.
P076	0.184 lb PE/hr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05(A)(3) OR-Maintenance of an average total dissolved solids content of 3500 mg/l or less in the cooling water. CAM is not applicable. M/R-Records of TDS provide indication of ongoing compliance. A CEM is not economically justified. ET-Calculations based on maximum TDS and a maximum drift loss factor of 0.0005% are sufficient to show compliance.
P076	6.13 tons PE/yr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05(A)(3) OR-Maintenance of an average total dissolved solids content of 3500 mg/l or less in the cooling water. CAM is not applicable. M/R-Records of TDS provide indication of ongoing compliance. A CEM is not economically justified. ET-The TPY limitation is based on the emissions unit's PTE (maximum hourly emission rate times the maximum annual hours of operation), therefore, if compliance is shown with the hourly emission rate, compliance will also be shown with the annual limitation. Therefore, no monitoring, recordkeeping or reporting is necessary.
P801	0.04 lb PE/hr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05(D) OR-Flare and incinerator parametric



																<p>monitoring. CAM is not applicable. M/R-Flare and incinerator monitoring and recordkeeping as required by 40 CFR 63.11(b), OAC 3745-21-09(DD), 40 CFR, Part 60, Subpart III, 40 CFR, Part 60, Subpart NNN, 40 CFR, Part 60, Subpart RRR and 40 CFR, Part 63, Subpart G provides indication of ongoing compliance. A CEM is not economically justified.</p> <p>ET-The hourly limitation is based on the emissions unit's potential to emit (a 98% reduction applied to a calculated engineering estimate of flare vent streams and the emissions from the combustion of the natural gas pilot flame flare - emission factor of 0.003 lb PE/mmBtu times the maximum hourly burning capacity of 13 mmBtu/hr). The monitoring and recordkeeping requirements ensure that the flare is operating at the proper efficiency and are sufficient to demonstrate compliance.</p>
P801	0.18 tons PE/yr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	N	<p>Other-OAC 3745-31-05 OR-Flare and incinerator parametric monitoring. CAM is not available. M/R-Flare and incinerator monitoring and recordkeeping as required by 40 CFR 63.11(b), OAC 3745-21-09(DD), 40 CFR, Part 60, Subpart III, 40 CFR, Part 60, Subpart NNN, 40 CFR, Part 60, Subpart RRR and 40 CFR, Part 63, Subpart G provides indication of ongoing compliance. A CEM is not economically justified.</p> <p>ET-The TPY limitation is based on the emissions unit's PTE (maximum hourly emission rate times the maximum annual hours of operation), therefore, if compliance is shown with the hourly emission rate, compliance will also be shown with the annual limitation. Therefore, no monitoring,</p>



															recordkeeping or reporting is necessary.
P905	0.20 lb PE/hr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05(A)(3) OR-dry filter parametric monitoring. CAM is not applicable. M/R-Records of dry filter pressure drop provide indication of ongoing compliance. A CEM is not economically justified. ET-Calculations based on applying a 99% control efficiency to an uncontrolled emission rate of 20 lbs/hr are sufficient to show compliance.
P905	0.14 tons PE/yr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05(A)(3) OR-dry filter parametric monitoring. CAM is not applicable. M/R-Records of dry filter pressure drop provide indication of ongoing compliance. A CEM is not economically justified. ET-The TPY limitation is based on the emissions unit's PTE (maximum hourly emission rate times the maximum annual hours of operation), therefore, if compliance is shown with the hourly emission rate, compliance will also be shown with the annual limitation. Therefore, no monitoring, recordkeeping or reporting is necessary.
P905	0.05 ton fugitive PE/yr	N	Y	N	N	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05(A)(3) M/R-weekly VE observations provide indication of ongoing compliance. ET-Calculations based on applying a company supplied emission factor of 0.08 lb/ton by a maximum of 1,367 tons of catalyst/yr are sufficient to show compliance.
J001	0.1 ton VOC/yr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05(A)(3) OR-Annual throughput shall not exceed 22,500,000 gallons. CAM is not applicable. M/R-Records of throughput indicate compliance by ensuring permittee does not



															exceed maximum throughput restriction. A CEM is not economically justified. ET-Calculations based on the appropriate AP-42 emission factor and the maximum throughput are sufficient to show compliance.
J002	0.16 ton VOC/yr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05 OR-Annual throughput shall not exceed 4,500,000 gallons. CAM is not applicable. M/R-Records of throughput indicate compliance by ensuring permittee does not exceed maximum throughput restriction. A CEM is not economically justified. ET-Calculations based on the appropriate AP-42 emission factor and the maximum throughput are sufficient to show compliance.
N006	63.0 lbs VOC/hr	N	Y	N	N	N	N	N	N	N	N	N	Y	N	Other-OAC 3745-31-05(D) M, R &Rp-Emissions testing will provide basis for compliance, therefore, no monitoring, recordkeeping or reporting is necessary.
N006	276.0 tons VOC/yr	N	Y	N	N	N	N	N	N	N	N	N	N	N	Other-OAC 3745-31-05(D) M, R, Rp& ET-The TPY limitation is based on the emission unit's potential to emit (PTE) (maximum hourly emission rate times the maximum annual hours of operation), therefore, if compliance is shown with the hourly emission rate, compliance will also be shown with the annual limitation. Therefore, no monitoring, recordkeeping or reporting is necessary.
P076	0.22 lb VOC/hr	N	Y	N	N	N	N	N	N	N	N	N	N	N	Other-OAC 3745-31-05(A)(3) M, R, Rp& ET-The hourly limitation is based on the emissions unit's potential to emit (maximum cooling water throughput capacity of 1,200,000 gallons per hour times a company supplied emission factor of 0.175 lb VOC/1,000,000 gallons),therefore, no



															monitoring, recordkeeping, reporting or emissions testing is necessary.
P076	0.96 ton VOC/yr	N	Y	N	N	N	N	N	N	N	N	N	N	N	Other-OAC 3745-31-05(A)(3) M, R, Rp& ET-The TPY limitation is based on the emissions unit's PTE (maximum hourly emission rate times the maximum annual hours of operation), therefore, if compliance is shown with the hourly emission rate, compliance will also be shown with the annual limitation. Therefore, no monitoring, recordkeeping or reporting is necessary.
P801	7.58 lbs VOC/hr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05(D) OR-Flare and incinerator parametric monitoring. CAM is not applicable. M/R-Flare and incinerator monitoring and recordkeeping as required by 40 CFR 63.11(b), OAC 3745-21-09(DD), 40 CFR, Part 60, Subpart III, 40 CFR, Part 60, Subpart NNN, 40 CFR, Part 60, Subpart RRR and 40 CFR, Part 63, Subpart G provides indication of ongoing compliance. A CEM is not economically justified. ET-The hourly limitation is based on the emissions unit's potential to emit (a 98% reduction applied to a calculated engineering estimate of flare vent streams). The monitoring and recordkeeping requirements ensure that the flare is operating at the proper efficiency and are sufficient to demonstrate compliance.



P801	33.2 tons VOC/yr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05(D) OR-Flare and incinerator parametric monitoring. CAM is not applicable. M/R-Flare and incinerator monitoring and recordkeeping as required by 40 CFR 63.11(b), OAC 3745-21-09(DD), 40 CFR, Part 60, Subpart III, 40 CFR, Part 60, Subpart NNN, 40 CFR, Part 60, Subpart RRR and 40 CFR, Part 63, Subpart G provides indication of ongoing compliance. A CEM is not economically justified. ET-The TPY limitation is based on the emissions unit's PTE (maximum hourly emission rate times the maximum annual hours of operation), therefore, if compliance is shown with the hourly emission rate, compliance will also be shown with the annual limitation. Therefore, no monitoring, recordkeeping or reporting is necessary.
P801	11.89 tons/yr fugitive VOC	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05 OR-Flare and incinerator parametric monitoring. CAM is not applicable. M/R-Flare and incinerator monitoring and recordkeeping as required by 40 CFR 63.11(b), OAC 3745-21-09(DD), 40 CFR, Part 60, Subpart III, 40 CFR, Part 60, Subpart NNN, 40 CFR, Part 60, Subpart RRR and 40 CFR, Part 63, Subpart G provides indication of ongoing compliance. A CEM is not economically justified. ET-Calculations based on the number of pipe fittings, the appropriate SOCM I emission factor from EPA-450/3-010 (4/82) and the maximum annual hours of operation are sufficient to show compliance.



N006	205.4 lbs CO/hr	N	Y	N	N	N	N	N	N	N	N	N	Y	N	Other-OAC 3745-31-05(D) M, R &Rp-Emissions testing will provide basis for compliance, therefore, no monitoring, recordkeeping or reporting is necessary.
N006	900.0 tons CO/yr	N	Y	N	N	N	N	N	N	N	N	N	N	N	Other-OAC 3745-31-05(D) M, R, Rp& ET-The TPY limitation is based on the emissions unit's PTE (maximum hourly emission rate times the maximum annual hours of operation), therefore, if compliance is shown with the hourly emission rate, compliance will also be shown with the annual limitation. Therefore, no monitoring, recordkeeping or reporting is necessary.
P801	4.85 lbs CO/hr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05(D) OR-Flare and incinerator parametric monitoring. CAM is not applicable. M/R-Flare and incinerator monitoring and recordkeeping as required by 40 CFR 63.11(b), OAC 3745-21-09(DD), 40 CFR, Part 60, Subpart III, 40 CFR, Part 60, Subpart NNN, 40 CFR, Part 60, Subpart RRR and 40 CFR, Part 63, Subpart G provides indication of ongoing compliance. A CEM is not economically justified. ET-The hourly limitation is based on the emissions unit's potential to emit (a 98% reduction applied to a calculated engineering estimate of flare vent streams and the emissions from the combustion of the natural gas pilot flame flare - emission factor of 0.37 lb CO/mmBtu times the maximum hourly burning capacity of 13 mmBtu/hr). The



																monitoring and recordkeeping requirements ensure that the flare is operating at the proper efficiency and are sufficient to demonstrate compliance.
P801	21.23 tons CO/yr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N		<p>Other-OAC 3745-31-05(D) OR-Flare and incinerator parametric monitoring. CAM is not applicable. M/R-Flare and incinerator monitoring and recordkeeping as required by 40 CFR 63.11(b), OAC 3745-21-09(DD), 40 CFR, Part 60, Subpart III, 40 CFR, Part 60, Subpart NNN, 40 CFR, Part 60, Subpart RRR and 40 CFR, Part 63, Subpart G provides indication of ongoing compliance. A CEM is not economically justified. ET-The TPY limitation is based on the emissions unit's PTE (maximum hourly emission rate times the maximum annual hours of operation), therefore, if compliance is shown with the hourly emission rate, compliance will also be shown with the annual limitation. Therefore, no monitoring, recordkeeping or reporting is necessary.</p>
N006	25.4 lbsNOx/hr, based upon a rolling, 24-hr ave.	N	Y	N	N	Y	N	N	Y	N	Y	N	N	N		<p>Other-OAC 3745-31-05(D) M, R and Rp – CEM is used to demonstrate compliance. ET – the M, R and Rp requirements for the CEM are sufficient to demonstrate compliance without requiring formal testing.</p>
N006	111.3 tons NOx/yr	N	Y	N	N	Y	N	N	Y	N	Y	N	N	N		<p>Other-OAC 3745-31-05(D) M, R, Rp&amp; ET-The TPY limitation is based on the emissions unit's PTE</p>



																(maximum hourly emission rate times the maximum annual hours of operation), therefore, if compliance is shown with the hourly emission rate, compliance will also be shown with the annual limitation. Therefore, no monitoring, recordkeeping or reporting is necessary.
N006	0.10 lbNOx/mmBtu(expressed as NO <sub>2</sub> )	N	Y	N	Y	Y	N	N	Y	N	Y	N	Y	N		Other-40 CFR 60, Subpart Db OR-Operational restrictions as required by 40 CFR, Part 60, Subpart Db. M/R-Monitoring and recordkeeping as required by rule.
P801	0.89 lbNOx/hr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N		Other-OAC 3745-31-05(D) OR-Flare and incinerator parametric monitoring. CAM is not applicable. M/R-Flare and incinerator monitoring and recordkeeping as required by 40 CFR 63.11(b), OAC 3745-21-09(DD), 40 CFR, Part 60, Subpart III, 40 CFR, Part 60, Subpart NNN, 40 CFR, Part 60, Subpart RRR and 40 CFR, Part 63, Subpart G provides indication of ongoing compliance. A CEM is not economically justified. ET-The hourly limitation is based on the emissions unit's potential to emit (a 98% reduction applied to a calculated engineering estimate of flare vent streams and the emissions from the combustion of the natural gas pilot flame flare - emission factor of 0.068 lbNOx/mmBtu times the maximum hourly burning capacity of 13 mmBtu/hr). The monitoring and recordkeeping requirements ensure that the flare is operating at the proper efficiency and are sufficient to



																demonstrate compliance.
P801	3.90 tons NOx/yr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	N	Other-OAC 3745-31-05(D) OR-Flare and incinerator parametric monitoring. CAM is not applicable. M/R-Flare and incinerator monitoring and recordkeeping as required by 40 CFR 63.11(b), OAC 3745-21-09(DD), 40 CFR, Part 60, Subpart III, 40 CFR, Part 60, Subpart NNN, 40 CFR, Part 60, Subpart RRR and 40 CFR, Part 63, Subpart G provides indication of ongoing compliance. A CEM is not economically justified. ET-The TPY limitation is based on the emissions unit's PTE (maximum hourly emission rate times the maximum annual hours of operation), therefore, if compliance is shown with the hourly emission rate, compliance will also be shown with the annual limitation. Therefore, no monitoring, recordkeeping or reporting is necessary.
N006	5.5 lbs SO2/hr, based upon a 30-day rolling ave.	N	Y	N	N	Y	N	N	Y	N	Y	N	N	N	N	Other-OAC 3745-31-05(D) M, R, Rp – compliance is based on receipt of fuel gas monitoring data (CEM data) and butane analysis using ASTM method from Lima Refining Company, who is the fuel gas supplier for this emissions unit. ET - the M, R and Rp requirements for the CEM are sufficient to demonstrate compliance without requiring formal testing.
N006	24.2 tons SO2/yr	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	Other-OAC 3745-31-05(D) M, R, Rp& ET-The TPY limitation is based on the emissions unit's PTE



															(maximum hourly emission rate times the maximum annual hours of operation), therefore, if compliance is shown with the hourly emission rate, compliance will also be shown with the annual limitation. Therefore, no monitoring, recordkeeping or reporting is necessary.
N006	None	18-06	N	Y	N	N	N	N	N	N	N	N	N	N	ND-The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05. M, R, Rp& ET--There are no emissions limitations established pursuant to this rule, therefore, no monitoring, recordkeeping, reporting or emissions testing is required.
P801	0.48 lb SO <sub>2</sub> /hr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other-OAC 3745-31-05(D) OR-Flare and incinerator parametric monitoring. CAM is not applicable. M/R-Flare and incinerator monitoring and recordkeeping as required by 40 CFR 63.11(b), OAC 3745-21-09(DD), 40 CFR, Part 60, Subpart III, 40 CFR, Part 60, Subpart NNN, 40 CFR, Part 60, Subpart RRR and 40 CFR, Part 63, Subpart G provides indication of ongoing compliance. A CEM is not economically justified. ET-The hourly limitation is based on the emissions unit's potential to emit (a 98% reduction applied to a calculated engineering estimate of flare vent streams and the emissions from the combustion of the natural gas pilot flame flare - emission factor of 0.0006 lb SO <sub>2</sub> /mmBtu times the maximum hourly burning capacity of 13 mmBtu/hr). The monitoring and



																recordkeeping requirements ensure that the flare is operating at the proper efficiency and are sufficient to demonstrate compliance.
P801	2.10 tons SO2/yr	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N		Other-OAC 3745-31-05(D) OR-Flare and incinerator parametric monitoring. CAM is not applicable. M/R-Flare and incinerator monitoring and recordkeeping as required by 40 CFR 63.11(b), OAC 3745-21-09(DD), 40 CFR, Part 60, Subpart III, 40 CFR, Part 60, Subpart NNN, 40 CFR, Part 60, Subpart RRR and 40 CFR, Part 63, Subpart G provides indication of ongoing compliance. A CEM is not economically justified. ET-The TPY limitation is based on the emissions unit's PTE (maximum hourly emission rate times the maximum annual hours of operation), therefore, if compliance is shown with the hourly emission rate, compliance will also be shown with the annual limitation. Therefore, no monitoring, recordkeeping or reporting is necessary.
N006	162 ppm hydrogen sulfide concentration in fuel gas, as a rolling, 3-hr ave.	N	Y	N	N	Y	N	N	Y	N	Y	N	N	N		Other-OAC 3745-31-05(D) M, R, Rp – compliance is based on receipt of fuel gas monitoring data (CEM data) from Lima Refining Company, who is the fuel gas supplier for this emissions unit. ET - the M, R and Rp requirements for the CEM are sufficient to demonstrate compliance without requiring formal testing.
J001,	Exempt	21-07(M)	N	Y	N	N	N	N	N	N	N	N	N	N		ND-These emissions unit are exempt



J002, N006, P801																from this rule pursuant to 3745-21-07(M)(3)(c)(iii), because there is a BAT requirement specified for 85% control for OC and VOC M, R, Rp& ET-There are no requirements since the emissions units are exempt from the rule.
J001, J002, N006, P801	See rule	21-09(DD)	N	N	Y	Y	N	N	Y	N	Y	N	Y	N		OR-Operational restrictions as required by rule. M/R-Monitoring and recordkeeping as required by rule.
P801	See Rule	21-09(EE)	N	N	Y	Y	N	N	Y	N	N	N	N	N		OR-Operational restrictions as required by rule. Rp& ET-This rule does not contain any reporting or emissions testing requirements.
N006	See Rule	N	Y	N	Y	Y	N	N	Y	N	Y	N	Y	N		Other-40 CFR 60, Subpart Db OR-Operational restrictions as required by rule. M/R-Monitoring and recordkeeping as required by rule.
J001, J002, N006	Not applicable	N	Y	Y	N	N	N	N	N	N	N	N	N	N		Other-40 CFR 60, Subpart VV ND – this rule overlaps with LDAR rules in 40 CFR, Part 63, Subpart H and permittee is only required to comply with 40 CFR, Part 63, Subpart H.
P801	See Rule	N	Y	N	Y	Y	N	N	Y	N	Y	N	Y	N		Other-40 CFR 60, Subpart III OR-Operational restrictions as required by rule. M/R-Monitoring and recordkeeping as required by rule.
P801	See Rule	N	Y	N	Y	Y	N	N	Y	N	Y	N	Y	N		Other-40 CFR 60, Subpart NNN OR-Operational restrictions as required by rule.



																M/R-Monitoring and recordkeeping as required by rule.
P801	See Rule	N	Y	N	Y	Y	N	N	Y	N	Y	N	Y	N		Other-40 CFR 60, Subpart RRR OR-Operational restrictions as required by rule. M/R-Monitoring and recordkeeping as required by rule.
P801	See Rule	N	Y	N	Y	Y	N	N	Y	N	Y	N	Y	N		Other-40 CFR 63.6(e)(3) OR-Operational restrictions as required by rule. M/R-Monitoring and recordkeeping as required by rule.
N006, P076, P801	See Rule	N	Y	N	Y	Y	N	N	Y	N	Y	N	Y	N		Other-40 CFR 63, Subpart F OR-Operational restrictions as required by rule. M/R-Monitoring and recordkeeping as required by rule.
P076	Exempt	N	Y	Y	N	N	N	N	N	N	N	N	N	N		Other-40 CFR 63, Subpart F ND – exempt from this rule pursuant to 40 CFR 63.104(a)(5)
N006, P801	See Rule	N	Y	N	Y	Y	N	N	Y	N	Y	N	Y	N		Other-40 CFR 63, Subpart G OR-Operational restrictions as required by rule. M/R-Monitoring and recordkeeping as required by rule.
N006, J001, J002, P801	See Rule	N	Y	N	Y	Y	N	N	Y	N	Y	N	Y	N		Other-40 CFR 63, Subpart H OR-Operational restrictions as required by rule. M/R-Monitoring and recordkeeping as required by rule.



**DRAFT**

**Division of Air Pollution Control  
Title V Permit  
for  
ISP**

Facility ID:	0302020343
Permit Number:	P0105167
Permit Type:	Renewal
Issued:	10/21/2011
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance





Division of Air Pollution Control
Title V Permit
for
ISP

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## Authorization

Facility ID: 0302020343  
Facility Description: Industrial Organic Chemicals, n.e.c.  
Application Number(s): A0017552, A0017553, A0042257  
Permit Number: P0105167  
Permit Description: Renewal Title V Permit for an Industrial Organic Chemicals (n.e.c.) Facility  
Permit Type: Renewal  
Issue Date: 10/21/2011  
Effective Date: To be entered upon final issuance  
Expiration Date: To be entered upon final issuance  
Superseded Permit Number:

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

ISP  
1220 South Metcalf Street  
Lima, OH 45804

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

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

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

*(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 contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

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

## 8. Fees

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

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

## 9. Marketable Permit Programs

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

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

## 10. Reasonably Anticipated Operating Scenarios

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

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

## **11. Reopening for Cause**

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

- a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

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

## **12. Federal and State Enforceability**

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

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

## **13. Compliance Requirements**

- a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
  - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c) The permittee shall submit progress reports to the 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.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the 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.)

## 25. Records Retention Requirements Under State Law Only

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

## 26. Inspections and Information Requests

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

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

## 27. Scheduled Maintenance/Malfunction Reporting

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) None.
2. The following insignificant emissions 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 emissions unit. The insignificant emissions units listed below are subject to one or more applicable requirement contained in a permit-to-install or in the SIP-approved versions of OAC Chapters 3745-17, 3745-18 and 3745-21, 40 CFR, Part 60, Subpart VV and 40 CFR, Part 63, Subpart H.
  - a) J003 – butane railcar/truck loading rack operations (PTI #03-11250)
  - b) J004 – maleic acid loading facility (PTI #03-13464)
  - c) T094 – 32,000 gallon fixed roof butanediol product rundown tank #60 (PTI #03-11250)
  - d) T095 – 32,000 gallon fixed roof butanediol product rundown tank #61 (PTI #03-11250)
  - e) T096 – 35,000 gallon fixed roof butanediol product rerun tank #62 (PTI #03-13628)
  - f) T097 – 12,000 gallon fixed roof organic waste tank #63 (PTI #03-13628)
  - g) T098 – 12,000 gallon fixed rood thermal oxidizer wastewater feed tank #64 (PTI #03-11250)
  - h) T099 – 35,000 gallon fixed roof tetrahydrofuran/water solution tank #65 (PTI #03-13628)
  - i) T100 – 35,000 gallon fixed roof maintenance flush tank #66 (PTI #03-11250)
  - j) T101 – 376,000 gallon fixed roof butanediol product tank #67 (PTI #03-13628)
  - k) T102 - 376,000 gallon fixed roof butanediol product tank #68 (PTI #03-13628)
  - l) T103 – 750,000 gallon fixed roof butanediol product tank #69 (PTI #03-11250)
3. The following emissions units contained in this permit are subject to 40 CFR, Part 63, Subpart F: N006, P076 and P801. 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://www.ecfr.gpoaccess.gov> or by contacting the Ohio EPA, Northwest District office.
4. The following emissions units contained in this permit are subject to 40 CFR, Part 63, Subpart G: N006 and P801. 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://www.ecfr.gpoaccess.gov> or by contacting the Ohio EPA, Northwest District office.
5. The following emissions units contained in this permit are subject to 40 CFR, Part 63, Subpart H: J001, J002, J003, J004, N006, P801, T095, T096, T097, T098, T099, T100, T101, T102 and T103. 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://www.ecfr.gpoaccess.gov> or by contacting the Ohio EPA, Northwest District office.

6. The following emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart Db: N006. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the Internet from the Electronic Code of Federal Regulations (e-CFR) website <http://www.ecfr.gpoaccess.gov> or by contacting the Ohio EPA, Northwest District office.
7. The following emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart VV: J001, J002, N006, P801, T095, T096, T097, T098, T099, T100, T101, T102 and T103. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the Internet from the Electronic Code of Federal Regulations (e-CFR) website <http://www.ecfr.gpoaccess.gov> or by contacting the Ohio EPA, Northwest District office.
8. The following emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart III: P801. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the Internet from the Electronic Code of Federal Regulations (e-CFR) website <http://www.ecfr.gpoaccess.gov> or by contacting the Ohio EPA, Northwest District office.
9. The following emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart NNN: P801. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the Internet from the Electronic Code of Federal Regulations (e-CFR) website <http://www.ecfr.gpoaccess.gov> or by contacting the Ohio EPA, Northwest District office.
10. The following emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart RRR: P801. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the Internet from the Electronic Code of Federal Regulations (e-CFR) website <http://www.ecfr.gpoaccess.gov> or by contacting the Ohio EPA, Northwest District office.
11. The following insignificant emission units are subject to OAC rule 3745-21-09(DD), 40 CFR, Part 60, Subpart VV and 40 CFR, Part 63, Subpart H: T095, T096, T097, T098, T099, T100, T101, T102 and T103 [See B.11.a), B.11.b) and B.11.c)].
  - a) 40 CFR, Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) and (c) address this overlap and state that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.
  - b) The requirements of the applicable standards in OAC rule 3745-21-09(DD), are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to 40 CFR Part 63, Subpart H.
  - c) The permittee shall include the appropriate process equipment and regulated components for these emission units in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and recordkeeping, reporting, and testing) 40 CFR, Part 63, Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks) [See 40 CFR 63.160 – 63.183].

## **C. Emissions Unit Terms and Conditions**



1. J001, BDO Loading

Operations, Property and/or Equipment Description:

Butanediol product loading facilities (1 truck and 2 railcar loading racks). Uses flare for loading of non-photochemically reactive material. Product contains HAPs as impurities.

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-21-07(M)(2)	See b)(2)a.
b.	OAC rule 3745-21-09(DD)	See b)(2)b.
c.	40 CFR, Part 60, Subpart VV (40 CFR 60.480 – 60.489)	See b)(2)b.
d.	OAC rule 3745-31-05(A)(3) (PTI #03-11250, issued 10/28/04)	0.1 ton of volatile organic compounds (VOC)/yr  The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-09(DD) and 40 CFR, Part 63, Subpart H.  [The fugitive emissions associated with this emissions unit are accounted for in the fugitive emission allowable for emissions unit P801.]
e.	40 CFR, Part 63, Subpart H (40 CFR 60.160 – 63.183)	See b)(2)c.
f.	40 CFR, Part 63, Subpart A (40 CFR 63.1 – 63.15)	Table 4 to 40 CFR, Part 63, Subpart H – Applicability of General Provisions to Subpart H shows which parts of the General Provisions in 40 CFR 63.1 – 63.15 apply.

(2) Additional Terms and Conditions

a. This emissions unit is not subject to OAC rule 3745-21-07(M), pursuant to OAC rule 3745-21-07(M)(3)(c)(iii) because this emissions unit has a Best Available

Technology (BAT) requirement pursuant to OAC rule 3745-31-05 that specified an overall control efficiency for organic compounds or VOC emissions that is greater than 85 percent by weight.

- b. 40 CFR, Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) and (c) address this overlap and state that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

The requirements of the applicable standards in OAC rule 3745-21-09(DD), are equivalent to or less stringent than the alternative leak detection and repair (LDAR ) monitoring plan submitted by the permittee, pursuant to 40 CFR, Part 63, Subpart H.

The permittee shall include the appropriate process equipment and regulated components for emissions unit J001 in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and recordkeeping, reporting, and testing) 40 CFR, Part 63, Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks).

- c. This emissions unit is a group 1 transfer rack as defined in 40 CFR 63.111.
- d. This emissions unit is vented to a flare that also controls the emissions from emissions unit P801, which is subject to 40 CFR, Part 63, Subpart H. All operational restrictions, monitoring, record keeping and reporting requirements for the flare are established in the terms and conditions for emissions unit P801. Therefore, no additional monitoring, record keeping and reporting requirements are necessary for this emissions unit.

c) Operational Restrictions

- (1) The permittee shall not exceed an annual material throughput rate of 22,500,000 gallons.

[OAC rule 3745-77-07(A)(1) and PTI #03-11250]

- (2) See 40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart H]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain annual records of the types of materials stored/loaded/unloaded and the throughput, in gallons, for this emissions unit.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- (2) See 40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart H]

## e) Reporting Requirements

- (1) The permittee shall submit annual summary reports that include the actual annual material throughput and all exceedances of the throughput restrictions established in this section for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year and shall include the corrective actions that were taken to achieve compliance.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- (2) See 40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart H]

## f) Testing Requirements

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

- a. Emission Limitation: 0.1 ton VOC/yr

Applicable Compliance Method: The permittee may demonstrate compliance with the annual limitation by using an emission factor and equation (1), from AP-42, Section 5.2.2.1.1, and the actual annual throughput as recorded in d)(1), as follows:

$$LL = 12.46 [S \times P \times M/T]$$

where:

LL = loading loss, pounds per 1,000 gallons (lbs/1,000 gal) of liquid loaded

S = saturation factor = 0.50 (AP-42, Table 5.2-1)

P = true vapor pressure of liquid loaded, pounds per square inch absolute (psia)  
= 0.000789

M = molecular weight of vapors, pounds per pound-mole (lb/lb-mole) = 90

T = temperature of liquid loaded, degrees R = 573.

TPY = LL x (actual annual throughput/1000) x (1 ton/2,000 lbs)

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

## g) Miscellaneous Requirements

- (1) None.



2. J002, THF/Water Loading

Operations, Property and/or Equipment Description:

Tetrahydrofuran/water solution loading facilities (1 truck and 1 railcar loading racks). Uses flare for loading of non-photochemically reactive material. Uses submerged fill. Authorized by PTI # 03-11250. Also shares with crude heavy bottom loading. Product contains HAPs as impurities.

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-21-07(M)(2)	See b)(2)a.
b.	OAC rule 3745-21-09(DD)	See b)(2)b.
c.	40 CFR, Part 60, Subpart VV (40 CFR 60.480 – 60.489)	See b)(2)b.
d.	OAC rule 3745-31-05 (PTI #03-11250, issued 10/28/04)	For emissions from the flare:  0.16 ton of volatile organic compounds (VOC)/yr  no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours  The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-09(DD) and 40 CFR, Part 63, Subpart H.  [The fugitive emissions associated with this emissions unit are accounted for in fugitive emission allowable for emissions unit P801.]
e.	40 CFR, Part 63, Subpart H (40 CFR 60.160 – 63.183)	See b)(2)c.



f.	40 CFR, Part 63, Subpart A (40 CFR 63.1 – 63.15)	Table 4 to 40 CFR, Part 63, Subpart H – Applicability of General Provisions to Subpart H shows which parts of the General Provisions in 40 CFR 63.1 – 63.15 apply.
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(2) Additional Terms and Conditions

- a. This emissions unit is not subject to OAC rule 3745-21-07(M), pursuant to OAC rule 3745-21-07(M)(3)(c)(iii) because this emissions unit has a Best Available Technology (BAT) requirement pursuant to OAC rule 3745-31-05 that specified an overall control efficiency for organic compounds or VOC emissions that is greater than 85 percent by weight.
- b. 40 CFR, Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) and (c) address this overlap and state that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

The requirements of the applicable standards in OAC rule 3745-21-09(DD), are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to 40 CFR, Part 63, Subpart H.

The permittee shall include the appropriate process equipment and regulated components for emissions unit J002 in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and recordkeeping, reporting, and testing) 40 CFR, Part 63, Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks).

- c. This emissions unit is a group 1 transfer rack as defined in 40 CFR 63.111.
- d. This emissions unit is vented to a flare that also controls the emissions from emissions unit P801, which is subject to 40 CFR, Part 63, Subpart H. All operational restrictions, monitoring, record keeping and reporting requirements for the flare are established in the terms and conditions for emissions unit P801. Therefore, no additional monitoring, record keeping and reporting requirements are necessary for this emissions unit.

c) Operational Restrictions

- (1) The flare shall be operated at all times when this emissions unit is in operation.  
[OAC rule 3745-77-07(A)(1) and PTI #03-11250]
- (2) The permittee shall not exceed an annual material throughput rate of 4,500,000 gallons.  
[OAC rule 3745-77-07(A)(1) and PTI #03-11250]



- (3) See 40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart H]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain annual records of the types of materials stored/loaded/unloaded and the throughput, in gallons, for this emissions unit.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- (2) The permittee shall maintain records that document any time periods when the flare serving this emissions unit was not in service while this emissions unit was operating.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- (3) See 40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart H]

e) Reporting Requirements

- (1) The permittee shall submit annual summary reports that include the actual annual material throughput and all exceedances of the throughput restrictions established in this section for this emissions unit during the previous calendar year. These reports shall be submitted by January 31 of each year and shall include the corrective actions that were taken to achieve compliance.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- (2) The permittee shall submit quarterly summaries that include a log of the downtime for the flare, when the associated emissions unit was in operation. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- (3) See 40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart H]

f) Testing Requirements

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

- a. Emission Limitation: 0.16 ton VOC/yr

Applicable Compliance Method: The permittee may demonstrate compliance with the annual limitation by using an emission factor and equation (1), from AP-42, Section 5.2.2.1.1, the actual annual throughput, as recorded in d)(1), and a control factor of  $(1-0.98)^*$ , as follows:



$$LL = 12.46 \times [S \times P \times M/T]$$

where:

LL = loading loss, pounds per 1,000 gallons (lbs/1,000 gallon) of liquid loaded

S = saturation factor = 0.50 (AP-42, Table 5.2-1)

P = true vapor pressure of liquid loaded, pounds per square inch absolute (psia)  
= 0.7734

M = molecular weight of vapors, pounds per pound-mole (lb/lb-mole) = 67

T = temperature of liquid loaded, degrees R = 555

TPY = LL x (actual annual throughput/1,000) x (1 ton/2,000 lbs) x (1 - 0.98\*)

\*The control efficiency of the flare is assumed to be 98%.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- b. Emission Limitation: no visible emissions from the flare, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, from the flare

Applicable Compliance Method: If required, the permittee shall demonstrate compliance in accordance with 40 CFR, Part 60, Appendix A, Method 22.

[OAC rule 3745-77-07(C) (1) and PTI #03-11250]

g) Miscellaneous Requirements

- (1) None.



3. N006, BDO Plant #1 SOGB

Operations, Property and/or Equipment Description:

Butanediol manufacturing plant No. 1 scrubber off-gas boiler (SOGB)

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

(1) d)(10), d)(11) and d)(12)

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) (PTI #P0107710, modification issued 4/27/11)	63.0 lbs of volatile organic compounds (VOC)/hr and 276.0 tons VOC/yr  205.4 lbs of carbon monoxide (CO)/hr and 900.0 tons CO/yr  25.4 lbs of nitrogen oxides (NOx)/hr, based upon a rolling, 24-hour average and 111.3 tons NOx/yr  5.5 lbs of sulfur dioxide (SO2)/hr, based upon a 30-day rolling average and 24.2 tons SO2/yr  6.4 lbs of particulate emissions (PE)/hr and 28.0 tons PE/yr  Visible PE shall not exceed 10% opacity as a 6-minute average.  The permittee shall not burn in this emissions unit any fuel gas that contains hydrogen sulfide (H2S) in excess of 162 ppm, as a rolling, 3-hour average. This concentration is equivalent to 230 mg H2S/dscm.  See b)(2)a. and c)(1)
b.	ORC 3704.03(T)	See b)(2)b.
c.	OAC rule 3745-17-07(A)	See b)(2)c.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-09	See b)(2)c.
e.	OAC rule 3745-18-06	See b)(2)c.
f.	OAC rule 3745-21-07(M)(2)	See b)(2)d.
g.	OAC rule 3745-21-09(DD)	See b)(2)e.
h.	40 CFR, Part 60, Subpart Db (40 CFR 60.40b – 60.49b)	See b)(2)f., c)(5), d)(13), e)(9) and f)(4)
i.	40 CFR, Part 60, Subpart VV (40 CFR 60.48 – 60.489)	See b)(2)e.
j.	40 CFR, Part 63, Subpart F (40 CFR 63.100 – 63.107)	See c)(6), d)(14), e)(10) and f)(5)
k.	40 CFR, Part 63, Subpart G (40 CFR 63.110 – 63.153)	See b)(2)g., b)(2)h., c)(7), d)(15), e)(11) and f)(6)
l.	40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)	See b)(2)e., c)(8), d)(16), e)(12) and f)(7)
m.	40 CFR, Part 60, Subpart A (40 CFR 60.1 – 60.19)	See 40 CFR 60.1 through 60.19
n.	40 CFR, Part 63, Subpart A (40 CFR 63.1 – 63.15)	Table 3 of Subpart F of 40 CFR, Part 63 – Applicability of General Provisions to Subpart F shows which parts of the General Provisions in 40 CFR 63.1 – 15 apply.  Table 1A of Subpart G of 40 CFR, Part 63 – Applicability of General Provisions to Subpart G shows which parts of the General Provisions in 40 CFR 63.1 – 15 apply.  Table 4 of Subpart H of 40 CFR, Part 63 – Applicability of General Provisions to Subpart H shows which parts of the General Provisions in 40 CFR 63.1 – 15 apply.

(2) Additional Terms and Conditions

- a. PTI No. P0107710 established the following federally enforceable emission limitations for the purpose of limiting potential to emit (PTE) to avoid Prevention of Significant Deterioration (PSD) requirements. The federally enforceable emission limitations are based on the operational restrictions contained in c)(1):
  - i. 63.0 lbs VOC/hr and 276.0 tons VOC/yr;
  - ii. 205.4 lbs CO/hr and 900.0 tons CO/yr;
  - iii. 25.4 lbs NOx/hr, based upon a rolling, 24-hour average and 111.3 tons NOx/yr;

- iv. 5.5 lbs SO<sub>2</sub>/hr, based upon a 30-day rolling average and 24.2 tons SO<sub>2</sub>/yr;
  - v. 6.4 lbs PE/hr and 28.0 tons PE/yr;
  - vi. Visible PE shall not exceed 10% opacity as a 6-minute average; and
  - vii. The permittee shall not burn in this emissions unit any fuel gas that contains hydrogen sulfide (H<sub>2</sub>S) in excess of 162 ppm, as a rolling, 3-hour average. This concentration is equivalent to 230 mg H<sub>2</sub>S/dscm.
- b. The requirements of this rule are equivalent to the requirements established pursuant to OAC rule 3745-31-05(D); therefore, the permittee has satisfied the Best Available Technology (BAT) requirements pursuant to ORC 3704.03(T) in this permit.
  - c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
  - d. This emissions unit is not subject to OAC rule 3745-21-07(M), pursuant to OAC rule 3745-21-07(M)(3)(c)(iii) because this emissions unit has a Best Available Technology (BAT) requirement pursuant to OAC rule 3745-31-05 that specified an overall control efficiency for organic compounds or VOC emissions that is greater than 85 percent by weight.
  - e. 40 CFR, Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) and (c) address this overlap and state that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.  
  
The requirements of the applicable standards in OAC rule 3745-21-09(DD), are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to 40 CFR, Part 63, Subpart H.  
  
The permittee shall include the appropriate process equipment and regulated components for emissions unit N006 in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) 40 CFR, Part 63, Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks).
- f. NO<sub>x</sub> emissions from the combustion of fuel and waste streams in the SOGB shall not exceed 0.10 lb/mmBtu total heat input.
  - g. This emissions unit is a group 1 process vent as defined in 40 CFR 63.111.
  - h. Pursuant to 40 CFR 63.113(h), the permittee is not required to make a group determination as described in 40 CFR 63.115 because it complies with 40 CFR 63.113(a)(1) or (a)(2).

## c) Operational Restrictions

(1) The following operational restrictions have been included in this permit for the purpose of establishing federally enforceable requirements which limit the PTE for VOC emissions [See b)(2)a.]:

- a. The boiler shall achieve a destruction efficiency greater than or equal to 99% for gaseous VOC.
- b. The boiler shall achieve a reduction efficiency of greater than or equal to 99% for liquid organics.

[OAC rule 3745-77-07(A)(1) and PTI #P0107710]

(2) The permittee shall only burn liquid organic waste streams that meet the requirements of 40 CFR 261.38, whether or not they are hazardous, in this emissions unit which meet the following requirements for hazardous wastes:

- a. the liquid organic waste streams have been classified as a hazardous waste solely because it possesses the characteristic of ignitability as described by the test for characteristics of hazardous wastes under Chapter 3745-51 of the Administrative Code, or have been exempted by the Director from hazardous waste incineration requirements in accordance with OAC rule 3745-57-40(C); and
- b. the liquid organic waste streams are not applicable to 40 CFR, Part 63, Subpart EEE - National Emission Standards for Hazardous Waste Combustors in accordance with the comparable fuels exclusion.

[OAC rule 3745-77-07(A)(1) and PTI #P0107710]

(3) The permittee shall establish a range of operating parameters for the SOGB that meet the requirements of 40 CFR, Part 63, Subpart G.

[40 CFR 63.114(e), 40 CFR 63.116(c), OAC rule 3745-77-07(A)(1) and PTI #P0107710].

(4) At all times, including periods of startup, shutdown and malfunction as defined by a plan developed in accordance with 63.103(c)(2), the thermal oxidizer shall be operated in accordance with good air pollution practices.

[OAC rule 3745-77-07(A)(1) and PTI #P0107710]

(5) See 40 CFR, Part 60, Subpart Db (40 CFR 60.40b – 60.49b)

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 60, Subpart Db]

(6) See 40 CFR, Part 63, Subpart F (40 CFR 63.100 – 63.107)

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart F]

- (7) See 40 CFR, Part 63, Subpart G (40 CFR 63.110 – 63.153)  
[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart G]
- (8) See 40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)  
[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart H]
- d) Monitoring and/or Recordkeeping Requirements
- (1) In order to demonstrate compliance with the requirement not to burn any fuel gas that contains an H<sub>2</sub>S concentration in excess of 230 mg/dscm (0.1 gr/dscf) (equivalent to 162 ppm) based on a 3-hour, rolling average in this emissions unit, the permittee shall calculate and record the H<sub>2</sub>S concentration, in ppm, for each rolling, 3-hour average, based on the data generated from the continuous monitoring system currently required for on the Lima Refining Company (premise #0302020012) fuel gas system which also serves this emissions unit. The monitoring to show ongoing compliance with the H<sub>2</sub>S limitation will also be adequate to ensure ongoing compliance with the SO<sub>2</sub> emission limitation.
- Sulfur monitoring for raw material butane shall be conducted by the appropriate ASTM methods. For butane supplied by Lima Refining Company, weekly analyses shall be required at a minimum.
- [OAC rule 3745-77-07(C)(1) and PTI #P0107710]
- (2) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the SOGB 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:
- the color of the emissions;
  - whether the emissions are representative of normal operations;
  - if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - the total duration of any visible emission incident; and
  - any corrective actions taken to eliminate the visible emissions.
- [OAC rule 3745-77-07(C)(1) and PTI #P0107710]
- (3) In order to demonstrate compliance with the NO<sub>x</sub> emission limitation of 23.0 lbs/hr, based upon a 24-hour rolling average, as established pursuant to OAC rule 3745-31-05 and the NO<sub>x</sub> emission limitation of 0.10 lb/mmBtu heat input based on a 30-day, rolling average as required by 40 CFR 60.44b, the permittee shall operate and maintain a continuous emission monitor (CEM) on the outlet stream of the SOGB to continuously monitor and record NO<sub>x</sub> from emissions unit N006 in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the

requirements specified in 40 CFR Part 60.13 and shall be installed and operated in accordance with the applicable portions of 40 CFR 60.48b.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (4) The permittee shall operate the SOGB in order to meet the requirements of 40 CFR, Part 63, Subpart G. The permittee shall operate continuous temperature monitoring and recording devices in the firebox of the thermal oxidizer. This parameter monitoring for temperature compliance with the requirements of 63.114(a)(1) provides parametric monitoring as an indicator of ongoing compliance with the applicable VOC and CO emission limitations.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (5) The following information shall be recorded for this emissions unit and kept in a readily accessible location:
- a. detailed schematics, design specifications, and piping and instrumentation diagrams;
  - b. the dates and descriptions of any changes in the design specification;
  - c. description of the parameter and or parameters monitored to ensure that the thermal oxidizer is operated and maintained in conformance with design, and an explanation of the reason for selecting such a parameter or parameters;
  - d. periods when the SOGB is not operated as designed; and
  - e. dates of start-ups and shutdowns of the SOGB.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (6) The permittee shall maintain records that document the operating times for the SOGB and the monitoring equipment. The information shall be retained for a period of five years.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (7) The permittee shall keep the following up-to-date and readily accessible records for a period of 5 years:
- a. continuous records of SOGB firebox temperature [40 CFR 63.118(a) and 40 CFR 63.152(f)];
  - b. records of all periods when the closed vent stream is diverted from the SOGB [40 CFR 63.118(c)(3)]; and
  - c. records of the daily average SOGB firebox temperature for each operating day [40 CFR 63.118(a) and 40 CFR 63.152(f)]

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (8) The permittee shall comply with the applicable monitoring and record keeping requirements for emissions unit N006 contained in 40 CFR, Part 60, Subpart Db.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (9) 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 unless otherwise specified in this permit and/or required by either State or federal applicable regulations in accordance with the general terms and conditions of this permit. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings, if a strip-chart recorder is employed, for continuous monitoring instrumentation, and copies of all reports required by the permit. Such records may be maintained in computerized form.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (10) The permit to install for this emissions unit (N006) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutants:

Pollutant: Methanol

TLV ( $\mu\text{g}/\text{m}^3$ ): 262,000

Maximum Hourly Emission Rate (lbs/hr): 0.15

Predicted 1-Hour Maximum Ground-Level Concentration ( $\mu\text{g}/\text{m}^3$ ): 174

MAGLC ( $\mu\text{g}/\text{m}^3$ ): 6,238

Pollutant: Tetrahydrofuran

TLV ( $\mu\text{g}/\text{m}^3$ ): 590,000

Maximum Hourly Emission Rate (lbs/hr): 5.20

Predicted 1-Hour Maximum Ground-Level Concentration ( $\mu\text{g}/\text{m}^3$ ): 358

MAGLC ( $\mu\text{g}/\text{m}^3$ ): 14,048

Pollutant: Ethanol

TLV ( $\mu\text{g}/\text{m}^3$ ): 1,880,000



Maximum Hourly Emission Rate (lbs/hr): 2.2

Predicted 1-Hour Maximum Ground-Level Concentration ( $\mu\text{g}/\text{m}^3$ ): 151

MAGLC ( $\mu\text{g}/\text{m}^3$ ): 44,762

Pollutant: Propanol

TLV ( $\mu\text{g}/\text{m}^3$ ): 492,000

Maximum Hourly Emission Rate (lbs/hr): 1.90

Predicted 1-Hour Maximum Ground-Level Concentration ( $\mu\text{g}/\text{m}^3$ ): 131

MAGLC ( $\mu\text{g}/\text{m}^3$ ): 11,714

Pollutant: Butanol

TLV ( $\mu\text{g}/\text{m}^3$ ): 152,000

Maximum Hourly Emission Rate (lbs/hr): 4.35

Predicted 1-Hour Maximum Ground-Level Concentration ( $\mu\text{g}/\text{m}^3$ ): 299

MAGLC ( $\mu\text{g}/\text{m}^3$ ): 2,670

Pollutant: Formic Acid

TLV ( $\mu\text{g}/\text{m}^3$ ): 9,400

Maximum Hourly Emission Rate (lbs/hr): 0.02

Predicted 1-Hour Maximum Ground-Level Concentration ( $\mu\text{g}/\text{m}^3$ ): 1.38

MAGLC ( $\mu\text{g}/\text{m}^3$ ): 224

Pollutant: Acrylic Acid

TLV ( $\mu\text{g}/\text{m}^3$ ): 5,900

Maximum Hourly Emission Rate (lbs/hr): 0.02

Predicted 1-Hour Maximum Ground-Level Concentration ( $\mu\text{g}/\text{m}^3$ ): 1.38

MAGLC ( $\mu\text{g}/\text{m}^3$ ): 141

Pollutant: Acetic Acid

TLV ( $\mu\text{g}/\text{m}^3$ ): 25,000

Maximum Hourly Emission Rate (lbs/hr): 0.05

Predicted 1-Hour Maximum Ground-Level Concentration ( $\mu\text{g}/\text{m}^3$ ): 3.44

MAGLC ( $\mu\text{g}/\text{m}^3$ ): 595

[PTI #P0107710]

- (11) Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used , or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05.

If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

[PTI #P0107710]

- (12) The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
  - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
  - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

[PTI #P0107710]

- (13) See 40 CFR, Part 60, Subpart Db (40 CFR 60.40b – 60.49b)  
[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart Db]
- (14) See 40 CFR, Part 63, Subpart F (40 CFR 63.100 – 63.107)  
[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart F]
- (15) See 40 CFR, Part 63, Subpart G (40 CFR 63.110 – 63.153)  
[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart G]
- (16) See 40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)  
[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart H]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the fuel content restriction of 230 mg H<sub>2</sub>S/dscm (equivalent to 162 ppm of H<sub>2</sub>S). These reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the SOGB stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (3) The permittee shall submit the following semiannual reports:
- a. exceedances of all monitored parameters;
  - b. a log of the operating time for the thermal oxidizer;
  - c. periods of time when the closed vent system is diverted from the thermal oxidizer;
  - d. all periods of time when the thermal oxidizer was not operational;
  - e. all periods of time when required monitoring data was not collected; and
  - f. daily average values of thermal oxidizer firebox temperature for both excused and un-excused excursions when the daily average temperature values were outside the ranges established in the Notification of Compliance or the operating permit. For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified [40 CFR 63.152(c) and 40 CFR 63.118(f)]

The time periods or deadlines specified in 40 CFR 63.152(c) may be changed by mutual agreement between the permittee and the Ohio EPA in accordance with 40 CFR 63.9(i).

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (4) The permittee shall comply with the record keeping and reporting requirements outlined in 40 CFR 60.49b. The reporting requirements include the submission of quarterly excess emission reports to the Ohio EPA, Northwest District Office in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (5) The permittee shall maintain records of all data obtained by the continuous NO<sub>x</sub> monitoring system including but not limited to parts per million of NO<sub>x</sub> on a six-minute basis, emissions of NO<sub>x</sub> in units of the applicable standards in the appropriate averaging period (e.g., 3-hour, rolling average and lb/mmBtu as a 30-day, rolling average), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (6) Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(H), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of NO<sub>x</sub> values in excess of any applicable limitations specified in the terms and conditions of this permit, in units of the standards. These reports shall also contain the total NO<sub>x</sub> emissions for the calendar quarter (in tons.)

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any continuous NOx monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment functions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous quarter in accordance with the general terms and conditions of this permit.

The time periods or deadlines specified in this provision may be changed by mutual agreement between the permittee and the Ohio EPA in accordance with 40 CFR 63.19(f).

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (7) The quality assurance/quality control plans and logbooks dedicated to the continuous NOx monitoring systems, developed in accordance with 40 CFR, Part 60, Appendix F, shall be kept on site and available for inspection during regular hours.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (8) The permittee will submit start-up, shutdown, and malfunction reports in accordance with 40 CFR 63.10(d)(5); except that reports shall be submitted at the times specified in 40 CFR 63.152(d) of Subpart G and 40 CFR 63.182(d) of Subpart H.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (9) See 40 CFR, Part 60, Subpart Db (40 CFR 60.40b – 60.49b)

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

- (10) See 40 CFR, Part 63, Subpart F (40 CFR 63.100 – 63.107)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart F]

- (11) See 40 CFR, Part 63, Subpart G (40 CFR 63.110 – 63.153)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart G]

- (12) See 40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart H]

f) Testing Requirements

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

- a. Emission Limitations: 57.0 lbs VOC/hr, 186.0 lbs CO/hr, 23.0 lbs NO<sub>x</sub>/hr, 5.0 lbs SO<sub>2</sub>/hr, 5.8 lbs PE/hr

Applicable Compliance Method: If required, compliance with the hourly allowable PE limitation shall be based on the results of stack testing conducted in accordance with 40 CFR, Part 60, Appendix A - Test Methods 1 - 5.

If required, compliance with the hourly allowable SO<sub>2</sub> emission limitation shall be based on the results of stack testing conducted in accordance with 40 CFR, Part 60, Appendix A - Test Methods 1 - 4 and 6.

[Compliance with the hourly, based upon a 30-day rolling average, SO<sub>2</sub> emission limitation shall be based upon H<sub>2</sub>S monitoring for refinery fuel gas and sulfur monitoring for input butane using ASTM test methods. For butane, supplied by Lima Refining Group, sulfur monitoring shall be performed weekly at a minimum. For butane purchased from other commercial sources, sulfur monitoring shall be performed on a per shipment basis.]

Compliance with the hourly allowable VOC emission limitation shall be based on the results of stack testing conducted in accordance with 40 CFR, Part 60, Appendix A - Test Methods 1 - 4 and 18, 25, or 25A, as appropriate.

Compliance with the hourly allowable NO<sub>x</sub> emission limitation shall be based on the continuous NO<sub>x</sub> emissions monitor and the results of stack testing conducted in accordance with 40 CFR, Part 60, Appendix A - Test Methods 1 - 4 and 7.

Compliance with the hourly allowable CO emission limitation shall be based on the results of stack testing conducted in accordance with 40 CFR, Part 60, Appendix A - Test Methods 1 - 4 and 10.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- b. Emission Limitations: 250.0 tons VOC/yr, 814.7 tons CO, 102.0 tons NO<sub>x</sub>/yr, 21.90 tons SO<sub>2</sub>/yr, 25.4 tons PE/yr

Applicable Compliance Method: The annual emission limitation for each pollutant above was developed by multiplying the hourly emission limitation for each pollutant by 8,760; and then dividing by 2,000. Therefore, as long as compliance with the hourly allowable emission limitation for each pollutant is maintained, compliance with the annual emission limitation for the pollutant shall be ensured.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- c. Emission Limitation: 0.10 lb NO<sub>x</sub>/mmBtu total heat input

Applicable Compliance Method: Compliance with the NO<sub>x</sub> standard of 0.10 lb/mmBtu heat input shall be demonstrated through a 30-day rolling average of all the calculated hourly NO<sub>x</sub> emission rates for the previous 30 operating days based on the results of the continuous emission monitor (CEM).

The permittee shall also monitor and record fuel gas and off-gas flow rates to the SOGB. The above information will be applied to the following equation for calculating lbs NO<sub>x</sub> per mmBtu heat input:

lbs NO<sub>x</sub>/mmBtu heat input = lbs NO<sub>x</sub> emitted/mmBtu heat input

**lbs NO<sub>x</sub> = ppmv/10<sup>6</sup> x MW<sub>corr</sub> x Stack (lb/hr) x Moisture**

Where:

Ppmv = concentration of NO<sub>x</sub> measured by CEM on SOGI outlet

MW<sub>corr</sub> = molecular weight correction factor, NO<sub>x</sub> (46.01 lb/lb-mole) to stack gas (~29.7 lb/lb-mole)

Stack = stack flow, lb/hr

Moisture = moisture correction factor, dry NO<sub>x</sub> CEM, wet stack flowmeter

**mmBtu/hr = [Fuel \* DH<sub>cf</sub> / 10<sup>6</sup>] + [Offgas lb \* DH<sub>co</sub> / 10<sup>6</sup>]**

Where:

Fuel = Fuel flow rate (natural gas or refinery fuel gas), average lb/hr

Offgas = Scrubber offgas flow rate, average lbs/hr

DH<sub>cf</sub> = Heat of combustion for fuel, Btu/lb (for natural gas, 23,000 Btu/lb and refinery fuel gas, 20,482 Btu/lb)

DH<sub>co</sub> = Heat of combustion for off gas =  $\sum_{i=1}^n C_i \text{Btu}_i$

where:

C<sub>i</sub> = offgas concentration of component i, in lb/hr

Btu<sub>i</sub> = Btu/lb of component i from published values or measured values of the heats of combustion determined using ASTM D2382-76 or 88 or D4809-95

10<sup>6</sup> = conversion to MM

The permittee shall demonstrate compliance with the 0.10 lb NO<sub>x</sub> per mmBtu limit through a 30-day, rolling average of all the calculated hourly NO<sub>x</sub> emission rates for the preceding 30 operating days. The monitoring equipment shall be installed and operated in accordance with the applicable portions of 40 CFR 60.48b.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- d. Emission Limitation: Visible PE shall not exceed 10% opacity as a 6-minute average

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation pursuant to Method 9 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (2) The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:
- a. The emission testing shall be conducted within 2 ½ years after effective date of this permit and within 6 months prior to permit expiration.
  - b. The emission testing shall be conducted to demonstrate compliance with the mass emission rates for VOC and CO. Performance testing shall also be conducted to demonstrate compliance with a liquid organic reduction efficiency of 99 percent, by weight.
  - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:
    - VOC - Methods 1 - 4 and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A
    - CO - Methods 1 - 4 and 10 of 40 CFR, Part 60, Appendix A
    - Liquid OC - The permittee shall submit a reduction performance test plan to be approved by the Ohio EPA which will demonstrate compliance with the requirement to reduce liquid organic materials by 99 percent or greater.
    - Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
  - 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 Ohio EPA, Northwest District Office.

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

Personnel from the Ohio EPA, Northwest District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a



valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

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

- (3) Performance testing requirements for emissions from emissions unit P801 to the SOGB are detailed in the terms and conditions for emissions unit N006 due to the fact that this incinerator also serves as a control device for emissions unit P801. All operational restrictions, monitoring, record keeping, reporting, and testing requirements for other emissions sources from P801, including but not limited to emissions from the butanediol plant No. 1 flare, are established in emissions unit P801.

[OAC rule 3745-77-07(C)(1) and PTI #P0107710]

- (4) See 40 CFR, Part 60, Subpart Db (40 CFR 60.40b – 60.49b)

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

- (5) See 40 CFR, Part 63, Subpart F (40 CFR 63.100 – 63.107)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart F]

- (6) See 40 CFR, Part 63, Subpart G (40 CFR 63.110 – 63.153)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart G]

- (7) See 40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart H]

g) Miscellaneous Requirements

- (1) None.



4. P076, Cooling Tower #1

Operations, Property and/or Equipment Description:

Non-contact cooling tower system

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
c.	OAC rule 3745-31-05(A)(3) (PTI #03-11250, issued 10/28/04)	0.184 lb PE/hr and 0.81 ton PE/yr  0.22 lb of volatile organic compounds (VOC)/hr and 0.96 ton VOC/yr  The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR, Part 63, Subpart F.
d.	40 CFR, Part 63, Subpart F (40 CFR 63.100 – 63.107)	See b)(2)a.

(2) Additional Terms and Conditions

a. This emissions unit is exempt from the requirements of this rule pursuant to 40 CFR 63.104(a)(5).

c) Operational Restrictions

(1) The permittee shall maintain a rolling, 4-week average total dissolved solids content of 3,500 mg/l or less in the cooling water.

[OAC rule 3745-77-07(A)(1) and PTI #03-11250]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform the following:

- a. The permittee shall test and record the total dissolved solids content (mg/l) of the cooling water on a weekly basis using a conductivity meter or other U.S. EPA-approved test procedures.
- b. Each week, the permittee shall calculate and record the average total dissolved solids content value based on the four most current readings from d)(1)a.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the total dissolved solids restriction of 3,500 mg/l. These quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

f) Testing Requirements

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

- a. Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- b. Emission Limitation: 0.184 lb PE/hr

Applicable Compliance Method: Compliance with the hourly allowable PE limitation shall be demonstrated by multiplying the maximum total dissolved solids content of the cooling water (3,500 mg/liter) by the maximum water flow rate (gallons/hr) and by a maximum drift loss factor of 0.0005%, and then by a conversion factor of (3.785 liter/gallon x lb/453,592 mg).

The permittee shall maintain documentation from the manufacturer of the cooling tower drift loss eliminators demonstrating that the cooling tower design specifications meet the maximum drift loss of 0.0005%.

In the event of equipment modification to the drift loss eliminators, specifications demonstrating compliance with a maximum drift loss of 0.0005% shall be submitted to the Ohio EPA and maintained by the permittee.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- c. Emission Limitation: 0.81 tons PE/yr

Applicable Compliance Method: The annual emission limitation was developed by multiplying the hourly emission limitation by 8,760 hrs/yr; and then dividing by 2,000 lbs/ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- d. Emission Limitation: 0.22 lb VOC/hr

Applicable Compliance Method: Compliance with the hourly allowable VOC emission limitation may be determined by multiplying an emission factor of 0.175 lb VOC/1,000,000 gallons by the maximum cooling water throughput capacity of 1,200,000 gallons per hour.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- e. Emission Limitation: 0.96 tons VOC/yr

Applicable Compliance Method: The annual emission limitation was developed by multiplying the hourly emission limitation by 8,760 hrs/yr; and then dividing by 2,000 lbs/ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- g) Miscellaneous Requirements

- (1) None.



5. P801, Various Sources

Operations, Property and/or Equipment Description:

Maleic anhydride reactor and recovery section, maleic acid hydrogenation section, butanediol recovery and purification section, butane feedstock supply section. Also includes fugitives.

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) (PTI #P0107710, modification issued 4/27/11)	<p><u>Emissions from this process vented to the flare:</u> 0.04 lb of particulate emissions (PE)/hr and 0.18 tons PE/yr</p> <p>7.58 lbs of volatile organic compounds (VOC)/hr, and 33.2 tons VOC/yr</p> <p>4.85 lbs of carbon monoxide (CO)/hr and 21.23 tons CO/yr</p> <p>0.89 lb of nitrogen oxides (NOx)/hr and 3.90 tons NOx/yr</p> <p>0.48 lb of sulfur dioxide (SO2)/hr and 2.10 tons SO2/yr</p> <p>No visible emissions from the flare [See c)(3)a.i.]</p> <p><u>Fugitive Process Emissions:</u> 11.89 tons VOC/yr</p> <p>The emissions from this process that are vented to the scrubber off-gas boiler (SOGB) are accounted for in the emissions allowables for emissions unit N006.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)a. and c)(1)
b.	ORC 3704.03(T)	See b)(2)b.
c.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)c.
d.	OAC rule 3745-31-05(A)(3), as effective 12/01/06	See b)(2)d.
e.	OAC rule 3745-21-07(M)(2)	See b)(2)e.
f.	OAC rule 3745-21-09(DD)	See b)(2)f.
g.	OAC rule 3745-21-09(EE)	See b)(2)g.
h.	40 CFR, Part 60, Subpart VV	See b)(2)f.
i.	40 CFR, Part 60, Subpart III	See b)(2)h.
j.	40 CFR, Part 60, Subpart NNN	See b)(2)i.
k.	40 CFR, Part 60, Subpart RRR	See b)(2)j.
l.	40 CFR, Part 63, Subpart F	See c)(6), d)(3), e)(3) and f)(2)
m.	40 CFR, Part 63, Subpart G	See c)(7), d)(4), e)(4) and f)(3)
n.	40 CFR, Part 63, Subpart H	See b)(2)f., c)(8), d)(5), e)(5) and f)(4)
o.	40 CFR, Part 63, Subpart A [40 CFR Part 63.1 – 63.15]	<p>Table 3 of Subpart F of 40 CFR, Part 63 – Applicability of General Provisions to Subpart F shows which parts of the General Provisions in 40 CFR 63.1 – 15 apply.</p> <p>Table 1A of Subpart G of 40 CFR, Part 63 – Applicability of General Provisions to Subpart G shows which parts of the General Provisions in 40 CFR 63.1 – 15 apply.</p> <p>Table 4 of Subpart H of 40 CFR, Part 63 – Applicability of General Provisions to Subpart H shows which parts of the General Provisions in 40 CFR 63.1 – 15 apply.</p>

(2) Additional Terms and Conditions

a. PTI No. P0107710 modification, issued 4/27/11, established the following federally enforceable emission limitations for the purpose of limiting potential to emit (PTE) to avoid Prevention of Significant Deterioration (PSD) requirements. The federally enforceable emission limitations are based on the operational restrictions contained in c)(1):

i. Emissions from this process vented to the flare:

(a) 0.04 lb PE/hr and 0.18 tons PE/yr

(b) 7.58 lbs VOC/hr, and 33.2 tons VOC/yr

- (c) 4.85 lbs CO/hr and 21.23 tons CO/yr
  - (d) 0.89 lb NOx/hr and 3.90 tons NOx/yr
  - (e) 0.48 lb SO<sub>2</sub>/hr and 2.10 tons SO<sub>2</sub>/yr
  - (f) No visible emissions from the flare [See c)(3)a.i.]
- ii. Fugitive Process Emissions:
    - (a) 11.89 tons VOC/yr
  - iii. The emissions from this process that are vented to the scrubber off-gas boiler (SOGB) are accounted for in the emissions allowables for emissions unit N006.
- b. The requirements of this rule are equivalent to the requirements established pursuant to OAC rule 3745-31-05(D); therefore, the permittee has satisfied the Best Available Technology (BAT) requirements pursuant to ORC 3704.03(T) in this permit.
  - c. The requirements of this rule are equivalent to the requirements established pursuant to OAC rule 3745-31-05(D); therefore, the permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit.

The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by 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 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, the requirements under this rule no longer apply.

It should be noted that the emission limitations and control requirements established pursuant to OAC rule 3745-31-05(D) will remain applicable after the above SIP revisions are approved by U.S. EPA.

- d. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the SIP.

Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3)(a), as effective December 1, 2006, do not apply to the PE, NO<sub>x</sub> and SO<sub>2</sub> emissions from this air contaminant source since the controlled potential to emit (PTE) is less than 10 tons per year taking into consideration federally enforceable requirements established under OAC rule 3745-31-05(D).

- e. This emissions unit is not subject to OAC rule 3745-21-07(M), pursuant to OAC rule 3745-21-07(M)(3)(c)(iii) because this emissions unit has a Best Available Technology (BAT) requirement pursuant to OAC rule 3745-31-05 that specified an overall control efficiency for organic compounds or VOC emissions that is greater than 85 percent by weight.
- f. 40 CFR, Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) and (c) address this overlap and state that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

The requirements of the applicable standards in OAC rule 3745-21-09(DD) are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to 40 CFR, Part 63, Subpart H.

The permittee shall include the appropriate process equipment and regulated components for emissions unit P801 in the current site fugitive LDAR program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of 40 CFR, Part 63, Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks).

- g. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- h. 40 CFR, Part 60, Subpart III regulations overlap with those of 40 CFR, Part 63, Subpart G. 40 CFR 63.110(d) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart III is required to comply only with the provisions of 40 CFR, Part 63, Subpart G.
- i. 40 CFR, Part 60, Subpart NNN regulations overlap with those of 40 CFR, Part 63, Subpart G. 40 CFR 63.110(d) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart NNN is required to comply only with the provisions of 40 CFR, Part 63, Subpart G.
- j. 40 CFR, Part 60, Subpart RRR regulations overlap with those of 40 CFR, Part 63, Subpart G. 40 CFR 63.110(d) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart RRR is required to comply only with the provisions of 40 CFR, Part 63, Subpart G.

Pursuant to 40 CFR 63.113(h), the permittee is not required to make a group determination as described in 40 CFR 63.115 because it complies with 40 CFR 63.113(a)(1) or (a)(2).

- k. This emissions unit is vented to a thermal oxidizer that also controls the emissions from emissions unit N006. All operational restrictions, monitoring, record keeping, reporting and testing requirements for the thermal oxidizer are established in the terms and conditions for emissions unit N006. Therefore, no

additional monitoring, record keeping, reporting and testing requirements are necessary for this emissions unit.

c) Operational Restrictions

(1) The following operational restrictions have been included in this permit for the purpose of establishing federally enforceable requirements which limit the PTE for VOC emissions [See b)(2)a.]:

- a. Emissions from this emissions unit shall be vented to a closed process vent. The closed process vent system shall meet the following control requirements:
  - i. maleic acid scrubber vent emissions shall be reduced by 99% utilizing a thermal oxidizer; and
  - ii. all process vent emissions not routed to a thermal oxidizer shall be combusted in a flare.

[OAC rule 3745-77-07(A)(1) and PTI No. P0107710]

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

[OAC rule 3745-77-07(A)(1) and PTI No. P0107710]

(3) The permittee shall comply with the following operational requirements of 40 CFR, Part 63, Subparts A, F, G and H:

- a. Flare operational restrictions [40 CFR 63.11(a)(4)]:
  - i. The flare shall be designed for and operated with no visible emissions as determined by "Method 22, 40 CFR, Part 60, Appendix A," except for periods not to exceed a total of five minutes during any 120 consecutive minutes.
  - ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times. If an electric arc ignition system is employed, the arcing shall pulse continually.
  - iii. The flare shall be steam-assisted.
  - iv. The net heating value of the gas being controlled in the flare shall meet the requirements of 40 CFR 63.11, as determined by the specified analytical methods.
  - v. The flare shall be designed and operated to meet the requirements for actual exit velocity, as determined by the method specified in 40 CFR 63.11.
  - vi. The permittee shall ensure the flare is operated and maintained in conformance with its design.

- vii. The flare shall be operated at all times when emissions may be vented to it.

[OAC rule 3745-77-07(A)(1) and PTI No. P0107710]

- (4) At all times including periods of startup, shutdown, and malfunction as defined by a plan developed in accordance with 63.6(e)(3), emissions unit P801 shall be operated in accordance with good air pollution control practices.

[OAC rule 3745-77-07(A)(1) and PTI No. P0107710]

- (5) The permittee shall comply with the heat exchanger system requirements by one of the methods specified in 63.104(b) or (c) unless one or more of the exemptions contained in 63.104(a)(1) through (6) are met.

[OAC rule 3745-77-07(A)(1) and PTI No. P0107710]

- (6) See 40 CFR, Part 63, Subpart F (40 CFR 63.100 – 63.107)

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart F]

- (7) See 40 CFR, Part 63, Subpart G (40 CFR 63.110 – 63.153)

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart G]

- (8) See 40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart H]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall comply with the following monitoring requirements:

- a. Flare monitoring requirements:

- i. The flare shall be monitored with a thermocouple or any other equivalent device to detect the presence of a pilot flame. If an electric arc ignition system is employed, the arcing shall be monitored to detect any failure. [40 CFR 63.114(a)(2)].

- ii. The permittee shall perform weekly 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 including the flare. 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 and color of the emissions;

- (b) whether the emissions are representative of normal operations;

- (c) if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- (d) the total duration of any visible emission incident; and
- (e) any corrective actions taken to eliminate the visible emissions.

If, during any weekly check, the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR, Part 60, Appendix A, Method 22 and record the results in an operations log.

b. LDAR monitoring requirements:

- i. The permittee shall comply with the LDAR program monitoring requirements in accordance with 40 CFR 63.180. Monitoring shall comply with Method 21 of 40 CFR, Part 60, appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107710]

(2) The permittee shall comply with the following record keeping requirements:

- a. The permittee shall maintain records of whether or not the flow indicator specified in 40 CFR Part 63.114(d)(1) was operating and whether or not a diversion was detected [40 CFR 63.118(a)(3)].
- b. The following information shall be recorded for the flare and kept in a readily accessible location:
  - i. detailed schematics, design specifications, and piping and instrumentation diagrams;
  - ii. the dates and descriptions of any changes in the design specification;
  - iii. a description of the parameter or parameters monitored to ensure that the flare is operated and maintained in conformance with its design, and an explanation of the reason for selecting such parameter or parameters;
  - iv. periods when the closed vent system and the flare are not operated as designed; and,
  - v. dates of start-ups and shutdowns of the closed vent system and flare.
- c. The permittee shall maintain records that document operating time for the closed vent system, flare and monitoring equipment. The information shall be maintained in the company's files for a period of five years.
- d. Flare record keeping requirements:
  - i. The permittee shall maintain records of all hourly periods when the flare pilot flame is absent [40 CFR 60.118(a)(1)].

- e. The permittee shall comply with all LDAR program record keeping requirements in accordance with 40 CFR 63.181. All records and information required shall be maintained in a manner that can be readily accessed at the plant site.
- f. 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 unless otherwise specified in this permit and/or required by either state or federal applicable regulations. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings, if a strip-chart recorder is employed, for continuous monitoring instrumentation, and copies of all reports required by the permit. Such records may be maintained in computerized form.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107710]

- (3) See 40 CFR, Part 63, Subpart F (40 CFR 63.100 – 63.107)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart F]

- (4) See 40 CFR, Part 63, Subpart G (40 CFR 63.110 – 63.153)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart G]

- (5) See 40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart H]

e) Reporting Requirements

- (1) The permittee shall comply with the following quarterly reporting requirements:

- a. the permittee shall submit the following reports for criteria pollutants:

- i. exceedances of all monitored parameters;
- ii. a log of the operating time for the closed vent system and flare;
- iii. all periods of time when the flare was not operational; and
- iv. all periods of time when required monitoring data was not collected.

- b. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stacks, including the flare, serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA, Northwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

- c. The permittee shall submit quarterly reports which include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR, Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted by January

31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107710]

- (2) The permittee shall comply with the LDAR program reporting requirements in accordance with 40 CFR 63.182. The time periods or deadlines specified in 40 CFR 63.182 may be changed by mutual agreement between the permittee and the Ohio EPA in accordance with 40 CFR 63.9(i).

[OAC rule 3745-77-07(C)(1) and PTI No. P0107710]

- (3) See 40 CFR, Part 63, Subpart F (40 CFR 63.100 – 63.107)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart F]

- (4) See 40 CFR, Part 63, Subpart G (40 CFR 63.110 – 63.153)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart G]

- (5) See 40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart H]

f) Testing Requirements

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

- a. Emission Limitations: Flare emissions - 0.04 lb PE/hr, 7.58 lbs VOC/hr, 4.85 lbs CO/hr, 0.89 lb NO<sub>x</sub>/hr, 0.48 lb SO<sub>2</sub>/hr

Applicable Compliance Method: Compliance shall be demonstrated by ensuring the flare operates at the proper efficiency through the monitoring and record keeping specified in sections d)(1)a. and d)(2)e.

The flare VOC emission limitation was developed by applying a 98% reduction efficiency for control with a flare to calculated engineering estimates of flare vent streams. The other flare emission limitations account for combustion emissions from the natural gas pilot flame. Pilot flame emissions were established by multiplying the emission factors for NO<sub>x</sub>, PE, CO and SO<sub>2</sub> of 0.068 lb NO<sub>x</sub>/mmBtu, 0.003 lb PE/mmBtu, 0.37 lb CO/mmBtu and 0.0006 lb SO<sub>2</sub>/mmBtu by the maximum hourly heat input capacity (13 mmBtu/hr) of the pilot flame.

- b. Emission Limitations: 0.18 ton PE/yr, 33.2 tons VOC/yr, 21.23 tons CO/yr, 3.90 tons NO<sub>x</sub>/yr, 2.10 tons SO<sub>2</sub>/yr

Applicable Compliance Method: The annual emission limitation for each pollutant above was developed by multiplying the hourly emission limitation for each pollutant by 8,760; and then dividing by 2,000. Therefore, as long as compliance with the hourly allowable emission limitation for each pollutant is maintained, compliance with the annual emission limitation for the pollutant shall be ensured.



c. Emission Limitation: No visible emissions from the flare [See c)(3)a.i.]

Applicable Compliance Method: The test method employed to demonstrate compliance with the emission limitation shall be Method 22, which is located in 40 CFR, Part 60, Appendix A.

d. Emission Limitation: Fugitive Process Emissions – 11.89 tons VOC/yr

Applicable Compliance Method: The process fugitive emission limitation was developed in accordance with the following equation:

$$PFE = [\text{summation of } NiSi \times (\text{hrs/yr}) \times (\text{ton}/2000 \text{ lbs})] \text{ for } i=1 \text{ to } n$$

where:

PFE = process fugitive VOC emissions, tons/yr

Ni = number of pipe fitting components

Si = SOCM I emission factor for pipe fitting component i (EPA-450/3-010, April 1982) for pipe fitting component i and/or site specific emission factors derived in accordance with U.S. EPA approved protocols. Compliance shall be demonstrated by calculations of annual emissions using the above equation or monitoring data from the LDAR program in conjunction with the U.S. EPA SOCM I correlations equation and the actual annual hours of operation.

[OAC rule 3745-77-07(C)(1) and PTI No. P0107710]

(2) See 40 CFR, Part 63, Subpart F (40 CFR 63.100 – 63.107)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart F]

(3) See 40 CFR, Part 63, Subpart G (40 CFR 63.110 – 63.153)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart G]

(4) See 40 CFR, Part 63, Subpart H (40 CFR 63.160 – 63.183)

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart H]

g) Miscellaneous Requirements

(1) None.



6. P905, Catalyst Handling System

Operations, Property and/or Equipment Description:

maleicanhydride reactor catalyst handling system; catalyst make-up transfers and catalyst drum handling.

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-07(B)	None [See b)(2)a.]
c.	OAC rule 3745-17-08(B)	None [See b)(2)b.]
d.	OAC rule 3745-17-11(B)	See b)(2)c.
e.	OAC rule 3745-31-05(A)(3) (PTI #03-11250, issued 10/28/04)	Stack emissions:  0.20 lb of particulate emissions (PE)/hr, 0.14 ton PE/yr  Fugitive emissions:  0.05 ton of fugitive PE/yr  Visible emissions of fugitive PE shall not exceed 20%, as a 3-minute average.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).

(2) Additional Terms and Conditions

a. This emissions unit is exempt from the visible emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).

- b. This facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08 (it is located in Allen County, but outside the city limits of Lima). Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
  - c. The emission limitation based on this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05.
  - d. The catalyst transfer operations for this emissions unit shall be controlled with a cartridge filter.
- c) Operational Restrictions
- (1) The maximum annual catalyst usage for this emissions unit shall not exceed 1,367 tons/year.  
  
[OAC rule 3745-77-07(A)(1) and PTI #03-11250]
  - (2) The permittee shall maintain on site, a Preventive Maintenance Malfunction Abatement Plan (PMMAP) for this emissions unit. The PMMAP shall include a description of steps or procedures reasonably available to be taken order to prevent or minimize the emission of PE during the transfer of catalyst between the maleic anhydride reactor and the catalyst hopper.  
  
[OAC rule 3745-77-07(A)(1) and PTI #03-11250]
  - (3) The pressure drop across the dry filter shall be maintained within a range of -14 to +9 pounds per square inch (psi), when the filter system is in service, at all times while the emissions unit in operation. This pressure drop range was established in a letter from the Ohio EPA, Northwest District Office dated 10/26/06 with the effective date being retroactive to 1/9/06.

The permittee may petition to the Ohio EPA for reestablishment, based on emissions testing or the collection of data, of the pressure drop range provided the permittee can demonstrate to the Ohio EPA's satisfaction that the new values will reasonably ensure compliance and the basis upon which the values were previously established is no longer applicable.

The parametric operational restriction is included in this permit to ensure ongoing compliance with the applicable mass emission and visible emission limitations. The operation of the control equipment outside the values established above may or may not indicate a mass emission and/or visible emission violation. If required by the Ohio EPA, Northwest District Office, compliance with the mass emission limitations and visible emission limitations shall be determined by performing concurrent mass emission tests, and visible emissions readings, using U.S. EPA-approved methods and procedures, as well as operational parameter readings. The results of any required emission tests, visible emission readings, and operational parameter readings shall be used in determining whether or not the operation of the control equipment outside the range of values that will be established above is indicative of a possible violation of the mass emission limitation and/or visible emission limitations. In addition, the permittee may provide other relevant credible evidence to the Ohio EPA to demonstrate that a deviation

of an operational restriction is not a violation of the applicable mass emission and/or visible emission limitations.

[OAC rule 3745-77-07(A)(1) and PTI #03-11250]

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall collect and record the amount of catalyst handled per year (from January to December), in tons.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- (2) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) 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 and color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emission incident; and
- e. any corrective actions taken to eliminate the visible emissions.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- (3) The monitoring equipment for the dry filter shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the dry filter on a weekly basis.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

e) **Reporting Requirements**

- (1) The permittee shall submit annual reports that summarize the actual annual catalyst throughput for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- (2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports

shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- (3) The permittee shall submit quarterly pressure drop deviation (excursion reports) that identify all periods of time during which the pressure drop across the dry filter did not comply with the allowable range specified above. The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

f) Testing Requirements

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

- a. Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by OAC rule 3745-17-07(A).

Applicable Compliance Method: If required, compliance with the visible PE limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- b. Emission Limitation: 0.20 lb PE/hr (stack emissions)

Applicable Compliance Method: The hourly allowable PE limitation was established by applying a 99% removal efficiency for control with a cartridge filter to the calculated uncontrolled mass rate of emissions based on engineering estimates of 20 lbs/hr.

If required, compliance with the limitation shall be determined in accordance with the methods specified in Methods 1-5 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- c. Emission Limitation: 0.14 ton PE/yr (stack emissions)

Applicable Compliance Method: The annual emissions shall be determined by multiplying the total amount of catalyst loaded each year by a site-specific emission factor of 0.20 lb PE/ton of catalyst loaded, and then dividing by 2000 lbs/ton.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- d. Emission Limitation: 0.05 ton PE/yr (fugitive emissions)

Applicable Compliance Method: The annual emission limitation was developed by multiplying a 0.08 lb PE/ton of catalyst handled emission factor (based on

engineering estimates) by a maximum operational restriction of 1,367 tons per year.

Compliance shall be demonstrated by multiplying the above emission factor (0.08 lb PE/ton of catalyst handled) by the total annual amount (in tons) of catalyst handled [from the record keeping specified in Section d)(1)], and then dividing by 2,000 lbs/ton.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- e. Emission Limitation: Visible emissions of fugitive PE shall not exceed 20%, as a 3-minute average.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance pursuant to the methods specified in Method 9 of 40 CFR, Part. 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI #03-11250]

- g) Miscellaneous Requirements

- (1) None.