OhioEPA

State of Ohio Environmental Protection Agency

Street Address:
Lazarus Gov. Center
50 West Town Street, Suite 700
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

CERTIFIED MAIL

RE: FINAL PERMIT TO INSTALL MODIFICATION
SUMMIT COUNTY
Application No: 16-01843
Fac ID: 1677010029

DATE: 4/15/2008

	TOXIC REVIEW
	PSD
	SYNTHETIC MINOR
	CEMS
	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

Emerald Performance Materials LLC
William Ramus
240 W Emerling Ave
Akron, OH 44301-1600

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of $70.00 which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA ARAQMD

REC'D APR 21 2008

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 16-01843

Application Number: 16-01843

Facility ID: 1677010029

Permit Fee: **$250**

Name of Facility: Emerald Performance Materials LLC

Person to Contact: William Ramus

Address: 240 W Emerling Ave
Akron, OH 443011600

Location of proposed air contaminant source(s) [emissions unit(s)]:
240 W Emerling Ave
Akron, Ohio

Description of proposed emissions unit(s):
Administrative modification of PTI 16-1843 issued final on January 27, 1999 for the installation of a flare as a control device.

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski
Director

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit-To-Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

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

ii. The date(s) analyses were performed.

iii. The company or entity that performed the analyses.

iv. The analytical techniques or methods used.

v. The results of such analyses.

vi. The operating conditions existing at the time of sampling or measurement.

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, 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.

c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written

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. See B.9 below if no deviations occurred during the quarter.

iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

iv. If this permit is for an emissions unit located at a Title V facility, then 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 are true, accurate, and complete.

d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

2. 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, i.e., upset, 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. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to 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"), the permittee shall comply with the requirement to register such a plan.

4. 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.

5. 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.

6. 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 re-issuance, or modification

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, revoked, or revoked and reissued, for cause. 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 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.

7. 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. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any 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 and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this 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:

i. 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.

ii. 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 ORC section 3704.08.

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

iv. 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:

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

ii. 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.

10. Permit-To-Operate Application

a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. 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.

13. Permit-To-Install

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in this permit.

B. State Only Enforceable Permit-To-Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or recordkeeping of state-only enforceable 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 (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) 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. 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.)

3. 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.

4. Authorization To Install or Modify

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

5. Construction of New Sources(s)

This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

6. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

7. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

8. Construction Compliance Certification

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the facility has been constructed in accordance with the permit-to-install application and the terms and conditions of the permit-to-install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit-To-Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons Per Year
VOC	8.8

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P016) - DPA/AO process line (Modified).

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	2.0 pounds of volatile organic compounds (VOC) per hour 8.8 tons of VOC per year See A.2.a below.
OAC rule 3745-21-09(BBB)(3)	For the diphenylamine-based antioxidants process, the VOC emissions from the reactor process vent streams, except the emulsion recovery system tank vent, recovered MND tank vent, and process emergency safety relief devices, shall be vented to a control device that is designed and operated to achieve a control efficiency of at least ninety-five per cent, by weight.

2. Additional Terms and Conditions

2.a All collected gas shall be vented to an open flare designed and operated as follows:

i. The flare shall be designed for and operated with no visible emissions, as determined by Method 22 of Appendix A of 40 CFR Part 60, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

ii. The flare shall be operated with a flame present at all times when gases are vented to it. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. The net heating value of the gas being combusted and the actual exit velocity shall be calculated as required in the Testing Section of this permit.

iii. The flare shall be nonassisted and shall comply with the following requirements for the heat content in paragraph "(a)" and the maximum tip velocity in paragraph "(b)"or shall comply with the alternative requirements in paragraph "(c)" for nonassisted flares:

a. the nonassisted flare shall have a net heating value of 200 Btu/scf (7.45 MJ/scm) for the gas being combusted.

The net heating value of the gas being combusted shall be calculated as required in the Testing Section of this permit.

b. the nonassisted flare shall be designed for and operated with an exit velocity of less than 18.3 m/sec (60 ft/sec), with the following exceptions:

i. steam-assisted and nonassisted flares, having a net heating value of 1,000 Btu/scf (37.3 MJ/scm) for the gas being combusted, can be designed for and operated with an exit velocity equal to or greater than 18.3 m/sec (60 ft/sec), but less than 122 m/sec (400 ft/sec); and

ii. steam-assisted and nonassisted flares can be designed for and operated with an exit velocity of less than the velocity calculated below for Vmax, and less than 122 m/sec (400 ft/sec):

$$\text{Log10 (Vmax)} = (H_T + 28.8)/31.7$$

where:

Vmax = maximum permitted velocity, m/sec;

28.8 = constant;

31.7 = constant; and

HT = the net heating value as determined in the Testing Section of this permit.

c. Nonassisted flares that have a diameter of 3 inches or greater and a hydrogen content of 8.0 percent (by volume), or greater, shall be designed for and operated with an exit velocity of less than 37.2 m/sec (122 ft/sec) and less than the velocity, Vmax, as determined by the following equation:

$$\text{Vmax} = (XH2 - K1)\ K2$$

where:

Vmax = maximum permitted velocity, m/sec;

K1 = constant, 6.0 volume-percent hydrogen;

K2 = constant, 3.9 (m/sec)/volume-percent hydrogen; and

XH2 = the volume-percent of hydrogen, on a wet basis, as calculated by using the ASTM Method D1946-90.

II. Operational Restrictions

1. A pilot flame shall be maintained at all times in the flare's pilot light burner.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall monitor the flare to ensure that it is operated and maintained in conformance with its design and the requirements contained in this permit.

2. The permittee shall record the following information each day for the flare and process operations:

   a. all periods during which there was no pilot flame; and

   b the operating times for the capture (collection) system, the flare, the monitoring equipment, and the associated emissions unit.

IV. Reporting Requirements

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

   a. a log of operating time for the capture (collection) system, the flare, the monitoring equipment, and the associated emissions unit; and

   b. identify all periods of time during which the pilot flame was not functioning properly or the flare was not maintained as required in this permit. The reports shall include the date, time, and duration of each such period.

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

V. Testing Requirements

1. The permittee shall conduct an initial flare compliance assessment for this emissions unit in accordance with the following requirements:

   a. The compliance assessment shall be conducted within 180 days of the startup of the flare.

   b. The compliance assessment shall be conducted to demonstrate compliance with the net heating value for the gas being combusted and the maximum permitted exit velocity.

c. The following test method(s) and calculations shall be employed to demonstrate compliance with the allowable net heating value for the gas being combusted, the maximum permitted exit velocity, and the actual exit velocity:

i. The net heating value of the gas being combusted at the flare shall be calculated as follows:

HT = k x [the summation of (Ci) x (Hi) from i=1 to i=n]

where:

HT = net heating value of the sample, MJ/scm; where the net enthalpy per mole of off gas is based on combustion at 25 degrees Celsius and 760 mm Hg, but the standard temperature of 20 degrees Celsius is used for determining the volume corresponding to one mole;

k = constant, 1.740 x 10^-7 (1/ppm) (g mole/scm) (MJ/kcal), where the standard temperature for "g mole/scm" is 20 degrees Celsius;

Ci = concentration of sample component "i" in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946–77 or 90; and

Hi = net heat of combustion of sample component "i", kcal/g mole at 25 degrees Celsius and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or ASTM D4809-95 if published values are not available or cannot be calculated.

i = subscript denoting a specific component in the sample.

n = total number of components within the sample.

The conversion factor of "26.84 Btu scm/MJ scf" can be used to convert the net heating value of the gas (HT) from MJ/scm to Btu/scf.

ii. The actual exit velocity of the flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure) of the flare header or headers that feed the flare, as determined by Reference Methods 2, 2A, 2C, or 2D (found in 40 CFR 60, Appendix A), as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

The conversion factor of "3.281 ft/m" can be used to convert the velocity from m/sec to ft/sec.

iii. If necessary, the maximum permitted velocity Vmax, shall be calculated as described in section A.2.a of this permit.

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

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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

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

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

2. Compliance with the emission limitations in sections A.I.1 and A.I.2.a of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

For the diphenylamine-based antioxidants process, the VOC emissions from the reactor process vent streams, except the emulsion recovery system tank vent, recovered MND tank vent, and process emergency safety relief devices, shall be vented to a control device that is designed and operated to achieve a control efficiency of at least ninety-five per cent, by weight.

Applicable Compliance Method:

Compliance with the allowable VOC control efficiency shall be assumed based upon demonstrating compliance with the net heating value for the gas being combusted and the maximum permitted exit velocity as determined in section A.V.1 of this permit

b. Emission Limitation:

2.0 pounds of VOC per hour

Applicable Compliance Method:

Compliance with the hourly allowable VOC emission limitation shall be determined by multiplying the maximum amount of VOC vented from this emissions unit to the flare by (1-0.98*) for stack emissions plus the VOC emission rate, in pounds per hour, determined from EPA-453/R-95-017 "Protocol for Equipment Leak Emission Estimates" for fugitive emissions.

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

c. Emission Limitation:

8.8 tons of VOC per year

Applicable Compliance Method:

The annual allowable VOC emission limitation above was determined by multiplying the hourly allowable VOC emission limitation by 8760 hours per year, and then dividing by 2000. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be assumed.

d. Emission Limitation:

no visible emissions from the flare, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours

Applicable Compliance Method:

If required, compliance shall be demonstrated through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22, and procedures specified in 40 CFR Part 60.18.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P016) - DPA/AO process line (Modified).

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05	None

2. **Additional Terms and Conditions**

   2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None