

Synthetic Minor Determination and/or Netting Determination
Permit To Install 02-14200

A. Source Description

Process AM is for the production of specialty organic chemicals used as additives for oil of fuel. The process consists of 8 reactors, raw material feed tanks, holding tanks and filters. VOC emissions are controlled by a flare and a fume incinerator. Process AM is operationally related to Process AL (P051) which has a VOC limit of 11.34 tons per year.

B. Facility Emissions and Attainment Status

Process AM will emit VOC and SO₂. The Lubrizol Painesville facility is a major source of both pollutants. Lake County is attainment for both pollutants.

C. Source Emissions

Process AM can produce two general categories of products: "solvent-containing" and "non-solvent-containing". During the production of either categories, VOC is emitted. The emissions of VOC is greater during the production of "solvent-containing" batches. At maximum production capacity, the potential VOC emissions for producing only "solvent-containing" batches would be 32.66 tons per year. When added to the allowable emission rate from operational related process AL (P051), the allowable VOC emission rate would be 43.94 tons. This would be considered a major modification under PSD regulations (40 CFR, Part 52). Therefore, Lubrizol has proposed to limit the number of "solvent-containing" batches to 2867 per any rolling, 12-month period. This will limit VOC emissions from process AM to 24.86 tons per year and combined VOC emissions from process AM and AL to 36.2 tons per year. This is below 40 tons per year and is not considered a major modification.

D. Conclusion

PTI 02-14200 will restrict the number of "solvent-containing" batches to 2867 per rolling 12-month period. The permit will require monthly record keeping on production batches and VOC emissions. This restriction will limit VOC emissions to 24.86 tons per year for process AM. Since, combined with emissions from process AL, the allowable VOC emissions are less than 40 tons per year, the emissions units are not subject to further review under PSD.



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

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

Mailing Address:

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

**RE: DRAFT PERMIT TO INSTALL
LAKE COUNTY
Application No: 02-14200**

CERTIFIED MAIL

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

DATE: 11/21/2000

The Lubrizol Corporation
Rebecca Wright
155 Freedom Rd
Painesville, OH 44077

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$800** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Thomas G. Rigo
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA
Lake Cty Local Air Agency

NEDO

PA



**Permit To Install
Terms and Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 02-14200

Application Number: 02-14200

APS Premise Number: 0243000024

Permit Fee: **To be entered upon final issuance**

Name of Facility: The Lubrizol Corporation

Person to Contact: Rebecca Wright

Address: 155 Freedom Rd
Painesville, OH 44077

Location of proposed air contaminant source(s) [emissions unit(s)]:

**155 Freedom Rd
Painesville, Ohio**

Description of proposed emissions unit(s):

Process AM; Reactors, receivers, filters, finish tanks.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit 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 emissions unit(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 and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

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 quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.11 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 to the appropriate Ohio EPA District Office or local air agency every six months, i.e., 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. 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.

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 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. 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.

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 this Permit To Install.

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 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.

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 To Install 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

The Lubrizol Corporation

PTI Application: 02-14200

Issued: To be entered upon final issuance

Facility ID: 0243000024

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 thirty (30) days after commencing operation of the source(s) covered by this permit.

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

1. Compliance Requirements

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

2. Reporting Requirements Related to Monitoring and Recordkeeping 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 quarterly, i.e., 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. 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.

5. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install 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.

6. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. 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 the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install 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 prove to be inadequate or cannot meet applicable standards.

7. 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.

8. 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).

9. 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.

10. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) 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.

11. 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., 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**

| <u>Pollutant</u> | <u>Tons Per Year</u> |
|------------------|----------------------|
| VOC | 24.86 |
| SO2 | 15.6 |

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.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|---|
| P052 - Process AM: production of specialty chemicals using 8 reactors, 8 raw material feed tanks, holding tanks and filters. VOC emissions from the reactors and the holding tanks are controlled by an incinerator or a flare. VOC emissions from the filters are not controlled. SO2 emissions are controlled by a scrubber. | OAC rule 3745-31-05(A)(3) | VOC: 130.8 lbs/day, 16.14 tons per year from reactors and holding tanks, 4.29 tons per year from feed tanks, 4.43 tons per year from filters SO2: 3.58 lbs/hr and 15.6 tons per year |
| | OAC rule 3745-31-05(D) | The requirements of this rule also include the requirements of OAC rules 3745-21-09(LL) and 3745-31-05(D) |
| | OAC rule 3745-21-09(LL) | VOC: 24.86 tons per rolling, 12-month period. |
| | OAC rule 3745-18-06 (E) | See A.2.a. through A.2.c The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |

2. Additional Terms and Conditions

- 2.a VOC emissions from the eight reactors and associated holding tanks shall be controlled at all times by either an incinerator or a flare.
- 2.b The incinerator shall reduce VOC emissions by at least 98% by weight at all times, as determined by paragraph OAC rule 3745-21-10 (C).
- 2.c The flare shall be designed and operated as follows:
 - i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

- 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 and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.
 - iii. The flare shall be steam-assisted, air-assisted or non-assisted.
 - iv. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is non-assisted.
 - v. Except as provided in paragraph A.2.c.vi. of this permit, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than sixty feet per second if the flare is steam-assisted or non-assisted, or less than the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.
 - vi. Excluded from the requirements of paragraph A.2.c.v. of this permit is any steam-assisted or non-assisted flare that meets both of the following requirements:
 - aa. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.
 - ab. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.
- 2.d** SO₂ emissions from all of the reactor tanks generated when processing sulfur containing raw materials shall be controlled by the scrubber prior to exhausting to the flare.
- 2.e** Each batch reaction takes approximately 12 hours

II. Operational Restrictions

1. The average combustion temperature within the thermal incinerator shall not be less than 1,600 degrees Fahrenheit at all times the emissions unit is in operation.
2. A pilot flame shall be maintained at all times in the flare's pilot light burner.

3. The pH of the scrubber liquor shall be maintained at or above the value determined during the most recent emissions test that demonstrated that the emissions unit was in compliance with the SO2 limit.
4. The maximum annual number of "solvent-containing" ¹ batches shall not exceed 2,867, based upon a rolling, 12-month summation of the production rates.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the production levels specified in the following table:

| <u>Month</u> | <u>Maximum Allowable Number of "solvent-containing" Batches</u> |
|--------------|---|
| 1 | 239 |
| 1-2 | 478 |
| 1-3 | 717 |
| 1-4 | 956 |
| 1-5 | 1195 |
| 1-6 | 1434 |
| 1-7 | 1673 |
| 1-8 | 1912 |
| 1-9 | 2151 |
| 1-10 | 2390 |
| 1-11 | 2629 |
| 1-12 | 2867 |

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual limitation of "solvent-containing" batches shall be based upon a rolling, 12-month summation of the number of batches.

¹ "Solvent-containing" batches contain raw materials whose flash point is less than 170 degrees Fahrenheit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

- a. All periods of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than 1,600 degrees Fahrenheit.

- b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
2. The permittee shall properly install, operate, and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall record the following information each day:

- a. All periods during which the pilot flame was out.
 - b. The operating times for the flare, monitoring equipment, and the associated emissions unit.
3. The permittee shall properly install, operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor while the emissions unit is in operation. The pH monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The permittee shall collect and record the following information each day:
 - a. The pH of the scrubber liquor, once per day.
 - b. A log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
4. The permittee shall maintain monthly records of the following information:
 - a. The number of "solvent-containing" batches.
 - b. The total number of batches.
 - c. Beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the number of "solvent-containing" batches.

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative number of "solvent-containing" batches for each calendar month.

5. The permittee shall maintain daily records of the following information:
 - a. the controlled VOC emission rate for "solvent-containing" and "non-solvent-containing" batches (lbs/batch) from the reactors and holding tanks;
 - b. the number of "solvent-containing" and "non-solvent-containing" batches completed; and
 - c. the daily VOC emissions from the reactors and holding tanks, based on the number of batches and the VOC emission factor (lbs/batch).

6. For the purpose of determining annual emissions, the following monthly records shall be maintained:
 - a. the VOC emissions from the reactors and holding tanks, based on the records kept in Section A.III.5 (tons).;
 - b. the VOC emissions from the filters and feed tanks (tons);
 - c. the total VOC emissions from the reactors, holding tanks, filters and feed tanks (tons); and
 - d. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the total VOC emissions from the reactors, the holding tanks, filters and feed tanks.

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative VOC emissions from the reactors, the holding tanks, filters and feed tanks. for each calendar month.

7. The permittee shall collect and record the following information each month:
 - a. The name of each Hazardous Air Pollutant (HAP)¹ used in the emissions unit.
 - b. The amount of each HAP used in the emissions unit, in tons.
 - c. The HAP emissions for each HAP from all materials employed, in pounds or tons per month and pounds or tons per rolling 12 month period (for each HAP this shall be determined by multiplying the uncontrolled HAP emission rate by the control efficiency of the air pollution control equipment, as determined in the most recent compliance test).
 - d. The total combined HAP emissions from all materials employed, in pounds or tons per month and pounds or tons per rolling 12 month period (the sum of each HAP emitted as determined in paragraph c).

¹A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all periods of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified above.
2. The permittee shall submit deviation (excursion) reports that identify all periods during which the pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period.

3. The permittee shall submit pH deviation (excursion) reports that identify all periods of time during which the scrubber liquor pH did not comply with the pH requirements specified above.
4. The permittee shall submit deviation (excursion) reports that identify all periods during which the flare or incinerator was not operated during the processing of raw materials.
5. The permittee shall submit deviation (excursion) reports that identify all periods during which the scrubber was not operated during the processing of sulfur-containing raw materials.
6. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, batch rate limitation for "solvent-containing" batches and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative production levels.
7. All reports required under items 1 through 6 of this section reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(1).

V. Testing Requirements

1. Compliance with the allowable emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation: 130.8 pounds VOC per day from the reactors and holding tanks

Applicable Compliance Method: Compliance shall be demonstrated by emissions testing using the procedures specified in OAC rule 3745-21-10(C) and the records kept in Section A.III. 5.
 - b. Emission Limitation: 16.14 tons VOC per year from the reactors and holding tanks

Applicable Compliance Method: Compliance with the stated VOC emission limitation shall be determined by using the results of the emissions testing specified in Section A.V.2. and the records kept in Section A.III.
 - c. Emission Limitation: 4.29 tons VOC per year from the feed tanks

Applicable Compliance Method: Compliance with the stated VOC emission limitation shall be determined by using AP-42 equations for VOC emissions from storage tanks and the records kept in Section A.III. 6.
 - d. Emission Limitation: 4.43 tons VOC per year from the filters

Applicable Compliance Method: Compliance with the stated VOC emission limitation shall be determined by using equations for spill vaporization and the records kept in Section A.III. 6.
 - e. Emission Limitation: 98% destruction of VOC by incinerator

Applicable Compliance Method: Compliance shall be demonstrated by emissions testing using the procedures specified in OAC rule 3745-21-10(C).

- f. Emission Limitation: 24.86 tons VOC per rolling, 12-month period

Applicable Compliance Method: Compliance with the stated VOC emission limitation shall be determined by using the results of the emissions testing specified in Section A.V.2. and the records kept in Section A.III.6.

- g. Emission Limitation: 3.58 pounds SO₂ per hour

Applicable Compliance Method: Compliance shall be demonstrated by emissions testing using the procedures specified in OAC rule 3745-18-04(A) and test Method 6 or 6C of 40 CFR, Part 60, Appendix A.

- h. Emission Limitation: 15.6 tons SO₂ per year

Applicable Compliance Method: This limit is based on the allowable hourly emission limit (3.58 lbs/hr) multiplied by the maximum possible operating hours (8760 hr/yr), and divided by 2000 (lbs/ton). Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- i. Emission limitation: 5 minutes of visible emissions from the flare in any 2 consecutive hours

Applicable Compliance Method: If required, Method 22 of 40 CFR, Part 60, Appendix A.

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

- a. The emission testing shall be conducted within 3 months after the emissions unit starts up.

- b. The emission testing shall be conducted to demonstrate compliance with the destruction efficiency limitation for VOC and the allowable mass emission rates for VOC and SO₂.

- c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s): for VOC, Methods 1-4, 25 or 25A of 40 CFR Part 60, Appendix A, for SO₂, Method 6 or 6C of 40 CFR, Part 60, Appendix A.

- d. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

- e. The test 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.

- f. The emission testing shall be conducted over an entire batch cycle for a "solvent-containing" batch and a "non-solvent-containing" batch..

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).

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.

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.

VI. Miscellaneous Requirements

1. 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.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P052 - Process AM: production of specialty chemicals using 8 reactors, 8 raw material feed tanks, holding tanks and filters. VOC emissions from the reactors and the holding tanks are controlled by an incinerator or a flare. VOC emissions from the filters are not controlled. SO2 emissions are controlled by a scrubber. | None | None |

2. **Additional Terms and Conditions**

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P052) 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" pollutant(s):

Pollutant: Stoddard solvent (mineral spirits)
 TLV (mg/m3): 525
 Maximum Hourly Emission Rate (lbs/hr): 137.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 10,723

MAGLC (ug/m3): 12,500

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

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

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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the “Air Toxic Policy:”

- 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.

IV. Reporting Requirements

None

The Lubrizol Corporation

PTI Application: 02-14200

Issued: To be entered upon final issuance

Facility ID: 0243000024

Emissions Unit ID: P052

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

NEW SOURCE REVIEW FORM B

PTI Number: 02-14200

Facility ID: 0243000024

FACILITY NAME The Lubrizol Corporation

FACILITY DESCRIPTION Process AM; Reactors, receivers, filters, finish tanks CITY/TWP Painesville

SIC CODE 2869 SCC CODE 30181001 EMISSIONS UNIT ID P052

EMISSIONS UNIT DESCRIPTION Process AM: production of specialty chemicals using 8 reactors; equipped with thermal incinerator and flare

DATE INSTALLED 11/2000

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | | | | | |
| Sulfur Dioxide | attainment | <3.58 | <15.6 | 3.58 lbs/hr | 15.6 |
| Organic Compounds | attainment | <130.8 lbs/dy | <24.86 | 130.8 lbs/dy | 24.86 |
| Nitrogen Oxides | | | | | |
| Carbon Monoxide | | | | | |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination Use of flare an fume incinerator to control VOC. Use of scrubber for SO2 control. Production limitation of "solvent-containing" batches.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: mineral spirits

PTI Number: 02-14200

Facility ID: 0243000024

FACILITY NAME The Lubrizol Corporation

FACILITY DESCRIPTION Process AM; Reactors, receivers, filters, finish tanks CITY/TWP Painesville

Ohio EPA Permit to Install Information Form Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit **hard copy items to Pam McGraner**, AQM&P, DAPC, Central Office, and electronic files to **airpti@epa.state.oh.us**

| <i>Please fill out the following. If the checkbox does not work, replace it with an 'X'</i> | <u>Electronic</u> | <u>Additional information File Name Convention (your PTI # plus this letter)</u> | <u>Hard Copy</u> | <u>None</u> |
|---|-------------------------------------|--|-------------------------------------|--------------------------|
| <u>Calculations (required)</u> | <input checked="" type="checkbox"/> | 00214200c.wpd | <input type="checkbox"/> | |
| <u>Modeling form/results</u> | <input type="checkbox"/> | 0000000s.wpd | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <u>PTI Application (complete or partial)*</u> | <input type="checkbox"/> | 0000000a.wpd | <input type="checkbox"/> | <input type="checkbox"/> |
| <u>BAT Study</u> | <input type="checkbox"/> | 0000000b.wpd | <input type="checkbox"/> | <input type="checkbox"/> |
| <u>Other/misc.</u> | <input type="checkbox"/> | 0000000t.wpd | <input type="checkbox"/> | <input type="checkbox"/> |

* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

NSR Discussion

Emissions unit is not subject to OAC 3745-21-09(DD) "Leaks from process units that produce organic chemicals". With controls, emissions unit does not have potential to emit more than 10 TPY of a single HAP or more than 25 TPY of combined HAPs.

No NSPS or MACT rules apply to this process.

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

Synthetic Minor Determination and/or **Netting Determination**
 Permit To Install **02-14200**

A. Source Description

Process AM is for the production of specialty organic chemicals used as additives for oil of fuel. The process consists of 8 reactors, raw material feed tanks, holding tanks and filters. VOC emissions are controlled by a flare and a fume incinerator. Process AM is operationally related to Process AL (P051) which has a VOC limit of 11.34 tons per year.

B. Facility Emissions and Attainment Status

Process AM will emit VOC and SO2. The Lubrizol Painesville facility is a major source of both pollutants. Lake County is attainment for both pollutants.

C. Source Emissions

NEW SOURCE REVIEW FORM B

PTI Number: 02-14200

Facility ID: 0243000024

FACILITY NAME The Lubrizol Corporation

| | | | |
|----------------------|--|----------|-------------|
| FACILITY DESCRIPTION | Process AM; Reactors, receivers, filters, finish tanks | CITY/TWP | Painesville |
|----------------------|--|----------|-------------|

Process AM can produce two general categories of products: "solvent-containing" and "non-solvent-containing". During the production of either categories, VOC is emitted. The emissions of VOC is greater during the production of "solvent-containing" batches. At maximum production capacity, the potential VOC emissions for producing only "solvent-containing" batches would be 32.66 tons per year. When added to the allowable emission rate from operational related process AL (P051), the allowable VOC emission rate would be 43.94 tons. This would be considered a major modification under PSD regulations (40 CFR, Part 52). Therefore, Lubrizol has proposed to limit the number of "solvent-containing" batches to 2867 per any rolling, 12-month period. This will limit VOC emissions from process AM to 24.86 tons per year and combined VOC emissions from process AM and AL to 36.2 tons per year. This is below 40 tons per year and is not considered a major modification.

D. Conclusion

PTI 02-14200 will restrict the number of "solvent-containing" batches to 2867 per rolling 12-month period. The permit will require monthly record keeping on production batches and VOC emissions. This restriction will limit VOC emissions to 24.86 tons per year for process AM. Since, combined with emissions from process AL, the allowable VOC emissions are less than 40 tons per year, the emissions units are not subject to further review under PSD.

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:

NONE

Please complete:

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

| <u>Pollutant</u> | <u>Tons Per Year</u> |
|------------------|----------------------|
| <u>VOC</u> | <u>24.86</u> |
| <u>SO2</u> | <u>15.6</u> |