

BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY

OHIO E.P.A.

NOV -9 2000

ENTERED DIRECTOR'S JOURNAL

In the Matter of:

The Lubrizol Corporation
155 Freedom Road
Painesville, OH 44077

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:
:

Director's Final Findings
and Orders

PREAMBLE

It is hereby agreed that:

I. JURISDICTION

These Director's Final Findings and Orders ("Orders") are issued to The Lubrizol Corporation ("Lubrizol"), pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency ("Ohio EPA") under R. C. 3704.03 and 3745.01.

II. PARTIES BOUND

These Orders shall apply to and be binding upon Lubrizol and its assigns and successors in interest.

III. DEFINITIONS

Unless otherwise stated, all terms used in these Orders shall have the same meaning as used in R.C. Chapter 3704 and the regulations promulgated thereunder.

IV. FINDINGS OF FACT

The Director of the Ohio EPA has determined the following findings of fact:

1. Lubrizol owns and operates six batch processes for the production of industrial organic chemicals, which are located at 155 Freedom Road, Painesville, Lake County, Ohio (Ohio EPA facility identification number 0243000024). These batch processes, identified by Lubrizol as processes "L, M, N, O, W, and AC," are identified by Ohio EPA as "emissions units P011, P012, P013, P014, P022, P030," respectively.

2. These batch processes are "air contaminant sources" as defined by Ohio Administrative Code ("OAC") Rule 3745-35-01(B)(1) and are "emission units," as defined by OAC Rule 3745-77-01(O). Emissions units P011, P012, P013, P014, P022, and P030

I certify this to be a true and accurate copy of the
official documents filed in the records of the Ohio
Environmental Protection Agency

By: Zona L. Clement Date: 11-9-00

emit sulfur compounds. Emissions from these emissions units are vented to a common fume incinerator system, made up of two incinerators, where the sulfur compounds are converted to sulfur dioxide ("SO₂") and then emitted into the ambient air through a common stack. These emissions units are non-dedicated batch processes that are used to create, simultaneously or individually, 25 reaction products and 500 to 1,000 blended products.

3. Lubrizol is subject to OAC Rule 3745-18-49(B), effective in 1979, which states that Lubrizol shall not cause or permit the emission of SO₂ from process M, emissions unit P012, to exceed a maximum of 10.0 pounds of SO₂ per ton of product ("lbs/T"). This limitation was converted to a pounds of SO₂ per hour emission limitation of 15.0 based on the maximum production rate of 1.5 tons of product per hour.

4. Lubrizol is also subject to OAC Rule 3745-18-06(E)(1), which states that no owner or operator of any process equipment located in Lake County shall cause or permit the maximum emission of SO₂ from any emissions unit to exceed the emission rate calculated based on the following equation:

$$AER = 20 P^{0.87}$$

where P is the process weight rate in tons per hour ("T/hr") and AER is the allowable emission rate in pounds of SO₂ per hour ("lbs/hr"). The following SO₂ emission limitations were developed for Lubrizol's other batch processes using the above equation:

Process	ID	Process Weight Rate (T/hr)	SO ₂ Emission Limitation (lbs/hr)
L	P011	0.50	12.6
N	P013	1.27	23.5
O	P014	0.62	14.5
W	P022	23.00	163.5
AC	P030	0.88	18.4

5. Compliance with the emission limitations in Findings 3 and 4 is determined using the measurement methods and procedures identified in OAC Rule 3745-18-04(A), if non-continuous test methods are employed. Specifically, compliance must be determined using the appropriate methods in 40 CFR, Part 60, Appendix A, i.e., U.S. EPA Methods 1 through 4 and 6.

6. In several letters to Ohio EPA, Lubrizol expressed its concern that the 10 lbs/T limitation for P012 would be interpreted as applying to each ton of product produced for

every individual batch produced in P012, and not as a maximum average for all the batches produced in P012. Lubrizol contends that the 10 lbs/T limitation was established by calculating the average emissions for both high and low SO₂ emitting batches and, therefore, Lubrizol should not be required to meet this limitation for every ton of product. Also, Lubrizol has expressed concern over the individual limitations developed under OAC Rule 3745-18-06(E)(1), as shown in Finding 4. Lubrizol is concerned that these limitations will be interpreted as short-term peak limitations rather than maximum average limitations over the entire batch cycle for each emissions unit. Lubrizol contends that the "process weight rates" used in the equation in OAC Rule 3745-18-06(E)(1) were determined by computing the total weight of raw materials used per batch divided by the cycle time (hours) per batch, to get the average T/hr input for the product. Therefore, the resulting individual limitations should be average emission limitations over the entire batch cycle, not peak limitations. In brief, Lubrizol has stated that the rules, methods, and procedures mentioned in Findings 3 and 4 above, do not precisely define how compliance shall be monitored, and the complexity of the situation makes appropriate compliance verification unduly difficult both for Lubrizol and Ohio EPA.

7. On February 10, 1999, Lubrizol sent a letter to NEDO requesting that all the individual SO₂ emission limitations for P011, P012, P013, P014, P022, and P030 be replaced with a single limitation for the fume incinerator, expressed as maximum lbs SO₂/hr. Lubrizol contends that eliminating the individual limitations would simplify the compliance monitoring for these batch process emissions units. Currently, Lubrizol's individual allowable emission limitations add up to 247.4 lbs/hr, or 1,092 tons per year of SO₂ emissions at 8,760 hours per year. Lubrizol has stated that it could limit the peak SO₂ emissions from the fume incinerator in any hour to 330 lbs/hr and limit the maximum yearly emissions to 100 tons. Lubrizol has stated that such limitations would be more stringent than the current mixture of individual process limitations, and ultimately would reduce emissions.

8. On May 28, 1999, Lubrizol met with Ohio EPA to discuss the suggested rule revisions. Ohio EPA provided Lubrizol with options for revising the Ohio Administrative Code and the State Implementation Plan ("SIP"). Lubrizol summarized the results of the meeting in a June 3, 1999 letter to Ohio EPA. In this letter, Lubrizol stated that it would prefer Ohio EPA's proposal to redistribute the individual allowable SO₂ limitations for the six emissions units more appropriately and keep the combined total from the fume incinerator as it is currently. The total combined limitation would remain at 247.4 lbs/hr of SO₂. In addition, Lubrizol would install a continuous emission rate monitoring system ("CERMS") for total SO₂ emissions from the fume incinerator. The actual SO₂ emission rate would be recorded on an hourly basis and as an average for each rolling, three-hour period. The rolling, three-hour average emission rates would be compared to the total allowables to determine the ongoing compliance status for the emissions unit.

9. In a letter dated August 5, 1999, Lubrizol provided Ohio EPA with the proposed

new SO₂ emission limitations for each of the six emissions units. The current SO₂ emission limitation and the proposed new SO₂ limitation for each individual process are summarized below (each column adds up to approximately 247.4 lbs/hr SO₂):

Process	ID	Current Limitation (lbs/hr SO ₂)	Proposed Limitation (maximum lbs/hr SO ₂)
L	P011	12.6	2.4
M	P012	15.0	160.0
N	P013	23.5	25.0
O	P014	14.5	10.0
W	P022	163.5	20.0
AC	P030	18.4	30.0

10. In accordance with R.C. 3704.03(E), Ohio EPA has determined that these alternative emission limitations proposed by Lubrizol in its August 5, 1999 letter to Ohio EPA are equivalent to the existing SIP; therefore, they are an acceptable replacement to the existing SIP. Upon the effective date of these Findings and Orders, the proposed limitations specified in Finding 9 will supersede the applicable requirements of OAC Rules 3745-18-06(E)(1) and 3745-18-49(B) for emissions units P011, P012, P013, P014, P022 and P030. Upon approval of these Findings and Orders by U.S. EPA, the Ohio SIP will also be revised for these six emissions units.

11. The Director has given consideration to, and based on his determination on, evidence relating to the technical feasibility and economic reasonableness of complying with the following Orders and their benefits to the people of the State to be derived from such compliance.

V. ORDERS

The Director hereby issues the following Orders:

1. Upon the effective date of these Orders and in lieu of the requirements of OAC Rules 3745-18-06(E)(1) and 3745-18-49(B), Lubrizol shall not cause or permit the emissions of SO₂ from emissions units P011, P012, P013, P014, P022, and P030 to exceed the maximum individual hourly SO₂ emissions limitations of 2.4, 160.0, 25.0, 10.0, 20.0 and 30.0 lbs, respectively. In addition, the total annual emissions from emissions

units P011, P012, P013, P014, P022 and P030 shall not exceed 100 tons per year.

The total allowable SO₂ emissions for the fume incinerator system for any hour shall be the sum of the individual allowable SO₂ emissions limitations for those emissions units that are in operation during any part of that hour. The total allowable SO₂ emission rate for the fume incinerator system for any rolling, three-hour period shall be the average of the three, one-hour allowables comprising the three-hour period. Compliance with the allowable hourly emission rates shall be determined by performing emission tests in accordance with U.S. EPA Method 6 and by employing the continuous emission rate monitoring system ("CERMS") described below.

2. By October 2, 2000, Lubrizol shall install a CERMS to monitor and record the hourly SO₂ emissions from the fume incinerator system (in lbs/hr). Prior to the installation of the CERMS, Lubrizol shall submit information detailing the proposed location of the sampling site(s) in accordance with the siting requirements in 40 CFR, Part 60, Appendix B, Performance Specification 6, for approval by the Ohio EPA, Central Office. The location of the sampling site(s) for the CERMS must be approved by Ohio EPA before installation of the system can occur.

3. By November 11, 2000, Lubrizol shall conduct certification tests of the CERMS pursuant to R.C. 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and/or 40 CFR Part 75. Personnel from Ohio EPA's Northeast District Office ("NEDO") shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to NEDO within 30 days after the test is completed. Copies of the test results shall be sent to NEDO and Ohio EPA, Central Office. Certification of the CERMS shall be granted upon determination by Ohio EPA, Central Office that the system meets all requirements of R.C. 3704.03(I) and 40 CFR, Part 60, Appendix B, Performance Specification 6.

4. On and after November 12, 2000, Lubrizol shall operate and maintain the CERMS to continuously monitor and record the SO₂ emissions from the fume incinerator system (in lbs/hr). The CERMS shall comply with the relevant calibration, operation, and data reduction requirements specified in 40 CFR Parts 60.13(d)(1), (e)(2), and (h), respectively, and the provisions specified in Orders 2 and 3. Lubrizol may request alternative monitoring procedures or requirements and alternative relative accuracy test procedures, in accordance with the relevant provisions of 40 CFR Parts 60.13(i) and (j), by submitting a written request to the Director. Any alternative monitoring and/or testing acceptable to the Director shall be approved by the U.S. EPA as a revision to the SIP prior to the implementation of the alternative monitoring and/or testing.

5. Lubrizol shall conduct emission testing for emissions units P011, P012, P013, P014, P022 and P030 in accordance with the following requirements:

- a. The emission testing shall be conducted by November 11, 2000.
- b. The emission testing shall be conducted to demonstrate compliance with the combined allowable SO₂ emission rate for emissions units P011, P012, P013, P014, P022 and P030 of 247.4 lbs/hr.
- c. The following test methods shall be employed to demonstrate compliance with the allowable SO₂ emission rate: Methods 1 through 4 and 6, 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.
- d. The tests shall be conducted while the emissions units are operating at or near their maximum production capacity, or other production rates as approved by the Director, that would simulate a production episode resulting in worst case SO₂ emissions.
- e. Not later than 30 days prior to the proposed test date, Lubrizol shall submit an "Intent to Test" notification to NEDO. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units' 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 NEDO's refusal to accept the results of the emission test(s).
- f. Personnel from NEDO 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 units and the testing procedures provide a valid characterization of the emissions from the emissions units and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to NEDO within 30 days following completion of the test(s). Lubrizol may request additional time for the submittal of the written report, where warranted, with prior approval from NEDO.

6. Lubrizol may fulfill the requirement to stack test and certify the CERMS at the same time by conducting the CERMS certification specified in Order 3 and by operating at or near the maximum production capacities for emissions units P011, P012, P013, P014, P022, P030.

7. The CERMS shall be used to determine compliance with the hourly SO₂ emission limitations specified in Order 1. Using the CERMS, Lubrizol shall maintain hourly records

of the following information:

- a. the actual SO₂ emission rate from the fume incinerator system, in lbs/hr;
- b. the rolling, three-hour average, actual SO₂ emission rate from the fume incinerator system, in lbs/hr;
- c. the total allowable SO₂ emission rate, in lbs/hr, for all the emissions units in operation during the hour; and
- d. the rolling, three-hour average, allowable SO₂ emission rate, in lbs/hr.

Lubrizol also shall maintain records that document which emissions units were in operation during each hour. If an emissions unit is in operation during any portion of an hour, it is considered to be in operation for the entire hour for purposes of determining compliance with the total allowable SO₂ emission rate for all the emissions units in operation during any hour. Compliance shall be determined by comparing the rolling, three-hour average, actual and allowable, SO₂ emission rates for each hour.

8. Lubrizol shall maintain records of all data obtained by the SO₂ CERMS including, but not limited to, parts SO₂ per million parts of exhaust gas on an instantaneous (one-minute) basis, emissions of SO₂ in units of lbs/hr and lbs/hr per rolling, three-hour average, the applicable standards in Order 1, and in the appropriate averaging period (i.e., hourly and hourly rolling of consecutive three-hour periods), results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

9. Beginning with the fourth quarter of calendar year 2000 and pursuant to OAC Rule 3745-15-04, and R.C. 3704.03(l) and 3704.031 and 40 CFR, Parts 60.7 and 60.13(h), Lubrizol shall submit quarterly deviation (excursion) reports that identify all rolling, three-hour periods during which the average SO₂ emission rate exceeded the corresponding total allowable SO₂ emission rate for the fume incinerator system.

Lubrizol shall also submit quarterly reports documenting any downtime of the SO₂ CERMS system and/or control equipment while any of the emissions units were on line. Lubrizol shall provide the date, time, duration, reason (if known), an estimate of excess emissions, and any corrective action(s) taken for each such incident. Normal downtimes for daily calibration and zero checks or periods where monitoring is maintained by a backup analyzer when the primary analyzer malfunctions shall not be reportable.

If no deviations occurred during a calendar quarter, Lubrizol 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 reports shall also contain the total SO₂

emissions for the calendar quarter (in tons).

10. By December 31, 2000, Lubrizol shall develop a written quality assurance/quality control plan for the SO₂ CERMS that is designed to ensure continuous valid and representative readings of SO₂ emission concentrations and exhaust gas flow rates. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the SO₂ CERMS shall be kept on site and available for inspection during regular office hours.

11. Each record of any monitoring data, testing data, and support information required pursuant to these Orders 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 these Orders. Such records may be maintained in computerized form.

12. All documents required by these Orders, unless otherwise specified in writing, shall be addressed to:

Ohio EPA, Northeast District Office/Air Unit
2110 E. Aurora Rd.
Twinsburg, OH 44087
Attn: John Curtin

VI. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable local, state and federal laws and regulations. These Orders do not waive or compromise the applicability and enforcement of any other statutes or regulations applicable to Lubrizol's operation.

VII. SIGNATORIES

Each undersigned representative of a party to these Orders certifies that he or she is fully authorized to enter into these Orders and to legally bind such party to this document.

VIII. RESERVATION OF RIGHTS

Nothing contained herein prevents the Ohio EPA from seeking legal or equitable relief to enforce the terms of these Orders or from taking other administrative, legal, or equitable action as deemed appropriate and necessary, including seeking penalties against Lubrizol for noncompliance with these Orders. Nothing contained herein prevents the Ohio

EPA from exercising its lawful authority to require Lubrizol to perform additional activities at the facility pursuant to R.C. Chapter 3704 or any other applicable law in the future. Nothing herein restricts the right of Lubrizol to raise any administrative, legal, or equitable claim or defense with respect to such further actions that the Ohio EPA may seek to require from Lubrizol.

IX. WAIVER

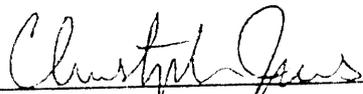
Lubrizol agrees that these Orders are lawful and reasonable and Lubrizol agrees to comply with these Orders.

Lubrizol hereby waives the right to appeal the issuance, terms and service of these Orders and it hereby waives any and all rights it might have to seek judicial review of these Orders either in law or equity.

Notwithstanding the preceding, the Ohio EPA and Lubrizol agree that in the event that these Orders are appealed by any other party to the Environmental Review Appeals Commission, or any court, Lubrizol retains the right to intervene and participate in such an appeal. In such event, Lubrizol shall continue to comply with these Orders unless these Orders are stayed, vacated, or modified.

IT IS SO ORDERED AND AGREED:

Ohio Environmental Protection Agency

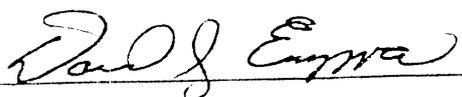


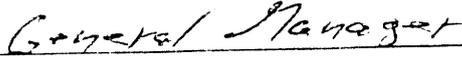
Christopher Jones
Director

11-2-00
Date

IT IS AGREED:

The Lubrizol Corporation



By


Title

September 29, 2000
Date