



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

SEP 08 2005

REPLY TO THE ATTENTION OF
(AE-17J)

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Gary Traverso
Plant Manager
Stepan Company
22500 W. Millsdale Road
Elwood, Illinois 60421

Dear Mr. Traverso:

Enclosed is a file stamped joint Consent Agreement and Final Order (CAFO) and Administrative Penalty Order which resolves violations at Stepan Company's facility in Elwood, Illinois, CAA Docket No. CAA-05-2005 0048. As indicated by the filing stamp on its first page, we filed the CAFO with the Regional Hearing Clerk on SEP 08 2005

Pursuant to paragraph 26 of the CAFO, Stepan Company must pay the civil penalty within 30 days after the effective date of this CAFO. Your check must display the case docket number, CAA-05-2005 0048, and the billing document number, 050305052.

Please direct any questions regarding this case to Andre Daugavietis, Regional Counsel, (312) 886-6663.

Sincerely yours,

Randall Robinson
Air Enforcement and Compliance Assurance
Acting Section Chief (MI/WI)

Enclosure

cc: Julie Armitage, Section Manager
Compliance and Systems Management Section
Illinois Environmental Protection Agency
1021 North Grand Avenue
Springfield, Illinois 62702

Russell A. Garrison
Corporate Counsel
Stepan Company
22 West Frontage Road
Northfield, Illinois 60093

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

CAA-05-2005 0048

IN THE MATTER OF:) Docket No.
)
The Stepan Company) Proceeding to Assess a Civil
Elwood, Illinois,) Penalty under Section 113(d)
) of the Clean Air Act,
) 42 U.S.C. § 7413(d)
Respondent.)
_____)

Consent Agreement and Final Order

I. Preliminary Statement

1. This is an administrative action commenced and concluded under Section 113(d) of the Clean Air Act, 42 U.S.C. § 7413(d), and Sections 22.1(a)(2), 22.13(b), and 22.18(b) of the Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties and the Revocation/Termination or Suspension of Permits (Consolidated Rules) as codified at 40 C.F.R. Part 22 (2004).
2. Complainant is the Director of the Air and Radiation Division, United States Environmental Protection Agency, Region 5 (EPA).
3. The Respondent is Stepan Company, a Delaware corporation, doing business in Elwood, Illinois.
4. Where the parties agree to settle one or more causes of action before the filing of a complaint, the administrative action may be commenced and concluded simultaneously by the issuance of a Consent Agreement and Final Order (CAFO). 40

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C.F.R. § 22.13(b) (2004).

5. The parties agree that settling this action without the filing of a complaint or the adjudication of any issue of fact or law is in their interest and in the public interest.
6. Respondent consents to entry of this CAFO and the assessment of the specified civil penalty, and agrees to comply with the terms of the CAFO.

II. Statutory and Regulatory Background

7. Under Section 112 of the Act, the Administrator of EPA promulgated the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Equipment Leaks at 40 C.F.R. Part 63, Subpart H.
8. Section 113(a) of the CAA, 42 U.S.C. § 7413(a), authorizes the Administrator to initiate an enforcement action whenever, among other things, the Administrator finds that any person has violated or is in violation of a requirement or prohibition of a SIP, permit, or any other rule promulgated, issued or approved under the CAA.
9. Per 40 C.F.R. § 63.100(b), Subpart H applies to the owner or operator of a chemical manufacturing process unit (CMPU) that:
 - a. Manufactures as a primary product one or more of the chemicals listed in table 1 of subpart F.
 - b. Uses as a reactant or manufactures as a product, or co-product, one or more of the organic hazardous air pollutants listed in table 2 of Subpart F.
 - c. Is located at a plant site that is a major source as defined in section 112(a) of the Act.

10. The Administrator of EPA (the Administrator) may assess a civil penalty of up to \$27,500 per day of violation up to a total of \$220,000 for emission violations that occurred between January 31, 1997 and March 15, 2004, and may assess a civil penalty of up to \$32,500 per day of violation up to a total of \$270,000 for emission violations that occurred on and after March 15, 2004, under Section 113(d)(1) of the Act, 42 U.S.C. § 7413(d)(1), and 40 C.F.R. Part 19, as amended at 69 Fed. Reg. 7121 (February 13, 2004).

III. Factual Allegations

11. Respondent is a "person" as defined at Section 302 (e) of the Clean Air Act, 42 U.S.C. §7602(e).
12. Stepan Company owns and operates a chemical plant at 22500 W. Millsdale Road in Elwood, Illinois 60421 ("Elwood facility").
13. Stepan Company manufactures Pthalic Anhydride (PA) at the Elwood facility.
14. The Elwood facility is an existing source at which Stepan Company is required to demonstrate compliance with 40 C.F.R. § 63.100(k)(3).
15. The Elwood facility's PA process uses ortho-xylene, a hazardous air pollutant (HAP), which makes the processing equipment subject to the requirements of 40 C.F.R. Part 63 Subpart H.

16. Section 63.180(b) of Subpart H, 40 C.F.R. Part 63, requires that monitoring performed pursuant to Subpart H shall comply with EPA Reference Method 21 Leak Detection and Repair monitoring. (40 C.F.R. Part 60 Appendix A).
17. Respondent has implemented a Subpart H "leak detection and repair" (LDAR) monitoring program at its Elwood facility since 1995.
18. During the May 25-26, 2004 EPA inspection at the Elwood facility, EPA conducted LDAR monitoring on the PA process equipment and components. During that inspection, EPA detected five (5) leaks which were confirmed by Stepan's regular LDAR contractor in side-by-side sampling. A "leak" is defined as an instrument reading of 500 ppm or greater under Sections 63.168 and 63.174 of Subpart H. Complainant alleges that these five (5) leaks represent a higher percentage of leaks than were detected in previous monitoring events by Respondent.

IV. Alleged Violation

Count I - Failure to Follow EPA Method 21

19. Complainant incorporates paragraphs 1 through 18, as if set forth in this paragraph.
20. Based upon information including the five (5) confirmed leaks detected during the May 25-26, 2004 inspection, Complainant alleges that the Respondent failed to monitor in accordance with EPA Reference Method 21 during previous LDAR

monitoring events.

21. Failure to monitor in accordance with EPA Reference Method 21 or as otherwise required by 40 CFR § 63.180 is a violation of 40 C.F.R. § 63.168 (b)(1), 40 C.F.R. § 63.174(a)(1), 40 C.F.R. § 63.180(b)(1), Method 21 of 40 C.F.R. Part 60 Appendix A, and 40 C.F.R. § 63.4(a)(1).

V. Procedural Matters

22. On August 20, 2004, EPA issued the Respondent a Finding of Violation giving notice of the violation alleged above, and offering the Respondent an opportunity to confer with EPA.
23. On September 23, 2004, and subsequent dates, the Respondent conferred with EPA regarding the alleged violation and potential resolution of this matter.

VI. Jurisdiction and Waiver of Right to Hearing

24. Respondent admits the jurisdictional allegations in this CAFO, but denies all factual allegations and conclusions of law regarding the violation alleged. Respondent believes that its monitoring program has at all times complied with Method 21 and other relevant regulations.
25. Respondent waives its right to request a hearing as provided at 40 C.F.R. § 22.15(c), any right to contest the allegations in this CAFO, and its right to appeal this CAFO under Section 113(d) of the Act, 42 U.S.C. § 7413(d), or otherwise.

VII. Civil Penalty

26. Based upon an evaluation of the facts alleged in this complaint, the factors in Section 113(e) of the Act, EPA's Clean Air Act Stationary Source Penalty Policy dated October 25, 1991, including Appendix 6, 'Volatile Hazardous Air Pollutant Civil Penalty Policy (dated March 2, 1988),' and Respondent's co-operation and agreement to perform the compliance steps and monitoring program specified below, EPA has determined that an appropriate civil penalty to settle this action is five thousand dollars (\$5,000).
27. Complainant developed the proposed penalty based on the best information available to Complainant at this time.
28. Complainant has determined the penalty amount in part based on information submitted to EPA by Respondent.
29. Respondent denies that it has failed to perform LDAR monitoring in accordance with Method 21. However, in order to resolve this matter, Respondent shall pay the civil penalty referenced above, by cashier's or certified check, payable to the "Treasurer, United States of America" within thirty (30) days of the effective date of this CAFO.
30. Respondent shall send the cashier's or certified check to the following address:

U.S. EPA, Region 5
P.O. Box 70753
Chicago, Illinois 60673

31. A transmittal letter, stating Respondent's name, complete address, the case docket number, and the billing document number must accompany the payment. Respondent must write the case docket number and the billing document number on the face of the check. Respondent must send copies of the check and transmittal letter to:

Regional Hearing Clerk (E-19J)
U.S. EPA, Region 5
77 West Jackson Blvd.
Chicago, Illinois 60604-3590

Constantinos Loukeris (AE-17J)
U.S. EPA, Region 5
77 West Jackson Blvd.
Chicago, Illinois 60604-3590

Andre Daugavietis (C-14J)
Office of Regional Counsel
U.S. EPA, Region 5
77 West Jackson Blvd.
Chicago, Illinois 60604-3590

32. This civil penalty is not deductible for federal tax purposes.
33. If Respondent does not pay timely the civil penalty, EPA may bring an action to collect any unpaid portion of the penalty with interest, handling charges, nonpayment penalties and the United States' enforcement expenses for the collection action under Section 113(d)(5) of the Act, 42 U.S.C. § 7413(d)(5). The validity, amount and appropriateness of the civil penalty are not reviewable in a collection action.

34. Interest will accrue on any overdue amount from the date payment was due at a rate established under 31 U.S.C. § 3717. Respondent will pay a \$15 handling charge each month that any portion of the penalty is more than 30 days past due. Respondent will pay a quarterly nonpayment penalty each quarter during which the assessed penalty is overdue according to Section 113(d)(5) of the Act, 42 U.S.C. § 7413(d)(5). This nonpayment penalty will be 10 percent of the aggregate amount of the outstanding penalties and nonpayment penalties accrued from the beginning of the quarter.

VIII. Monitoring and Repair Program

35. Respondent denies that it has at any time failed to comply with the monitoring requirements in Method 21. However, in order to resolve this matter, Respondent commits to take the following steps, including both required monitoring, and, for a period of two years from the date this CAFO is filed, monitoring and repair which exceeds the requirements of Subpart H and Method 21, as follows:

A. Monitoring

1. Conduct timely LDAR monitoring of all applicable valves, connectors, and pumps for the PA process unit at the Elwood facility.
2. Perform the LDAR monitoring per the HON regulations, 40 C.F.R. 63 Subpart H, using U.S. EPA Reference Method 21.

3. For the LDAR monitoring, utilize a Toxic Vapor Analyzer 1000B Flame Ionization Detector (FID) equipped with a data logger which automatically records the emission levels detected at each component and the date and time that each sample is taken. If an equivalent or superior data recording instrument becomes available, Respondent may request approval to use such instrument.
4. The LDAR monitoring may be performed by an outside contractor.
5. Provide the results of the LDAR monitoring event to EPA within 30 days after the end of each calendar quarter.

B. Enhanced Monitoring

1. As part of the resolution of this matter and in order to provide additional information about equipment leaks at the facility, for a period of two years from the date the CAFO is filed, perform LDAR monitoring for valves and connectors in the PA process unit more frequently than required under the LDAR regulations. Monitoring shall be on the following schedule until such time as the monitoring results demonstrate that the facility's leak detection rate qualifies for Phase III monitoring, as specified in Sections 63.168 and 63.174, Subpart H:
 - a) Valves - Quarterly
 - b) Connectors - Semi-Annually
 - c) This Enhanced Monitoring Program schedule will begin from the date the CAFO is filed.
2. Perform and report this monitoring per applicable HON regulations, 40 C.F.R. 63 Subpart H, using U.S. EPA Reference Method 21.
3. For this LDAR monitoring, utilize a Toxic Vapor Analyzer 1000B Flame Ionization Detector (FID) equipped with a data logger which automatically records the emission levels detected at each component and the date and time that each sample is taken. If an equivalent or superior data recording instrument becomes available, Respondent

may request approval to use such instrument.

4. The LDAR monitoring may be performed by an outside contractor.
5. Submit a schedule of the monitoring events to EPA. Respondent may modify the schedule with 15 days advance written notice to EPA.
6. Provide the results of the LDAR monitoring event to EPA within 30 days after the end of each calendar quarter.
7. For purposes of the Enhanced Monitoring described above, use the following supplements to the Method 21 Type I protocol to provide assurance and consistency between the monitoring events:
 - a. Proximity to Leak Source: Place the probe tip at the surface of the component interface where leakage could occur.
 - b. Minimum Time of Measurement: Due to the small size of the components at this facility (generally 1" to 3"), Respondent believes, and for purposes of enforcing this CAFO, EPA agrees, that "slowly" circumventing the probe tip at the surface of the component interface for a minimum of 10 seconds is necessary. Within 5 days following receipt of the data, Respondent shall re-take the measurement for any component for which the data-logger indicates a less than 10 second measurement time.
 - c. Review of Longer Measurements: Due to the small size of the components at this facility (generally 1" to 3"), Respondent believes that measurements in excess of 30 seconds should not generally be necessary to identify the maximum leak.

Where the measurement time for a component exceeds 30 seconds with no

increased meter reading determined, Respondent shall review the measurement for the component location and any difficulties that may have been encountered in taking the measurement. If an increased meter reading occurs, Respondent must monitor at that component to ensure the maximum leak concentration is determined. Within 5 days following receipt of the data, Respondent may re-take the measurement for any component for which the data-logger indicates a more than 30 second measurement time.

C. More Stringent Leak Repair Standard

1. To use a reduced leak "repair action level" standard (below the regulatory leak definition) for valves, connectors, and pumps as follows: 250 ppm for valves, 250 ppm for connectors, and 500 ppm for pumps. These leak levels will trigger repair as described in the HON regulations, 40 C.F.R. 63 Subpart H. For all other purposes, the leak definition shall remain 500 ppm, as defined in the HON regulations.

D. Upgrading Components - New Technology

1. As a "first option" for repair of leaking components, evaluate upgrading valves, connectors and pumps to utilize improved technology, or environmentally enhanced alternatives or processes or technology, to provide improved pollution prevention (such as audits for short-bolting, or other improvements for the different types of components). Each evaluation will be documented with details regarding actions taken and conclusions made.
2. Evaluate upgrading leaking or even non-leaking pumps to either double mechanical seal pumps or seal-less pumps (meeting the requirements of the HON), to eliminate the need for monitoring these components and to reduce fugitive emissions from them. Each evaluation will be documented with details of conclusions reached and actions taken.

3. Evaluate more aggressive alternatives as part of a "first attempt" on repair of leak. This includes, for example, "drill and tap" repair technology for valves where there is no risk of product contamination, process interference, equipment damage, an explosion or other hazard or adverse reaction such that the valve would not be placed on the delay of repair list. Each evaluation shall be documented with details of conclusions reached and actions taken.

E. Root-Cause Analysis

1. Within one year from the date the CAFO is filed, perform an engineering analysis on monitoring results beginning with results of June 2003 monitoring, to determine potential "root" causes and sources of such leaks, evaluating factors such as:
 - a) HAP/VOC in-process stream that due to its volatility and/or vapor pressure under certain process conditions has a greater potential to cause a leak;
 - b) areas in the PA process of fluctuating temperature, fluctuating pressure, and/or vibrational movement to determine if the fluctuations (higher/lower) and/or vibrating conditions cause or promote, over time, leaks in components;
 - c) research components from various manufacturers and the leak history of the components;
 - d) perform "root cause" analysis for types of components (e.g. gate valve, check valve, or a flange) which are identified as leaking 2 or more times, in monitoring from June 2003 through two years from filing of this CAFO.

F. Prevention of Component Leaks

1. Develop a maintenance and corrective action program, incorporating the results of the Root-Cause Analysis, including processes or technologies, reasonably available, that provide

improved prevention measures.

G. Reporting

1. Provide the EPA with Annual Reports which describe steps Respondent is taking to maintain and ensure compliance with the requirements of the applicable regulations and this CAFO. Each Annual Report will be submitted by October 1st of each calendar year for the two-year period and contain information including the following:
 - a. The results of the LDAR monitoring, including individual monitoring data (preferably electronic), Enhanced monitoring and Repair programs;
 - b. Describe the equipment leaks which were detected during the year and reviewed under the Root Cause Analysis, and the steps taken to correct them;
 - c. Set forth any improvements to the monitoring program that Respondent's experience indicates might be helpful in identifying, preventing, reducing and/or repairing equipment leaks; and,
 - d. Submit documentation of all evaluations under the monitoring and repair program conducted during the year.

IX. Dispute Resolution

36. For purposes of this CAFO, the parties will use their best efforts to informally and in good faith resolve all disputes or differences of opinion.
37. If either party disagrees, in whole or in part, with any decision made or action taken under this CAFO, that party will notify the other party's Compliance Manager of the dispute. The Compliance Managers will attempt to resolve the dispute informally.

38. If the Compliance Managers cannot resolve the dispute informally, either party may pursue the matter formally by placing its objections in writing. A written objection must state the specific points in dispute, the basis for that party's position, and any matters which it considers necessary for determination.
39. EPA and Respondent will in good faith attempt to resolve the dispute through formal negotiations within 21 business days, or a longer period if agreed in writing by the parties. During formal negotiations, either party may request a conference with appropriate senior management to discuss the dispute.
40. If the parties are unable to reach an agreement through formal negotiations, within 14 business days after any formal negotiations end, Respondent and EPA's Compliance Manager may submit additional written information to the Director of the Air and Radiation Division, EPA Region 5. EPA will maintain a record of the dispute, which will contain all statements of position and any other documentation submitted pursuant to this Section. EPA will allow timely submission of relevant supplemental statements of position by the parties to the dispute. Based on the record, EPA will respond to Respondent's arguments and evidence and provide a detailed written decision on the dispute signed by the Director of the Air and Radiation Division, EPA Region 5 ("EPA Dispute Decision").

41. If, at the conclusion of the Dispute Resolution process, Respondent notifies EPA that it refuses to implement the EPA Dispute Decision or EPA's selected compliance steps or other remedies, EPA will endeavor to pursue the action(s) it deems necessary, if any, within a reasonable period of time.

X. Compliance Managers

42. EPA and Respondent each shall designate a Compliance Manager. Each Compliance Manager shall be responsible for overseeing the implementation of the Compliance Order in Section V. of this CAFO. Correspondence regarding the above Compliance Order should be directed through, or copied to, the Compliance Managers. The Parties shall submit, or copy, all reports, submissions, and notifications required by this CAFO to each Compliance Manager.
43. EPA hereby designates its Compliance Manager as:
- Constantinos Loukeris (AE-17J)
Air & Radiation Division
U.S. EPA, Region 5
77 W. Jackson Blvd.
Chicago, IL 60604-3590
44. Respondent hereby designates its Compliance Manager as:
- Edgar Moodie
Environmental Engineer
Stepan Company
22500 W. Millsdale Road
Elwood, Illinois 60421
45. The parties shall provide written notice of a change of Compliance Manager.

XIII. Final Statement

46. This CAFO resolves only Respondent's liability for federal civil penalties for the violations alleged in the Factual Allegations section of this CAFO.
47. If Respondent fails to comply with any provision contained in this CAFO, Respondent waives any rights it may possess in law or equity to challenge the authority of EPA to bring a civil action in the appropriate United States District Court to compel compliance with this CAFO.
48. The settlement effected in this CAFO is in part, conditioned upon the accuracy of Respondent's representations to EPA.
49. This CAFO does not affect the right of EPA or the United States to pursue appropriate injunctive or other equitable relief or criminal sanctions for any violation of law under the Act, other than those alleged herein.
50. This CAFO does not affect Respondent's responsibility to comply with the Act and other applicable federal, state and local statutes, laws, ordinances and regulations, nor shall it be construed to be a ruling on, or determination of, any issue related to any federal, state, or local permit. Compliance with this CAFO shall not be a defense to any actions subsequently commenced pursuant to federal laws and regulations administered by Complainant, and it is the responsibility of Respondent to comply with such laws and regulations.

51. Respondent certifies that it is now in compliance with the requirements that formed the basis of the violations alleged in this CAFO, in that it is performing required monitoring in compliance with EPA Reference Method 21 Leak Detection and Repair monitoring. (40 C.F.R. Part 60 Appendix A).
52. This CAFO constitutes an "enforcement response" as that term is used in "U.S. EPA's Clean Air Act Stationary Source Civil Penalty Policy" to determine Respondent's "full compliance history" under Section 113(e) of the Act, 42 U.S.C. § 7413(e).
53. The terms of this CAFO bind Respondent, and its successors, and assigns.
54. Each person signing this consent agreement certifies that he or she has the authority to sign this consent agreement for the party whom he or she represents and to bind that party to its terms.
55. This CAFO shall terminate upon payment of the required penalty amount and completion of the monitoring and repair program requirements in section VII., including submission of the annual reports.
56. Each party agrees to bear its own costs and attorneys' fees in this action.
57. This CAFO constitutes the entire agreement between the parties.

**CONSENT AGREEMENT AND FINAL ORDER
STEPAN COMPANY, ELWOOD, ILLINOIS**

U.S. Environmental Protection Agency, Complainant

9/6/2005

Date

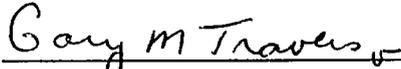


Stephen Rothblatt, Director
Air and Radiation Division
U.S. Environmental Protection
Agency, Region 5 (A-18J)

The Stepan Company, Respondent

8-17-05

Date



Gary Traverso, Plant Manager
Stepan Company,
Elwood, Illinois

**CONSENT AGREEMENT AND FINAL ORDER
STEPAN COMPANY, ELWOOD, ILLINOIS**

Docket No.

~~CAA-05~~ 2005 00-48

Final Order

It is ordered as agreed to by the parties and as stated in the consent agreement, effective immediately upon filing of this CAFO with the Regional Hearing Clerk. This Final Order disposes of this proceeding pursuant to 40 C.F.R. § 22.18.

9-7-05
Date



Thomas V. Skinner
Regional Administrator
U.S. Environmental Protection
Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3511

CONSENT AGREEMENT AND FINAL ORDER
The Stepan Company
Docket No.

~~CAA-05-~~ 2005 0048

CERTIFICATE OF SERVICE

I hereby certify that I have caused the original of the foregoing Complaint and Consent Agreement and Final Order (CAFO) to be filed with the Regional Hearing Clerk, U.S. EPA, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, and a copy of the CAFO to be served upon the persons designated below, on the date below, by depositing a copy in the U.S. Mail, certified-return receipt requested, in an envelope addressed to:

Gary Traverso, Plant Manager
Stepan Company,
22500 W. Millsdale Road
Elwood, Illinois 60421

and by first-class mail to:

Russell A. Garrison
Corporate Counsel
Stepan Company
22 West Frontage Road
Northfield, IL 60093

Julie K. Armitage, Acting Manager
Compliance and Enforcement Section (MC 40)
IEPA Bureau of Air
P.O. Box 19276
Springfield, Illinois 62794-9276

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PROTECTION AGENCY
REGION V

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REGIONAL HEARING CLERK
SEP 8 2005

on the 8th day of September, 2005.

Shanee Rucker
Shanee Rucker, Administrative
Program Assistant, AECAS (MI/WI)

CERTIFIED MAIL RECEIPT NUMBER: 7001 0320 0006 14478715