



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

JUN 30 2015

REPLY TO THE ATTENTION OF:

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Cytec Industries, Inc.
c/o The Corporation Company, Registered Agent
30600 Telegraph Road, Suite 2345
Bingham Farms, MI 48025

Re: Notice of Violation and Finding of Violation (NOV/FOV)
Cytec Industries, Inc.
Kalamazoo, Michigan

To Whom It May Concern:

The U.S. Environmental Protection Agency is issuing the enclosed Notice of Violation and Finding of Violation (NOV/FOV) to Cytec Industries, Inc. ("you"), under Section 113(a) of the Clean Air Act, 42 U.S.C. § 7413(a). We find that Cytec Industries, Inc. is violating the Michigan State Implementation Plan, including the requirements of obtain a Permits to Install at the facility in Kalamazoo, Michigan. Additionally, we have determined that you are violating Section 112 of the CAA, 42 U.S.C. § 7412, the applicable implementing regulations, and Title V of the Clean Air Act, 42 U.S.C. § 7661 *et seq.*

Section 113 of the Clean Air Act gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order, and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the NOV/FOV. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply, and the steps you will take to prevent future violations. In order to make the conference more productive, we encourage you to submit information responsive to the NOV/FOV to us prior to the conference date.

Please plan for your technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

You may contact Constantinos Loukeris or Alexandra Letuchy at (312) 353-6198 or (312) 866-6035, respectively, to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,


George T. Czerniak
Director
Air and Radiation Division

Enclosures: NOV/FOV
Small Business Fact Sheet

cc: Mary Douglas, District Supervisor
MDEQ Air Quality Division

Albert Dumois
Safety, Health, and Environmental Manager
Cytec Industries Inc.
3115 Miller Road
Kalamazoo, Michigan 49001

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:)

Cytec Industries, Inc.)
Kalamazoo, Michigan)

) Proceedings Pursuant to the
) Clean Air Act, 42 U.S.C. § 7401 *et seq.*

)
) EPA-5-15-MI-05
)

NOTICE OF VIOLATION AND FINDING OF VIOLATION

The U.S. Environmental Protection Agency is issuing this Notice of Violation and Finding of Violation (NOV/FOV or Notice) to Cytec Industries, Inc. ("Cytec"), for violations of the Clean Air Act (CAA), 42 U.S.C. § 7401 *et seq.*, at the facility located at 3115 Miller Road in Kalamazoo, Michigan (the facility).

This Notice is issued pursuant to Sections 113(a)(1) and (a)(3) of CAA, 42 U.S.C. §§ 7413(a)(1) and (a)(3). The authority to issue this Notice has been delegated to the Director, Air and Radiation Division, Region 5.

STATUTORY AND REGULATORY BACKGROUND

Obtaining a Permit to Install

1. On May 31, 1972, EPA approved the State of Michigan's February 3, 1972 State Implementation Plan (SIP) submittal. 37 Fed. Reg. 10873 (May 31, 1972). On May 6, 1990, EPA approved the State of Michigan's April 25, 1979 SIP submittal. 45 Fed. Reg. 29790 (May 6, 1990). On May 13, 1993, EPA approved the State of Michigan's October 10, 1986 SIP submittal (portions of which were withdrawn in a January 28, 1993 letter from the State of Michigan). 58 Fed. Reg. 28359 (May 13, 1993).
2. The Michigan SIP includes Mich. Admin. Code r. 336.1201 (1980). Mich. Admin. Code r. 336.1201 provides that a person shall not install, construct, reconstruct, relocate, or alter any process, fuel-burning, or refuse-burning equipment, or control equipment pertaining thereto which may be a source of an air contaminant, until a permit is issued by the commission. Mich. Admin. Code r. 336.1201 further provides that this permit shall be known as a permit to install and shall cover construction, reconstruction, relocation, and alteration of equipment where such is installed.

National Emission Standards for Hazardous Air Pollutants

3. Pursuant to Section 112(b) of the CAA, 42 U.S.C. § 7412(b), EPA designates hazardous air pollutants (HAPs) which present or may present a threat of adverse effects to human health or the environment. EPA has designated methanol (Chemical Abstracts Service

(CAS) Number 67561) and formaldehyde (CAS Number 50000) as HAPs under Section 112(b) of the CAA.

4. Sections 112(c) and (d) of the CAA, 42 U.S.C. §§ 7412(c) and (d), require EPA to publish a list of categories of sources which EPA finds present a threat of adverse effects to human health or the environment due to emissions of HAPs, and to promulgate emission standards for each source category. These standards are known as “national emission standards for hazardous air pollutants” or “NESHAPs.” EPA codifies these requirements at 40 C.F.R. Part 63.
5. The NESHAPs are national technology-based performance standards for HAP sources in each category that become effective on a specified date. The purpose of these standards is to ensure that all sources achieve the maximum degree of reduction in emissions of HAPs that EPA determines is achievable for each source category.
6. Section 112(i)(3) of CAA, 42 U.S.C. § 7412(i)(3), and 40 C.F.R. § 63.4, prohibit the owner or operator of any source from operating such source in violation of any NESHAP applicable to such source.
7. Section 112(a)(1) of the CAA, 42 U.S.C. § 7412(b), and 40 C.F.R. § 63.2, define “major source” as any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year (TPY) or more of any HAP or 25 TPY or more of any combination of HAPs.

*NESHAP for Miscellaneous Organic Chemical Manufacturing at 40 C.F.R. Part 63,
Subpart FFFF*

8. The NESHAP, at 40 C.F.R. Part 63, Subpart A, contains general provisions applicable to the owner or operator of any stationary source that contains an affected source subject to the NESHAP at Part 63. These include definitions at 40 C.F.R. § 63.2.
9. The NESHAP, at 40 C.F.R. § 63.2, defines “affected source” as the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a CAA Section 112(c) source category or subcategory for which a Section 112(d) standard or other relevant standard is established pursuant to Section 112 of the CAA.
10. The NESHAP, at 40 C.F.R. § 63.2, defines “existing source” as any affected source that is not a new source, and further defines “new source” as any affected source the construction or reconstruction of which is commenced after EPA first proposes a relevant emission standard under 40 C.F.R. Part 63 establishing an emission standard applicable to such source.
11. The NESHAP, at 40 C.F.R. § 63.2, defines “performance test” as the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.

12. On November 10, 2003, EPA promulgated the NESHAP for Miscellaneous Organic Chemical Manufacturing (MON), codified at 40 C.F.R. Part 63, Subpart FFFF. 68 *Fed. Reg.* 63888. The MON establishes emission standards, requirements to demonstrate initial and continuous compliance with emission limits, operating limits, work practice standards, and recordkeeping requirements associated with miscellaneous organic chemical manufacturing. See 40 C.F.R. § 63.2430.
13. The MON, at 40 C.F.R. § 63.2435(a), provides that owners and operators are subject to the MON if they operate miscellaneous organic chemical manufacturing process units (MCPU) that are located at, or are part of, a major source of HAP emissions as defined in Section 112(a) of the CAA.
14. The MON, at 40 C.F.R. § 63.2550, defines “miscellaneous organic chemical manufacturing process” as all equipment which collectively functions to produce a product or isolated intermediate that are “materials” described in 40 C.F.R. § 63.2435(b). Process includes any, all, or a combination of reaction, recovery, separation, purification, or other activity, operation, manufacture, or treatment which are used to produce a product or isolated intermediate.
15. The MON, at 40 C.F.R. § 63.2435(b), provides that a MCPU includes equipment necessary to operate a miscellaneous organic chemical manufacturing process, as defined in 63.2550, that, among other things: produces certain organic chemicals with an SIC or NAICS code listed in 40 C.F.R. § 63.2435(b)(1)(i) or (ii); processes, uses or generates any of the organic HAP listed in Section 112(b) of the Act; and is not an affected source under another NESHAP. An MCPU also includes any assigned storage tanks and transfer racks; equipment in open systems that is used to convey or store water having the same concentration and flow characteristics as wastewater; and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open ended valves or lines, valves, connectors, and instrumentation systems.
16. The MON, at 40 C.F.R. § 63.2445(a)(2), provides that owners and operators of a new affected source with a start up after November 10, 2003 must comply with the requirements for new sources in this subpart upon startup of your affected source.

Title V Requirements

17. Pursuant to Section 502(a) of the CAA, 42 U.S.C. § 7661a(a), it is unlawful for any person to, among other things, operate a major source subject to Title V except in compliance with a Title V permit after the effective date of any permit program approved or promulgated under Title V of the CAA. EPA first promulgated regulations governing state operating permit programs on July 21, 1992. See 57 *Fed. Reg.* 32295; 40 C.F.R. Part 70.
18. EPA granted interim approval of the Michigan Title V program on January 10, 1997. See 62 *Fed. Reg.* 1387 (effective on February 10, 1997). EPA fully approved the Michigan Title V program on December 4, 2001. See 66 *Fed. Reg.* 62949 (effective on November 30, 2001). The Michigan regulations governing the Title V permit program, also known

as the “renewable operating permit program,” are codified at R 336.1210 through R 336.1219.

19. 40 C.F.R. § 70.2 defines “major source,” in part, as any stationary source (or group of stationary sources that are located on one or more contiguous or adjacent properties, and are under common control of the same person (or persons under common control)) belonging to a single major industrial grouping and that directly emits or has the potential to emit greater than 100 TPY of any criteria air pollutant, 10 TPY of a single HAP, or 25 TPY of all HAP combined. See also Mich. Admin. Code r. 336.1211.
20. 40 C.F.R. § 70.7(b) provides that no source subject to 40 C.F.R. Part 70 requirements may operate without a permit as specified in the CAA. See also Mich. Admin. Code r. 336.1210.
21. 40 C.F.R. § 70.1(b) provides that all sources subject to Title V shall have a permit to operate that assures compliance by the source with all applicable requirements. See also Mich. Admin. Code r. 336.1213.
22. Section 503 of the CAA, 42 U.S.C. § 7661b, and 40 C.F.R. § 70.5(a), set forth the requirement to submit a timely, accurate, and complete permit application for a permit, including information required to be submitted with the application. See also R 336.1210 and Mich. Admin. Code r. 336.1212.

FACTUAL BACKGROUND

23. Cytec operates a chemical manufacturing facility located 2715 Miller Road in Kalamazoo, Michigan. At the facility, Cytec produces thermoplastic resins in KM and APC processes. The primary chemical that Cytec processes at the facility is methanol, which is used solely in the KM process.
24. Cytec began construction of the three reactor trains that produce three thermoplastic resin products (two KM products and one APC product) at the facility in 2005. Operations began in 2007.
25. Originally, Cytec had two leaching columns used in the KM and APC processes. In 2012, Cytec expanded its facility with the construction of two additional leaching columns for use in both processes and began operation of those columns in 2014.
26. Cytec has installed and operated this facility without receiving any CAA permits from the Michigan Department of Environmental Quality (MDEQ) or EPA Region 5 for the KM and APC processes.
27. On April 22, 2015, EPA conducted an inspection of the facility (April 2015 Inspection).
28. During the April 2015 Inspection, Cytec provided purchase order records depicting the amount of methanol that is purchased monthly from its neighboring facility, Allnex.

29. For calendar year 2014, Cytec purchased 209 tons of methanol that were needed to operate four leaching columns.
30. During the April 2015 Inspection, Cytec provided records of the daily amount of wastewater effluent containing methanol that left the facility and was sent to the Kalamazoo Publicly Owned Treatment Works.
31. For calendar year 2014, Cytec sent effluent wastewater containing about 180.96 tons of methanol.
32. Cytec estimates its methanol emissions from the processes using an Emission Master® model, assuming a 90 percent control efficiency of methanol at the water scrubber.
33. Based on the facility's actual emissions in 2014, the facility has exceeded the major source threshold for methanol in 2014.
34. Based on the facility's potential to emit, excluding controls, the facility has exceeded the major source threshold for methanol since startup.

VIOLATIONS

SIP and Permit to Install Violations

35. Cytec failed to obtain a permit to install for the facility prior to the start of construction of the facility in 2005. Cytec continues to operate the facility, in violation of the Mich. Admin. Code R. 336.1201 (1980).
36. Cytec failed to obtain a permit to install for the facility prior to the start of construction of the two additional leaching columns in 2012. Cytec continues to operate the leaching columns, in violation of the Mich. Admin. Code R. 336.1201 (1980).

NESHAP Violations

37. From the startup of the facility to the present, Cytec has been a major source of HAPs and was therefore required to comply with the requirements of the MON at 40 C.F.R. Part 63, Subpart FFFF upon startup. From the startup of the facility to the present, Cytec failed to comply with the requirements of the MON, which includes requirements to demonstrate initial and continuous compliance with emission limits, operating limits, work practice standards, and recordkeeping requirements associated with miscellaneous organic chemical manufacturing, in violation of 40 C.F.R. Part 63, Subpart FFFF and Section 112 of the CAA, 42 U.S.C. § 7412.

Title V Violations

38. Cytec failed to submit a timely Title V permit application to the State of Michigan prior to the startup of the facility, in violation of 40 C.F.R. §§ 70.5(a) and 70.7(b) and Section 503 of the CAA.

ENVIRONMENTAL IMPACT OF VIOLATIONS

- 39. The violations described above may result in elevated and potentially uncontrolled emissions of a hazardous air pollutant, methanol, to the atmosphere.
- 40. Acute exposure to methanol by inhalation may result in visual disturbances, such as blurred or dimness of vision; and neurological damage, specifically permanent motor dysfunction. Chronic inhalation may result in headache; insomnia; conjunctivitis; visual disturbances; and blindness.

ENFORCEMENT AUTHORITY

- 41. Section 113(a)(1) of the Act, 42 U.S.C. § 7413(a)(1), provides in part that at any time after the expiration of 30 days following the date of the issuance of a Notice of Violation, EPA may, without regard to the period of violation, issue an order requiring compliance with the requirements of the applicable SIP or permit, issue an administrative penalty order pursuant to Section 113(d), or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.
- 42. Section 113(a)(3) of the Act, 42 U.S.C. § 7413(a)(3), provides in part that if EPA finds that a person has violated or is in violation of any requirement or prohibition of any rule promulgated under Title I and/or Title V of the Act, EPA may issue an administrative penalty order under Section 113(d), issue an order requiring compliance with such requirement or prohibition, or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.

Date

6/30/15

George T. Czerniak
Director
Air and Radiation Division

CERTIFICATE OF MAILING

I, Loretta Shaffer, certify that I sent a Notice of Violation and Finding of Violation, No. EPA-5-15-MI-05, by Certified Mail, Return Receipt Requested, to:

Cytec Industries, Inc.
c/o The Corporation Company, Registered Agent
30600 Telegraph Road, Suite 2345
Bingham Farms, MI 48025

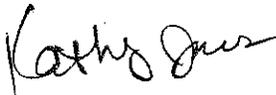
Albert Dumois
Safety, Health, and Environmental Manager
Cytec Industries Inc.
3115 Miller Road
Kalamazoo, Michigan 49001

7009 1680 0000 7644 3326

I also certify that I sent copies of the Notice of Violation and Finding of Violation by first-class mail to:

Mary Douglas,
Air Quality Division
7953 Adobe Road
Kalamazoo, MI 49009

On the 30th day of June 2015.



Loretta Shaffer, Program Technician
AECAB, PAS

CERTIFIED MAIL RECEIPT NUMBER: 7009 1680 0000 7644 3333