

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5

IN THE MATTER OF: )  
 )  
Ferro Corporation ) NOTICE OF VIOLATION  
Keil Chemical Division )  
Hammond, Indiana ) EPA-5-00-IN-04  
 )  
Proceedings Pursuant to )  
Section 113(a)(1) of the )  
Clean Air Act, 42 U.S.C. )  
§ 7413(a)(1) )

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**NOTICE OF VIOLATION**

The Administrator of the United States Environmental Protection Agency (U.S. EPA) is issuing this Notice of Violation pursuant to Section 113(a)(1) of the Clean Air Act (Act), 42 U.S.C. § 7413(a)(1). U.S. EPA finds that Ferro Corporation, Keil Chemical Division (Keil), is violating the Indiana State Implementation Plan (SIP), as follows:

**Statutory and Regulatory Background**

1. On July 5, 1995, the Administrator of U.S. EPA approved Indiana SIP Rule 326 IAC 8-7, containing requirements for sources constructed in non-attainment areas, as part of the federally enforceable SIP for Indiana (60 Fed. Reg. 34859). This rule became federally effective on September 5, 1995.
2. Indiana SIP Rule 326 IAC 8-7 applies to, among other things, stationary sources located in Lake County that emit or have the potential to emit VOC at levels equal to or greater than 25 tons per year (tpy).
3. Indiana SIP Rule 326 IAC 8-7-3 requires that affected facilities achieve an overall VOC reduction from baseline actual emissions of at least 98 percent by the documented reduction in use of VOC-containing materials or the installation of an add-on control system that achieves an overall control efficiency of 98 percent.
4. Indiana SIP Rule 326 IAC 8-7-7 states that the owner or operator of any source subject to this rule is subject to the applicable test method requirements of 326 IAC 8-1-4 and 40 C.F.R. Part 60, Appendix A.

5. On March 6, 1992, the Administrator of U.S. EPA approved Indiana SIP Rule 8-1-4, which contains the required test methods and procedures for sources subject to 326 IAC 8.57 Fed. Reg. 8086.
6. Indiana SIP Rule 326 IAC 8-1-4(d) defines the overall efficiency of the emission control system as the product of each individual capture system efficiency and each control device efficiency. Indiana SIP Rule 8-1-4(e)(1)(A) requires that the control device efficiency test for a carbon adsorption system with a common exhaust stack for all individual adsorber vessels consist of three separate runs. Each run must coincide with one or more complete sequences through the adsorption cycles of all the individual adsorber vessels.
7. Indiana SIP Rule 326 IAC 8-7-4(a) states that for sources that choose to comply by the application of a control device, the source must submit a compliance plan containing certain information on or before December 31, 1994.
8. Indiana SIP Rules 326 IAC 8-7-4(a) and 326 IAC 8-7-9(4) state that for sources that choose to comply by means of a control device, compliance tests must be performed as follows: on or before August 31, 1995, every two years after the date of the initial test, and whenever the owner or operator chooses to operate the control system under conditions different from those in place at the time of the previous test.
9. Indiana SIP Rule 326 IAC 8-7-4(a) states that the results of the initial test required to be conducted under 326 IAC 8-7-9(4) must be submitted by September 30, 1995. The test results must include, among other things, the overall control efficiency and certain process parameters, such as production rate, characteristics of process materials, and other parameters relevant to the emissions of VOC.
10. Indiana SIP Rule 326 IAC 8-7-9(1) requires that the control system be operated and maintained according to the manufacturer's recommendations.
11. Indiana SIP Rule 326 IAC 8-7-9(2) requires that the control device operating and maintenance procedures be submitted to the Indiana Department of Environmental Management no later than September 30, 1995.

12. Indiana SIP Rule 326 IAC 8-7-10(a) specifies that for sources that choose to comply by means of a carbon adsorption control system, the source must operate a VOC monitoring device capable of continuously recording the concentration of VOC at the outlet of the carbon bed.

#### **Keil's Facility**

13. Keil owns and operates a manufacturing facility, located at 3000 Sheffield Avenue, Hammond, Indiana, used to make Pyro-Chek. The Pyro-Chek process emits 1,2 dichloroethane (ethylene dichloride or EDC), which is a VOC.
14. The Keil facility in Hammond, Indiana is located in Lake County, which has been designated a severe nonattainment area for ozone. 40 C.F.R. § 81.315.
15. VOC emissions from Keil's Pyro-Chek manufacturing process are subject to the VOC specific requirements for Lake County as set forth in the Indiana SIP at 326 IAC 8-7.
16. Keil has chosen to comply with the requirements of 326 IAC 8-7 by installation of a carbon adsorber control system. The carbon adsorber control system consists of two separate adsorber vessels and one common exhaust stack.
17. Keil performed an initial control device efficiency test on its carbon adsorption system in January of 1995. After its January 1995 test, Keil conducted its next removal efficiency test on the carbon adsorption system in July of 1999.

#### **Findings of Violation**

18. Keil has failed to achieve an overall VOC reduction of at least 98 percent from baseline actual emissions by the documented reduction in the use of VOC containing materials or by the installation of an add-on control system that achieves an overall VOC control efficiency of 98 percent, in violation of 326 IAC 8-7-3.
19. Keil has failed to submit a compliance plan to the Indiana Department of Environmental Management that contains information required by 326 IAC 8-7-4(a)(1).
20. The results of Keil's January 1995 removal efficiency testing failed to contain certain information required under

326 IAC 8-7-4(a)(4). Specifically, the test results failed to contain: the overall control efficiency, production rate, characteristics of process materials, and other parameters relevant to the emissions of VOC, in violation of 326 IAC 8-7-4(a)(4).

21. The January 1995 test did not consist of three separate runs, each coinciding with with one or more complete sequences through the adsorption cycles of all the individual adsorber vessels, in violation of 326 IAC 8-7-7 and 8-1-4(e).
22. After January of 1995, Keil operated the carbon adsorption system under conditions different from those that were in place at the time of the January 1995 test. As of October of 1996, Keil changed the following operating conditions from the original system design: among other things, the solvent laden air was not heated and the steaming time, working saturation, and steam consumption had increased.
23. Keil failed to conduct VOC compliance testing on its carbon adsorber control system every two years after the date of the initial test (January of 1995) and after operating the control system under conditions different from those that were in place at the time January 1995 test, as required by 326 IAC 8-7-4(a)(2) and 326 IAC 8-7-9(4).
24. Keil has failed to operate and maintain the carbon adsorber control system in accordance with the manufacturer's recommendations, in violation of 326 IAC 8-7-9(2).
25. Keil has failed to submit to the Indiana Department of Environmental Management the carbon adsorber's operating and maintenance procedures, in violation of 326 IAC 8-7-9(2).
26. Prior to approximately January of 1999, when Keil installed the new gas chromatograph-based continuous emission monitoring system, Keil failed to operate a VOC monitoring device capable of continuously recording the concentration of VOC at the outlet of the carbon bed, in violation of 326 IAC 8-7-10(a).

Date

12/16/95

  
Margaret M. Guerriero, Acting Director  
Air and Radiation Division

**CERTIFICATE OF MAILING**

I, Betty Williams, do hereby certify that a Notice of violation, issued pursuant to the Clean Air Act, was sent by Certified Mail, Return Receipt Requested, to:

Hugh Gainey, Plant Manager  
Ferro Corporation, Keil Chemical Division  
3000 Sheffield Avenue  
Hammond, Indiana 46320

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

Felicia R. George, Assistant Commissioner  
Office of Enforcement  
Indiana Department of Environmental Management  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015

Adriane Esparza, Director  
Northwest Regional Office  
Indiana Department of Environmental Management  
504 North Broadway, Suite 418  
Gary, Indiana 46402-1921

on the 1<sup>th</sup> day of December, 1999.

Betty Williams  
Betty Williams, Secretary  
AECAS (IL/IN)

CERTIFIED MAIL RECEIPT NUMBER:

P 140 895 486