

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5**

**IN THE MATTER OF:** )  
 )  
Coulton Chemical Company, L.P. ) **NOTICE OF VIOLATION**  
Coulton Chemical Corporation, Inc. )  
Cairo, Ohio ) **EPA-5-99-OH-35**  
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 )  
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"), by authority delegated to the Director of the Air and Radiation Division, Region 5, issues this Notice of Violation pursuant to Section 113(a)(1) of the Clean Air Act, 42 U.S.C. § 7413(a)(1). U.S. EPA notifies the State of Ohio and Coulton Chemical Company, L.P., and Coulton Chemical Corporation, Inc. (collectively and individually - as appropriate - referred to as "Coulton"), that the U.S. EPA finds that Coulton formerly located at 7680 Ottawa Road, Cairo, Allen County, Ohio, violated the Prevention of Significant Deterioration ("PSD") rules in the Ohio State Implementation Plan ("Ohio SIP"). U.S. EPA issues this NOV to Coulton for building and operating a major modification of its major stationary source of sulfur dioxide without a construction permit that requires the use of the Best Available Control Technology ("BACT") at its sulfuric acid and liquid sulfur dioxide plant.

**Statutory and Regulatory Background**

1. The Clean Air Act ("Act"), in Part C, at Sections 160-169, 42 U.S.C. §§ 7470-7479, provides for the prevention of significant deterioration of air quality. Specifically, Section 165(a) of the Act, 42 U.S.C. § 7475(a), sets forth the following preconstruction requirements for major emitting facilities:

No major emitting facility on which construction is commenced after August 7, 1977, may be constructed in any area to which this part applies unless -

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- (4) the proposed facility is subject to the best

available control technology for each pollutant subject to regulation under this chapter emitted from, or which results from, such facility;....

2. Pursuant to Section 161 of the Act, 42 U.S.C. § 7471, each state implementation plan shall contain emission limitations and other measures to prevent the significant deterioration of air quality in each region designated as attainment or unclassifiable pursuant to Section 107 of the Act, 42 U.S.C. § 7407.
3. Pursuant to Section 169 of the Act, 42 U.S.C. § 7479, the term "construction" when used in connection with any source or facility, includes the modification (as defined in section 7411(a) of this title) of any source or facility.
4. On June 19, 1978, the U.S. EPA promulgated PSD rules at 40 C.F.R. § 52.21. The U.S. EPA promulgated amendments to the PSD rules in May 1979; August 1980; June 1982; October 1984; July 1985; November 1986; July 1987; January and October 1988; June 1989; February 1991; February and July 1992; June and July 1993.
5. The U.S. EPA incorporated the PSD rules into the Ohio SIP. 45 Fed. Reg. 52741 (August 7, 1980) and 46 Fed. Reg. 9584 (January 29, 1981). 40 C.F.R. § 52.1884(b).
6. The regulations at 40 C.F.R. § 52.21(i)(1)-(3) set forth the source applicability for the PSD rules:
  - (i) Review of major stationary sources and major modifications--Source applicability and exemptions.
    - (1) No stationary source or modification to which the requirements of paragraphs (j) through (r) of this section apply shall begin actual construction without a permit which states that the stationary source or modification would meet those requirements. The Administrator has authority to issue any such permit.
    - (2) The requirements of paragraphs (j) through (r) of this section shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the Act that it would emit, except as this section otherwise provides.
    - (3) The requirements of paragraphs (j) through (r) of this section apply only to any major stationary source

or major modification that would be constructed in an area designated as attainment or unclassifiable under section 107(d)(1)(D) or (E) of the Act.

7. The regulations at 40 C.F.R. § 52.21(j)(3) require the use of best available control technology whenever there is a significant net emissions increase due to a major modification of a major stationary source. The regulations at 40 C.F.R. § 52.21(r)(1) require that any owner or operator who operates a source or modification without applying for and receiving approval under the requirements of 40 C.F.R. § 52.21 shall be subject to appropriate enforcement action.
8. Pursuant to the definition in 40 C.F.R. § 52.21(b)(3)(i), "net emissions increase" means the amount by which the sum of the following exceeds zero: (a) Any increase in actual emissions from a particular physical change or change in the method of operation at a stationary source; and (b) any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable.

**Applicable PSD Requirements to the Physical Changes**

9. 40 C.F.R. § 52.21(b)(23) defines "significant" in reference to a net emissions increase of sulfur dioxide to be a rate of emissions that would equal or exceed 40 tons per year. 40 C.F.R. § 52.21(b)(2) defines "major modification" to mean any physical change or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act.

**Attainment Status of Allen County, Ohio**

10. The U.S. EPA has designated Allen County, Ohio, as attainment or unclassifiable for sulfur dioxide, pursuant to Section 107 of the Act, 42 U.S.C. § 7407. 40 C.F.R. § 81.336.

**Factual Background**

11. Between 1975 and September 30, 1996, Coulton owned and operated a sulfuric acid plant and a liquid sulfur dioxide plant, located at 7680 Ottawa Road, Cairo, Allen County, Ohio. Marsulex, Inc. (Marsulex), the current owner and operator of the facility, refers to these plants as Plants A and B, respectively. In 1980, Coulton built a second sulfuric acid plant to produce ultra-pure sulfuric acid.

Marsulex refers to this plant as Plant D. The Ohio Environmental Protection Agency ("Ohio EPA") collectively designates Plants A, B, and D as source number 0302000001 P001. On October 9, 1991, the Ohio EPA issued a PTI to Coulton for the construction of a second liquid sulfur dioxide plant. Marsulex refers to this plant as Plant C. The Ohio Environmental Protection Agency ("Ohio EPA") designates it as source number 0302000001 P007. Plants A, B, C, and D have one common stack emission point to the atmosphere. The U.S. EPA collectively refers to Plants A, B, C, and D as the Cairo facility.

**Major Source Status of the Facility**

12. On July 29, 1992, Coulton's stack testing contractor conducted three runs of Reference Method 8 in 40 C.F.R. 60, Appendix A (Method 8) for sulfur oxides. The average emission rate from the Cairo facility was 206 pounds of sulfur dioxide per hour (lbs/hr). Coulton's permit allowed it to operate 8,760 hours per year, so its actual emissions, as defined in 40 C.F.R. § 52.21(b)(21), are 902.3 tons of sulfur dioxide per year (tons/yr).

**Application for a Permit to Install**

13. On September 8, 1994, Coulton applied to the Ohio EPA for a permit to install ("PTI") to increase the production capacity of the Cairo facility from 150 tons of sulfuric acid per day (tons/day) to 250 tons/day. On June 28, 1995, the Ohio EPA issued to Coulton a PTI for this production increase.
14. On March 29, 1999, Marsulex provided the following description of the physical changes or changes in the method of operation of the Cairo facility:

[The June 28, 1995, PTI] authorized physical equipment replacement that would increase the plant's capacity to produce sulfuric acid as well as Plant C's capacity to produce liquid sulfur dioxide. Significant portions of the project, including the planned changes to Plant C, were subsequently abandoned. The changes actually made pursuant to the PTI included installation of an oleum booster fan and replacement of the demister pads and related equipment in the absorbing tower and drying tower. In addition, a portion of the catalyst was replaced in the A plant converter and the A Plant absorbing tower and drying tower were both repacked. Finally, a booster fan was installed in B Plant, the purpose being to allow B Plant to operate without

diminishing A Plant production rate.

15. On March 29, 1999, Marsulex reported that the first purchase order for equipment related to the physical changes or changes in the method of operation is dated January 5, 1996. Marsulex also reported that startup after completing the construction occurred in May 1996.
16. On April 16, 1997, after completing the physical changes or changes in the method of operation of the Cairo facility, Marsulex's stack testing contractor conducted three runs of Method 8 for sulfur oxides. The average emission rate for the Cairo facility was 219.8 lbs/hr. Marsulex's permit allows it to operate 8,760 hours per year, so its actual emissions, as defined in 40 C.F.R. § 52.21(b)(21), are 962.7 tons/yr.

**Calculation of the Net Emissions Increase**

17. The difference between the current actual emissions and the past actual emissions is:

962.7 tons of sulfur dioxide per year
<u>-902.3 tons of sulfur dioxide per year</u>
60.4 tons of sulfur dioxide per year <sup>1</sup>

**The June 28, 1995, Permit to Install**

18. On June 28, 1995, the Ohio EPA issued a Permit to Install (PTI) to Coulton. The PTI included emission limits that decrease as the production rate increases in 25-ton per day increments as tabulated below.

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<sup>1</sup> Ohio Administrative Code (OAC) 3745-18-08(H) sets an emission limit of 35.0 lbs of sulfur dioxide per ton of 100% sulfuric acid produced for The Cairo facility. In February 1980, the Ohio EPA included this rule in its proposed SIP revision. In May 1980, the Ohio EPA withdrew this rule from the proposed SIP revision, and therefore, in January 1981, the U.S. EPA did not approve OAC 3745-18-08(H) as part of the applicable Ohio SIP. 40 C.F.R. § 52.1881(a)(4) and (8). However, this emission limit is legally and practicably enforceable by the Ohio EPA. In January 1995, an Ohio EPA permit reviewer used the limit in OAC 3745-18-08(H) to determine that the net emissions increase for this facility would be at least 639 tons/year.

## Emission Limits and Potential Emissions in the Permit to Install.

Production Rate (tons/day)	Emission Rate (lbs/ton)	Potential Emissions (tons/yr)
0 to 150	35.0	958.1
151 to 175	31.2	996.5
176 to 200	27.3	996.5
201 to 225	24.2	993.7
226 to 250	21.8	994.6

19. The U.S. EPA's RACT/BACT/LAER [Reasonably Available Control Technology/Best Available Control Technology/Lowest Achievable Emission Rate] Clearinghouse reports that the BACT emission rate for a sulfuric acid plant is 4.0 pounds of sulfur dioxide per ton of 100 percent sulfuric acid produced (lbs/ton).
20. On March 17, 1999, the Ohio EPA issued a draft administrative modification of the June 28, 1995, PTI. The draft modification deletes the emission limits cited in Paragraph 18 and inserts two emission limits: a maximum emission rate of 35.0 lbs/ton; and a maximum of 5460 pounds of sulfur dioxide per day.

**Findings of Violation**

21. The U.S. EPA finds that the Cairo facility is a major stationary source of sulfur dioxide because the Cairo facility emits more than 100 tons of sulfur dioxide per year. 40 C.F.R. § 52.21(b)(1).
22. The U.S. EPA finds that physical changes or changes in the method of operation of the Cairo facility have resulted in a significant net emissions increase of sulfur dioxide. The U.S. EPA also finds that the physical changes or changes in the method of operation of the Cairo facility constitute a major modification of a major stationary source. The U.S. EPA further finds that Coulton began actual construction of a major modification to a major stationary source without properly applying for and obtaining a permit which requires operation of its source in compliance with 40 C.F.R. § 52.21(j) through (r).
23. The U.S. EPA finds that because all of the emission limits in the PTI are greater than 4.0 lbs/ton, the PTI did not

apply BACT to the Cairo facility even though Coulton constructed a major modification of a major stationary source of sulfur dioxide.

24. The U.S. EPA finds that between no later than June 1, 1996 and September 30, 1996, Coulton owned and operated a major modification of a major stationary source of sulfur dioxide which did not use the best available control technology in violation of 40 C.F.R. § 52.21(j)(3).

8/18/99

Date



Margaret M. Guerriero, Acting Director  
Air and Radiation Division