



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

**MAR 27 2012**

REPLY TO THE ATTENTION OF:

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

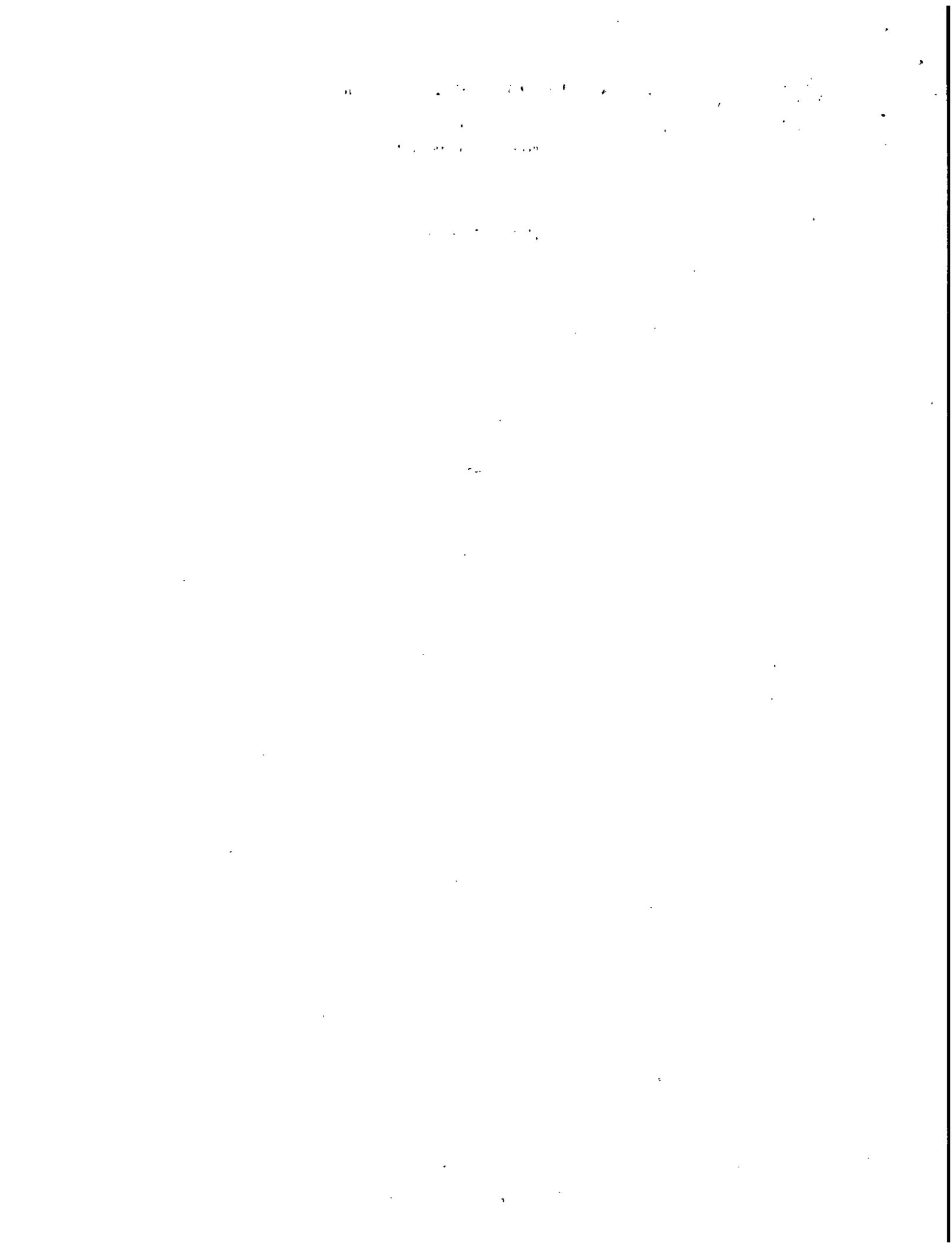
Michael W. Hult, P.E.  
Environmental Engineering Specialist  
3M Environmental, Health and Safety Operations  
3M Center, Building 0224-05-W-03  
St. Paul, Minnesota 55144-1000

Katrina Hendricks  
Senior Environmental Engineer  
3M Company  
10746 Innovation Road  
Cottage Grove, Minnesota 66016

Dear Mr. Hult and Ms. Hendricks:

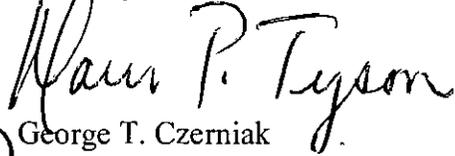
The U.S. Environmental Protection Agency is issuing the enclosed Notice and Finding of Violation (NOV/FOV) to 3M Company (3M or you) relating to emission sources at the Cottage Grove Traffic Safety Systems Division (TSS Division) located at 10746 Innovation Road, Cottage Grove, Minnesota. We find that you have violated and/or are in violation of the Minnesota State Implementation Plan, Title V of the Clean Air Act (the Act) and its implementing regulations, and the New Source Performance Standards at 40 C.F.R Part 60, promulgated under Section 111(b) of the Act, 42 U.S.C. § 7411(b), at the TSS Division.

We appreciate your self-disclosure relating to some of the alleged violations in this NOV/FOV and the information you have provided EPA to date. We are offering you an opportunity to confer with us about the violations alleged in the NOV/FOV. The conference will give you the opportunity to present information on the specific findings of violation, the efforts you have taken to comply, and the steps you will take to prevent future violations. Please plan for your facility's 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 Patrick Miller at 312-886-4044 to request a conference. You should make the request for a conference no later than 10 days after receipt of this letter, and we should hold any conference within 30 calendar days of your receipt of this letter.

Sincerely,



 George T. Czerniak  
Acting Director  
Air and Radiation Division

Enclosure

cc: Jeff Connell, Section Manager Compliance & Enforcement  
Minnesota Pollution Control Agency

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5**

**IN THE MATTER OF:**

**3M Company**

**Cottage Grove, Minnesota**

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Proceedings pursuant Section 113 of the  
Clean Air Act, 42 U.S.C. § 7413

**EPA-5-12-MN-02**

**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 3M Company (3M), for violations of the Clean Air Act (the CAA), 42 U.S.C. §§ 7401 *et seq.*, at its Cottage Grove Traffic Safety Systems Division ( TSS Division) located at 10746 Innovation Road, Cottage Grove, Minnesota.

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

**STATUTORY AND REGULATORY BACKGROUND**

**New Source Performance Standards**

1. Section 111(b) of the CAA, 42 U.S.C. § 7411(b), requires EPA to publish a list of categories of sources, which, in EPA's judgment, cause or contribute significantly to air pollution that may reasonably be anticipated to endanger public health or welfare, and to promulgate standards of performance for new stationary sources within these categories. These standards are known as "new source performance standards" or "NSPS."
2. The NSPS are national technology-based performance standards for air pollutant sources constructed or modified after a specified date. The purpose of the standards is to ensure that all new or modified sources of air pollutants will be designed to meet emission limitations achievable through the application of the best demonstrated system for emission reduction considering the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements.
3. Section 111(e) of the CAA, 42 U.S.C. § 7411(e), prohibits the owner or operator of any new source from operating such source in violation of any standard of performance applicable to such source.
4. Under Section 111(b) of the CAA, 42 U.S.C. § 7411(b), EPA promulgates NSPS for categories of sources and codifies those requirements at 40 C.F.R. Part 60.

5. 40 C.F.R. Part 60, Subpart A contains general provisions applicable to the owner or operator of any stationary source which contains an affected facility subject to NSPS. These include definitions at 40 C.F.R. § 60.2, notification and record keeping provisions at 40 C.F.R. § 60.7 and performance test requirements at 40 C.F.R. § 60.8.
6. Under 40 C.F.R. § 60.2, an “affected facility” means any apparatus subject to a performance standard under the NSPS regulations.
7. Under 40 C.F.R. § 60.2, “construction” means fabrication, erection or installation of an affected facility.
8. The NSPS, at 40 C.F.R. § 60.7(a)(1), require the owner or operator of an affected facility to furnish EPA a notification of the date of construction of an affected facility postmarked no later than 30 days after such date.
9. The NSPS, at 40 C.F.R. § 60.7(a)(3), require the owner or operator of an affected facility to furnish EPA a notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
10. The NSPS, at 40 C.F.R. § 60.8, require the owner or operator of an affected facility to conduct a performance test on the affected facility and to furnish EPA a written report of the results of the performance test within 60 days after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup of the affected facility.
11. In 1992, EPA promulgated standards of performance for calciners and dryers in mineral industries, which were codified at 40 C.F.R. Part 60, Subpart UUU (“NSPS Subpart UUU”). 57 Fed. Reg. 44503 (September 28, 1992).
12. Under 40 C.F.R. § 60.730, the affected facility to which NSPS Subpart UUU applies is each calciner and dryer at a mineral processing plant that commences construction, modification, or reconstruction after April 23, 1986.
13. Under 40 C.F.R. § 60.731, “calciner” means the equipment used to remove combined (chemically bound) water and/or gases from mineral material through direct or indirect heating. This definition includes expansion furnaces and multiple hearth furnaces.
14. Under 40 C.F.R. § 60.731, “dryer” means the equipment used to remove uncombined (free) water from mineral material through direct or indirect heating.
15. Under 40 C.F.R. § 60.731, “mineral processing plant” means any facility that processes or produces any of the following minerals, their concentrates or any mixture of which the majority (>50 percent) is any of the following minerals or a combination of these minerals: alumina, ball clay, bentonite, diatomite, feldspar, fire clay, fuller’s earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite.

16. The NSPS, at 40 C.F.R. § 60.736, set forth test methods that owners and operators of affected facilities must use when conducting the performance test(s) required under 40 C.F.R. § 60.8.
17. The NSPS, at 40 C.F.R. § 60.734(d), provide that the owner or operator of an affected facility who uses a wet scrubber to comply with the mass emission standard for any affected facility shall install, calibrate, maintain, and operate monitoring devices that continuously measure and record the pressure loss of the gas stream through the scrubber and the scrubbing liquid flow rate to the scrubber.
18. The NSPS, at 40 C.F.R. § 60.735(b), provide that each owner or operator who uses a wet scrubber to comply with the emission limits in 40 C.F.R. § 60.732 shall determine and record once each day, from the recordings of the monitoring devices in 40 C.F.R. § 60.734(d), an arithmetic average over a 2-hour period of both the change in pressure of the gas stream across the scrubber and the flowrate of the scrubbing liquid. Under 40 C.F.R. § 60.735(a), records of the measurements set forth above shall be retained for at least 2 years. 40 C.F.R. § 60.735(c) requires that each owner or operator submit written reports semiannually of exceedances of control device operating parameters required to be monitored by NSPS Subpart UUU.

#### **Title V Requirements**

19. Section 502(a) of the Act, 42 U.S.C. § 7661a(a), provides that no source may operate without a Title V permit after the effective date of any permit program approved or promulgated under Title V of the Act. EPA first promulgated regulations governing state operating permit programs on July 21, 1992. *See* 57 Fed. Reg. 32295; 40 C.F.R. Part 70. EPA promulgated regulations governing the federal operating permit program on July 1, 1996. *See* 61 Fed. Reg. 34228; 40 C.F.R. Part 71.
20. Section 503 of the Act, 42 U.S.C. § 7661b, sets forth the requirement to submit a timely, accurate, and complete application for a permit, including information required to be submitted with the application.
21. Section 504(a) of the Act, 42 U.S.C. § 7661c(a), requires that each Title V permit include enforceable emission limitations and standards, a schedule of compliance, and other conditions necessary to assure compliance with applicable requirements, including those contained in a state implementation plan. 42 U.S.C. § 7661c(a).
22. 40 C.F.R. § 70.5(a) and (c) require timely and complete permit applications for Title V permits with required information that must be submitted and 40 C.F.R. § 70.6 specifies required permit content. To be deemed complete, an application must contain information sufficient to evaluate the subject source and its application and to determine all applicable requirements.

23. 40 C.F.R. § 70.5(b) provides that: “Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit.”
24. EPA approved Minnesota’s Title V operating program on an interim basis on June 16, 1995 and fully approved the program on December 1, 2001. *See* 57 Fed. Reg. 31637, and 66 Fed. Ref. 62967. Minnesota’s Title V operating permit program regulations are codified at Minn. R. 7007 and are federally enforceable pursuant to 40 C.F.R. 52.23 and the CAA, 42 U.S.C. § 7413a(3).

### **Minnesota’s State Implementation Plan**

25. Section 110 of the CAA, 42 U.S.C. § 7410, requires each state to adopt and submit to EPA a plan that provides for the implementation, maintenance, and enforcement of primary and secondary National Ambient Air Quality Standards in the state. Upon approval by EPA, the plan becomes part of the applicable State Implementation Plan (SIP) for the state.
26. On July 24, 1995, EPA approved the Minnesota (MN) SIP requirement at Minn. R. 7007.0500 as part of the federally approved MN SIP. 60 Fed. Reg. 27411. The MN SIP at Minn. R. 7007.0500 requires a Title V applicant to submit an application that includes all information needed to determine the applicability of, or to impose, any applicable requirement. An application must include, *inter alia*, all applicable requirements to which a source is subject, enforceable emission limitations and standards, a schedule of compliance, and other conditions necessary to assure compliance with all applicable requirements.
27. The MN SIP, at Minn. R. 7007.0500, Subpart 3, requires a responsible official to sign and certify any Title V application with regard to the truth, accuracy and completeness of the information contained within.

### **FINDINGS OF FACT**

28. 3M owns and operates a mineral processing plant located at 10746 Innovation Road, Cottage Grove, Minnesota, identified as Building 113 Traffic Safety Systems Division (the TSS Division).
29. 3M operates emission units EU016, EU018 and Calciner #3 (within EU015) at the TSS Division, as identified in its Title V Permit.
30. Emission units EU016, EU018 and Calciner #3 are each an “affected facility” under the NSPS regulations, and are subject to NSPS Part 60, Subpart UUU.
31. 3M is the owner and operator of affected facilities that commenced construction after April 23, 1986 and therefore is subject to the NSPS regulations.

32. On January 15, 2002, the Minnesota Pollution Control Agency (MPCA) issued CAA Title V Permit Air Emission Permit Number 16300059-002, effective April 7, 2006 (Title V Permit) to 3M for the TSS Division.
33. 3M did not include the applicability of NSPS Subpart UUU to emission units EU016, EU018 and Calciner #3 in its Title V application to MPCA on April 12, 1995, in its update to the application on June 2, 2000, or when it submitted an administrative amendment to the Title V Permit on November 16, 2005.
34. On July 14, 2011, 3M submitted a self-disclosure of potential violations of NSPS Subpart UUU to EPA relating to emission units EU016, EU018, and Calciner #3. For each affected facility, 3M disclosed that it failed to submit a notification of the date of construction as required by 40 C.F.R. § 60.7(a)(1), and failed to submit notification of the actual date of initial start up as required by 40 C.F.R. § 60.7(a)(3). 3M further disclosed that it failed to complete an initial performance test for particulate matter and opacity for EU018 and Calciner #3 as required by 40 C.F.R. § 60.8.
35. In the self-disclosure, 3M stated that it would complete performance tests for particulate matter and opacity as required by 40 C.F.R. § 60.7(a)(3) for Calciner #3 by October 25, 2011. 3M further stated emission unit EU018 has not been operational since 1998, and that 3M would complete performance tests for EU018 within 30 days of restarting it.
36. In the self-disclosure, 3M stated that emission units EU016 and EU018 were installed in 1995, and Calciner #3 was installed in 1994 at the TSS Division.
37. On August 5, 2011, EPA notified 3M that it did not qualify for possible reduction or elimination of gravity-based penalties under EPA's Audit Policy associated with 3M's disclosed violations of NSPS Subpart UUU at the TSS Division. *See* 65 Fed. Reg. 19618 (April 11, 2000).
38. On August 17, 2011, 3M submitted to EPA notifications of the dates of construction and initial start-up for emission units EU016, EU018, and Calciner #3.
39. On October 26, 2011, 3M submitted a response to EPA's request for information (response) issued pursuant to Section 114 of the CAA, 42 U.S.C. § 7414.
40. In the response, 3M provided information showing that emission units EU016, EU018 and Calciner #3 process a mixture with a titanium dioxide content greater than 50 percent.
41. 3M uses a wet scrubber to comply with the mass emission standard for emission unit EU016.
42. The Title V permit for the TSS Division requires daily pressure drop and scrubbing liquid flow rate monitoring for the wet scrubber.

43. 3M has not installed, calibrated, maintained and operated a monitoring device that continuously measures and records the pressure loss of the gas stream through the scrubber and the scrubbing liquid flow rate to the scrubber, and does not determine and record once each day an arithmetic average over a 2-hour period of both the change in pressure of the gas stream across the scrubber and the flowrate of the scrubbing liquid for emission unit EU016.

### **NOTICE AND FINDING OF VIOLATIONS**

#### **Violations of NSPS**

44. 3M failed to notify EPA of the dates of construction for emission units EU016, EU018 and Calciner #3 at the TSS Division in accordance with deadlines set forth at 40 C.F.R. § 60.7(a)(1), in violation of 40 C.F.R. § 60.7(a)(1) and Section 111 of the CAA, 42 U.S.C. § 7411.
45. 3M failed to notify EPA of the actual dates of initial startup for emission units EU016, EU018 and Calciner #3 at the TSS Division in accordance with deadlines set forth at 40 C.F.R. § 60.7(a)(3), in violation of 40 C.F.R. § 60.7(a)(3) and Section 111 of the CAA, 42 U.S.C. § 7411.
46. 3M failed to conduct a performance test for emission units EU018 and Calciner #3 at the TSS Division in accordance with the deadlines set forth at 40 C.F.R. § 60.8 and using the test methods required by 40 C.F.R. § 60.736, in violation of 40 C.F.R. § 60.8 and Section 111 of the CAA, 42 U.S.C. § 7411.
47. 3M failed to install, calibrate, maintain and operate monitoring devices that continuously measure and the scrubbing liquid flow rate to the scrubber for emission unit EU016, in violation of 40 C.F.R. § 60.734(d) and Section 111 of the CAA, 42 U.S.C. § 7411.
48. 3M failed to determine and record once each day from the monitoring device required by 40 C.F.R. § 60.734(d), an arithmetic average over a 2-hour period of both the change in pressure of the gas stream across the scrubber and the flowrate of the scrubbing liquid for emission unit EU016, in violation of 40 C.F.R. § 60.735 and Section 111 of the CAA, 42 U.S.C. § 7411.

#### **Violations of the Minnesota State Implementation Plan and Title V**

49. 3M failed to submit a timely and complete application for a Title V operating permit for the TSS Division that: (i) identifies all applicable requirements, including the applicability of NSPS Subpart UUU to emission units EU016, EU018, and Calciner #3; (ii) accurately certifies compliance with such requirements; and (iii) contains a compliance plan for all applicable requirements for which it is not in compliance, in violation of the MN SIP at Minn. R. Chapter 7007.0500; Title V of the CAA, and 40 C.F.R. Part 70.

**ENFORCEMENT AUTHORITY**

50. 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 applicable SIP, 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.
51. 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.

03/27/12  
Date

Alan P. Tyson  
George T. Czerniak  
Acting Director  
Air and Radiation Division

**CERTIFICATE OF MAILING**

I, Tracy Jamison, certify that I sent a Notice and Finding of Violation, No. EPA-5-12-MN-02, by Certified Mail, Return Receipt Requested, to:

Michael W. Hult, P.E., Environmental Engineering Specialist  
3M Environmental, Health and Safety Operations  
3M Center, Building 0224-05-W-03  
St. Paul, Minnesota 55144-1000

Katrina Hendricks  
Senior Environmental Engineer  
10746 Innovation Road  
Cottage Grove, Minnesota 66016

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

Jeff Connell, Section Manager  
Compliance & Enforcement  
Minnesota Pollution Control Agency  
520 Lafayette Road N  
St. Paul, Minnesota 55155-4194

On the 28<sup>th</sup> day of March 2012

  
\_\_\_\_\_  
Tracy Jamison  
Office Automation Assistant  
AECAB, PAS

CERTIFIED MAIL RECEIPT NUMBER: 70091680 0000 7672 8577  
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