

PERMIT BOOK

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **112008-009** Project Number: 2008-06-045

Parent Company: 3M

Parent Company Address: P.O. Box 33331, St. Paul, MN 55133-3331

Installation Name: 3M Nevada

Installation Address: 2120 East Austin, Nevada, MO 64772

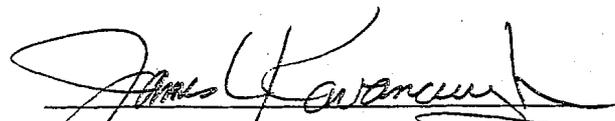
Location Information: Vernon County, S10, R35N, R3W

Application for Authority to Construct was made for:
Installation of two (2) 16.7 MMBtu per hour boilers (EU0090 and EU0100). This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

- Standard Conditions (on reverse) are applicable to this permit.
- Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

NOV 17 2008

EFFECTIVE DATE


DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the departments' Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

3M Nevada
Vernon County, S10, R35N, R3W

1. No. 2 Fuel Oil Sulfur Content
The sulfur content of the fuel to be used in the two (2) dual-fired 16.7 MMBTU per hour boiler (EU0090 and EU0100) shall not exceed 0.05% by weight. 3M Nevada shall obtain the sulfur content of the fuel oil for each fuel oil delivery from the fuel vendors or conduct their own fuel analysis to evaluate the typical sulfur content weight percent of the fuel oil. The fuel consumption records and statement shall be kept on-site for five (5) years and shall be made immediately available to the Missouri Department of Natural Resources' personnel upon request.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2008-06-045
Installation ID Number: 217-0004
Permit Number:

3M Nevada
2120 East Austin
Nevada, MO 64772

Complete: June 17, 2008

Parent Company:
3M
P.O. Box 33331
St. Paul, MN 55133-3331

Vernon County, S10, R35N, R3W

REVIEW SUMMARY

- 3M Nevada has applied for authority to install two (2) 16.7 million British Thermal Units per hour (MMBtu/hr) boilers (EU0090 and EU0100).
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment, but in insignificant amounts.
- 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, of the New Source Performance Standards (NSPS) applies to the two (2) new boilers.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are at de minimis levels.
- This installation is located in Vernon County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].

- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the new equipment unless required by the NSPS, Subpart Dc.
- An amendment to your Part 70 Operating Permit is required for this installation within one year of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

3M Nevada (3M) owns and operates an existing commercial graphics plant in Nevada, Missouri. This installation is a major source of volatile organic compound (VOC) emissions. A Part 70 Operating Permit, OP2005-023, was issued by the Air Pollution Control Program on August 15, 2005, and is currently under Technical Review. The following permits have been issued to 3M Nevada from the Air Pollution Control Program.

Table 1: Previously Issued Construction Permits

Permit Number	Description
0782-002	DMC Paint Line (Dismantled)
0184-013	Storage/Extruder Fume Exhausts
0884-005	3 Roll Mill
0585-001	Corona Treater
0988-003	Replacement Boiler
0289-005	Roll Grinder
0590-011	Replacement of Line Drives for 42 Maker
0590-012	Five (5) Aboveground Solvent Storage Tanks
0291-003	47 Maker
0395-012	48 Maker
0895-025	533 Gallon Kettle
0395-012A	Amendments to Permit 0395-012
1195-009	250 Gallon Kettle
1095-014	N3 Maker
1195-018	Chromium and Copper Electroplating
0396-019	49 Maker
0396-020	Case Printer
1195-018A	Amendments to Permit 1195-018
0596-010	Temporary Permit for 40 Maker
0596-011	Temporary Permit for Corona Treaters
0796-003	New Lathe
1096-003	Distillation Unit
0297-017	Electrostatic Printer and Two (2) Flexographic Printers
1098-017	Flexible sign face substrate production line
0199-025	New Parts Cleaning Vat
0899-012	Temporary permit for an air compressor
012000-020	Temporary permit for two (2) 175 kw/hour diesel generators
1098-017A	Amendment to Permit Number 1098-017
1098-017B	Amendment to Permit Number 1098-017A
042004-002	A flexible permit for pre-approved modifications at an existing commercial

PROJECT DESCRIPTION

3M Nevada is seeking authority to install two (2) 16.7 MMBtu/hr boilers (EU0090 and EU0100) to replace the out-of service Boiler #2 (EU0020) and the current back-up emergency boiler. The new boilers will be capable of burning natural gas and No. 2 fuel oil. No control devices are associated with the new equipment.

In Permit No. 042004-002, 3M Nevada was given a flexible permit for pre-approved modifications at the existing commercial graphics plant. In the flexible permit, 3M took an installation-wide cap of 655 tons per year on VOCs. Special Condition 4.D of the flexible permit states that if 3M wishes to make physical or operational changes other than those listed in the pre-approved changes (Attachment B) and that are not exempt, they must apply for and obtain a construction permit or amendment. Since the boilers are not exempt from construction permitting according to 10 CSR 10-6.060, a permit is required. In order to maintain the VOC cap, Permit No. 042004-002 will be amended to add the boilers to Attachment B and include the VOC emissions from the new boilers in the installation-wide VOC cap. All other non-VOC pollutants associated with the boilers will be addressed under the authority of this permit. These pollutants will not be counted towards the emission limitations for non-VOC pollutants referenced in Special Condition 23 of Permit No. 042004-002.

EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.3, *Fuel Oil Combustion (9/98)*, and Section 1.4, *Natural Gas Combustion (7/98)*. Although natural gas was indicated as the primary fuel, the boiler is capable of combusting both natural gas and fuel oil. The potential emissions of each type of fuel were determined and the highest rate for each criteria pollutant was used to determine the potential emissions of the boiler.

The existing potential emissions were taken from Permit No. 042004-002. Due to the nature of Permit No. 042004-002, the potential emissions of the application and existing potential emissions were not determined. VOCs were conditioned to less than 655 tons per year for the entire installation. The existing actual emissions were taken from the 2007 Emission Inventory Questionnaire (EIQ). Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8,760 hours per year). The following table provides an emissions summary for this project:

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2007 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	N/D	2.01	2.09	N/A
SO _x	40.0	N/D	0.16	7.52	N/A
NO _x	40.0	N/D	26.46	20.90	N/A
VOC	40.0	<655	242.1	0.77*	N/A
CO	100.0	N/D	22.23	11.70	N/A
HAPs	10.0/25.0	N/D	N/D	0.26	N/A

N/A = Not Applicable; N/D = Not Determined

*Permit 042004-002 is being amended to include the VOC emissions from the two boilers into the installation-wide VOC cap.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are at de minimis levels.

APPLICABLE REQUIREMENTS

3M Nevada shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required June 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-3.090

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *New Source Performance Regulations*, 10 CSR 10-6.070 – *New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 CFR Part 60, Subpart Dc
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260
- *Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*, 10 CSR 10-3.060

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Susan Heckenkamp
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated June 12, 2008, received June 17, 2008, designating 3M as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southwest Regional Office Site Survey, dated June 25, 2008.

Ms. Wendy Reno
Adv. Environmental Engineer
3M Nevada
P.O. Box 33331
St. Paul, MN 55133-3331

RE: New Source Review Permit - Project Number: 2008-06-045

Dear Ms. Reno:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files.

Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance.

The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Susan Heckenkamp at the departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:cwyk

Enclosures

c: Southwest Regional Office
PAMS File: 2008-06-045

Permit Number: