

STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY

In the Matter of GAF Building Materials Corporation

Proceedings to Develop
and Implement a State Implementation
Plan for the Twin Cities Sulfur Dioxide
Nonattainment Area to Demonstrate,
Attain and Maintain Compliance with the
National Ambient Air Quality Standards
for sulfur dioxide as required by the
Clean Air Act Section 110, 172 and 191
of the Clean Air Act, 42 U.S.C. §§ 7410,
7502 and 7514.

FINDINGS AND
ORDER

The Minnesota Pollution Control Agency (MPCA), being fully advised in the premises, hereby adopts the following Findings and Order.

FINDINGS

1. The U.S. Environmental Protection Agency (EPA) is required by section 109 of the Clean Air Act, 42 U.S.C. § 7409, to promulgate national ambient air quality standards (NAAQS). The EPA has promulgated NAAQS to protect the public health (primary standards) and the public welfare (secondary standards). 40 CFR pt. 50 (1990).

2. Among other pollutants, EPA has promulgated primary NAAQS for sulfur dioxide. The primary NAAQS for sulfur dioxide is 0.03 parts per million (ppm) annual arithmetic mean and 0.14 ppm maximum 24-hour concentration, not to be exceeded more than once per year. 40 CFR pt. 50.4 (1990). The secondary

NAAQS for sulfur dioxide of 0.5 ppm maximum three-hour concentration, not to be exceeded more than once per year, 40 CFR § 50.5 (1990).

3. Each state is obligated by section 110(a) of the Clean Air Act, 42 U.S.C. § 7410, to develop a plan which provides for "implementation, maintenance, and enforcement" of the NAAQS promulgated by the EPA.

4. The EPA has promulgated requirements for implementation plans titled Requirements for Preparation, Adoption and Submittal of Implementation Plans 40 CFR pt. 51 (1990).

5. The MPCA is a statutory agency of the State of Minnesota, charged with the responsibility to administer and enforce laws and promulgate rules to prevent water, air and land pollution throughout the State of Minnesota. Minn. Stat. chs. 115, 115B and 116 (1990).

6. The MPCA is empowered to promulgate standards and rules for the prevention, abatement or control of air pollution related, without limitation, to "sources or emissions of air contamination or air pollution, to the quality or composition of such emissions, or to the quality of or composition of the ambient air or outdoor atmosphere or to any other matter relevant to the prevention, abatement or control of air pollution." Minn. Stat. § 116.07, subd. 4 (1990). See Minn. Stat. § 116.07, subd. 2 (1990).

7. The MPCA has the authority to enforce any statute or rule related to air pollution by, among other things, adopting, issuing, entering into or enforcing "reasonable orders, schedules of compliance and stipulation agreements." Minn. Stat. § 116.07, subd. 9 (1990).

8. Minn. Stat. § 115.071 (1990) provides that the provisions of chapters 115 and 116 and "all rules, standards, orders, stipulation agreements, schedules of compliances, and permits adopted or issued" by the MPCA may be enforced by criminal prosecution, action to recover civil penalties, injunction, action to compel performance, or other appropriate action.

Specifically, in an action to compel performance of an Order of the MPCA, the regulated party may be required "to do and perform any and all acts and things within the defendant's power which are reasonably necessary to accomplish the purposes of the order." Minn. Stat. § 115.071, subd. 5 (1990).

9. The MPCA has promulgated primary ambient air quality standards for sulfur dioxide of 0.03 ppm annual arithmetic mean and 0.14 ppm maximum 24-hour concentration, not to be exceeded more than once per year. Minn. Rules pt. 7005.0080 (1991). The MPCA has also promulgated secondary ambient air quality standards for sulfur dioxide of 0.5 ppm maximum three-hour concentration, not to be exceeded more than once per year in Air Quality Control Region 131. Minn. Rules pt. 7005.0080 (1991). AQCR 131 encompasses the seven county Twin Cities metropolitan area defined at 40 CFR pt. 81.27 (1990). Minn. Rules pt. 7005.0080 (1991).

10. AQCR 131 is classified as a nonattainment area for the primary NAAQS for sulfur dioxide. 40 CFR § 81.324 (1990).

11. The MPCA staff performed or reviewed and approved a computer modeling analysis of AQCR 131 to determine which sources are major contributors to the sulfur dioxide nonattainment status of AQCR 131. This modeling was initiated prior to the publication of the revised modeling guidelines in the September 9, 1986, Federal Register (51 Fed. Reg. 32176) and conforms to the EPA Guideline Air Quality Dispersion Model RAM version 5.0 and CDM version 2.0. Where, as here, a modeling analysis was initiated before the revised guidelines were published, EPA continues to allow states to use Model RAM 5.0 and CDM version 2.0 in analyzing a nonattainment area. More recently, and where appropriate, the modeling for AQCR 131 was supplemented using ISCST version 90346.

12. The computer modeling analysis for AQCR 131 shows that, among others, the Asphalt Roofing Products Manufacturing Facility is a major contributor of sulfur dioxide emissions in AQCR 131. The Asphalt Roofing Products Manufacturing Facility is located at 50 Lowry Avenue North in the city of Minneapolis, in the county of Hennepin, in the state of Minnesota. The Asphalt Roofing Products Manufacturing Facility is a culpable sulfur dioxide emission source for the nonattainment status of AQCR 131. Sulfur dioxide emissions from the Asphalt Roofing Products Manufacturing Facility contribute to a violation of the primary and secondary NAAQS for sulfur dioxide.

13. Computer modeling shows that AQCR 131 will attain and maintain compliance with the sulfur dioxide NAAQS if: (a) the Asphalt Roofing Products Manufacturing Facility is operated in compliance with the requirements of this Order; (b) other facilities receiving Orders are operated in compliance with the conditions of their Orders; and (c) all other facilities in the area are operated in compliance with the limits that apply under state rules.

14. Asphalt Roofing Products Manufacturing Facility emits pollutants into the ambient air in sufficient quantities to require an air emission permit pursuant to Minn. Stat. § 116.081 (1990) and Minn. Rules pts. 7001.0030 and 7001.1210 (1991). On May 23, 1986, the MPCA issued air emission permit No. 18-86-OT-1 to GAF Building Materials Corporation authorizing the operation of the Asphalt Roofing Products Manufacturing Facility under specified terms and conditions. That permit expired on May 23, 1991. GAF Building Materials Corporation has applied for a new permit and, in the interim, is operating under the expired permit rule. Minn. Rules pt. 7001.0160 (1991). This Order imposes additional requirements on GAF Building Materials Corporation, as specified in Parts I through VI, below, to assure that AQCR 131 will achieve and maintain compliance with the NAAQS for sulfur dioxide. To the extent there

is a conflict between operating limitations authorized by the expired permit and this Order, GAF Building Materials Corporation shall comply with the more stringent requirements.

ORDER

NOW, THEREFORE, IT IS ORDERED, for the purposes of demonstrating reasonable progress and attaining, demonstrating and maintaining compliance with the NAAQS for sulfur dioxide as set forth in 40 CFR pts. 50.4 and 50.5 (1990), GAF Building Materials Corporation (Company) shall operate the Asphalt Roofing Products Manufacturing Facility (Facility) in compliance with the following requirements and limitations:

I. SULFUR DIOXIDE EMISSIONS CONTROL PLAN FOR THE FACILITY

A. General Operating and Maintenance Requirements. Exhibit 1, the Facility Description, which is appended to and incorporated as part of this Order, identifies the parameters used in the computer modeling performed to demonstrate that AQCR 131 will attain compliance with the sulfur dioxide NAAQS. Except as specifically allowed or required elsewhere in this Order, the Company shall operate and maintain the process and control equipment described in Exhibit 1 within the parameters set forth in Exhibit 1.

B. Emission Limitations. The emission units at the Facility that discharge sulfur dioxide emissions to the atmosphere are two boilers, an afterburner which controls emissions from a blow still, and two fluid heaters. Each of these emission units is more fully described in Exhibit 1, pts. 1.2.1-1.2.2 (boilers); 1.2.3 (an afterburner for a blow still); 1.2.4 (fluid heater HTF1); and 1.2.5 (fluid heater HTF2). The Company shall limit its emissions of sulfur dioxide from these Emission Units to no more than 1.5 pounds per million British Thermal Units per Emission Point. The basis for this limitation is 40 CFR Part 50 (1990).

C. Additional Operating Requirements.

1. Capacity Limitation. The Company may operate the Emission Units described in I.B. and Exhibit 1 at full rated heat input, but may not operate them at greater than rated heat input.

2. Fuel Restrictions. The Company is authorized to burn natural gas as the primary fuel source and No. 6 fuel oil, with or without knockout oil¹ as the backup fuel source in the Emission Units described in I.B. The sulfur content of No. 6 fuel oil, asphalt and knockout oil shall not exceed 1.5 percent by weight.

D. Demonstration of Compliance with Emission Limitations. The Company shall demonstrate compliance with sulfur dioxide emission limitation requirements of Part I.B. of this Order by obtaining and maintaining a No. 6 fuel oil supplier certification and an asphalt supplier certification from the fuel oil and asphalt suppliers for each shipment of fuel oil and asphalt delivered to the Facility. Each fuel oil and asphalt supplier's certifications shall include the following information:

1. The name of the supplier;
2. The location of where the sample was drawn for analysis to determine the sulfur content of the fuel oil or asphalt. Specifically the certification shall include whether each shipment was sampled as delivered to the Facility, or whether the sample was drawn from the storage tanks at the fuel oil supplier's or oil refiner's facility, or other location;

1. Knockout Oil: Petroleum based by product derived from the Facility's asphalt blowing operation. Studies have shown that the sulfur content of this by-product does not exceed the sulfur content of the asphalt processed in the asphalt blowing operation.

3. The sulfur content of the No. 6 fuel oil or the asphalt from which the shipment came;
4. The method used to determine the sulfur content; and
5. The heating value (million British Thermal Units per gallon) of the No. 6 fuel oil determined in accordance with ASTM Method D-240.

E. Demonstration of Compliance with Additional Operating Requirements.

1. On an hourly basis, the Company shall measure the total gallons of knockout oil and No. 6 fuel oil burned at each emission unit.

2. Once per month the Company shall sample and analyze the knockout oil from the asphalt blowing operation to determine the sulfur content in accordance with ASTM Method D-270 or other EPA approved method, and the heating value (million British Thermal Units per gallon) in accordance with ASTM Method D-240.

II. CHANGES NOT REQUIRING A MODIFICATION OF THIS ORDER

The Company is authorized to make changes to the Facility without obtaining a modification to this Order as long as the change does not do or result in any of the following:

- A. an exceedance of the limitations in the Order at which sulfur dioxide is emitted from any emissions unit at the Facility; or

- B. a physical change of the equipment that effects the stack parameters described in Exhibit 1.

III. CHANGES REQUIRING A MODIFICATION OF THIS ORDER

- A. Activities that do require a modification to this Order prior to commencing the modification include, but are not limited to:

1. any decrease in the design stack gas volumetric flow rate below that contained in Exhibit 1;

2. any decrease in the design stack gas exit temperature below that contained in Exhibit 1;

3. any reduction in stack height below that contained in Exhibit 1;

4. any increase in the stack exit diameter above that contained in Exhibit 1; or

5. any construction or modification of structures that increase the effective structural dimensions as they are used in the building wake effects algorithm in the ISC Air Dispersion Model.

B. Regardless of whether a modification of this Order is required, the Company shall obtain a permit amendment if required by state or federal law.

IV. RECORDKEEPING REQUIREMENTS

A. Record Maintenance

The Company shall keep and maintain all required documents, records, reports and plans identified in this Part IV in a form suitable to allow the EPA or MPCA staff to determine the Facility's compliance with this Order. The Company shall maintain the information at its Facility in files which are easily accessible for inspection by EPA or MPCA staff.

B. Recordkeeping Requirements

1. Permanent Records. The Company shall permanently maintain all of the following information, as well as all amendments, revisions or modifications made to this information.

a. Design, Construction and Operation Information. The Company shall maintain a file or files of information on the design, construction and operation of each emission facility, emission source, fuel system, stack, structures pertinent to modeling for downwash, and any other information required to conduct sulfur dioxide ambient air quality modeling of emissions from the Facility. The file or files shall also include all information

required to demonstrate that the equipment identified in Exhibit 1 is installed as described in that Exhibit. Where an activity has been undertaken pursuant to Part II of this Order, the file or files shall include a description of each activity and all information required to demonstrate that the activity complies with each applicable Part II requirement.

b. Copy of this Order. The Company shall maintain a file at the Facility that includes this Order and the Exhibits attached and incorporated by reference in this Order.

2. Non-Permanent Records. Notwithstanding any document retention policy to the contrary, the Company shall retain the information identified below for a minimum of six years following the date on which the information was received by the Company. This retention period shall be automatically extended upon the written request of the Manager of the MPCA's Air Quality Division (AQD Manager).

a. Sulfur Dioxide Emissions and Operating Records. The Company shall generate and maintain records containing information to demonstrate compliance with the emission limitation and operating requirements specified in Part I of this Order. In order to demonstrate compliance with the emission limitation (Part I.B.), the Company shall retain the following records: the percent by weight of sulfur in the No. 6 fuel oil, asphalt and knockout oil, and the heating value of the No. 6 fuel oil and knockout oil. In order to demonstrate compliance with the capacity limitation (Part I.C.1.), the Company shall retain records on the heating value of the No. 6 fuel oil and knockout oil (in million British Thermal Units per gallon), the number of gallons of the No. 6 fuel oil burned on an hourly basis for each emission unit, and the number of gallons of the knockout oil burned on an hourly basis for each emission unit. In order to demonstrate compliance with the fuel sulfur content

restrictions (Part I.C.2.), the Company shall retain records on the percent by weight of sulfur in the No. 6 fuel oil, asphalt and knockout oil. In order to demonstrate compliance with the fuel usage limitations (Part I.C.3.), the Company shall retain monthly records on the amount of No. 6 fuel oil burned and knockout oil burned. The records shall be signed by the person entering information into the record. To summarize, at a minimum, the Company shall retain records containing the following information:

1) The fuel oil and asphalt suppliers certifications containing the information listed in Part I.D. of this Order:

2) The date of each fuel oil or asphalt delivery cross-referenced to the certification accompanying that delivery;

3) The date the knockout oil was sampled;

4) The results of the knockout oil analyses for sulfur content (percent by weight) and heating value (million British Thermal Units per gallon);

5) The methods used to determine the sulfur content and heating value of the knockout oil;

6) The number of gallons on No. 6 fuel oil burned tabulated on an hourly and monthly basis per emission unit; and

7) The number of gallons of knockout oil burned, tabulated on an hourly and monthly basis per emission unit.

b. Startup, Shutdown, Bypass, and Breakdown Records. The Company shall maintain files containing records for each startup, shutdown, bypass and breakdown for each piece of process equipment, control equipment, fuel supply system, emission stack, monitoring system and any other piece of equipment to which this Order applies.

c. Excess Emissions and Noncompliance with Operating Requirements Records. The Company shall maintain files that record each exceedance of the capacity fuel limitation, sulfur content limitation, or fuel use limitation required in this Order. For each period of exceedance or noncompliance, the record shall include a description of the exceedance or noncompliance, its cause, the magnitude of the exceedance, and the date and time of commencement and cessation of the exceedance or noncompliance and corrective action taken to be in compliance.

d. Reports Required by this Order. The Company shall maintain files containing the reports required by Part V of this Order.

V. REPORTING REQUIREMENTS

A. Notifications of Shutdowns and Breakdowns and Duty to Minimize Adverse Impact on Air Quality.

1. Notification of Process or Control Equipment Shutdown. In accordance with Minn. Rules pt. 7005.1880 (1991), the Company shall notify the Commissioner at least 24 hours in advance of: (1) each shutdown of any control equipment governed by this Order and (2) each shutdown of any process equipment governed by this Order if the process equipment shutdown will cause an increase in sulfur dioxide emissions. Notification can be made by calling (612)296-7300. If the call is made after normal working hours (8-4:30), the Company shall leave a recorded message. At the time of the notification, the Company shall provide the following information:

- a. Date and time of call.
- b. Company and facility name and location.
- c. Caller's name, title and telephone number.
- d. Date and time of shutdown.

- e. Equipment failure that caused the shutdown and reason for the equipment failure.
- f. Potential environmental impacts and what steps are or will be taken to address them.
- g. Estimated duration of shutdown.

The Company shall also notify the Commissioner when the shutdown is over.

2. Notification of Process or Control Equipment Breakdown. In accordance with Minn. Rules pt. 7005.1880 (1991), the Company shall notify the Commissioner immediately of (1) each breakdown of more than one hour duration of control equipment governed by this Order and (2) each breakdown of process equipment governed by this Order if the equipment breakdown causes an increase in the emissions of sulfur dioxide. Immediately shall mean as soon as is reasonably possible after giving consideration to plant and personnel safety. Notification can be made by calling (612)296-7300. If the call is made after normal working hours (8-4:30) the Company shall leave a recorded message. At the time of the notification the Company shall provide the following information:

- a. Date and time of call.
- b. Company and facility name and location.
- c. Caller's name, title and telephone number.
- d. Date and time of breakdown.
- e. Equipment failure that caused the breakdown and reason for the equipment failure.
- f. Potential environmental impacts and what steps are or will be taken to address them.
- g. Estimated duration of breakdown.

The Company shall notify the MPCA Commissioner when the breakdown is over.

3. Duty to Minimize Adverse Impact on Air Quality. In the event of a shutdown or breakdown to which this part applies, the Company shall comply with Minn. Rules pt. 7005.1880, subp. 3, (1991), including the requirement to immediately take all practical steps to prevent or reduce any adverse impact on air quality that may result from the shutdown or breakdown. Immediately shall mean as soon as is reasonably possible after giving consideration to plant and personnel safety. In addition, the Commissioner of the MPCA may require feasible and practical modifications of the operation of the Facility to reduce emissions of sulfur dioxide during the period of the shutdown or breakdown. The Facility shall not be permitted to operate if the Facility experiences an unreasonable breakdown frequency of control equipment. Nothing in this Order shall permit the Facility to operate under conditions which may cause an immediate public health hazard.

4. Notification of Changes to be Made Pursuant to Part II of this Order. Pursuant to Part II of this Order, the Company may undertake certain changes to the Facility without obtaining a modification of this Order. If the Company does make such a change, and if the change in any way affects maximum allowable sulfur dioxide emissions or their dispersion the Company shall notify the AQD Manager in writing at least 30 days prior to undertaking the change. The notification shall describe the change and why it does not require a modification of the Order. The Company must also obtain a permit amendment if required by state or federal law.

B. Annual Reports

The Company shall submit to the AQD Manger each calendar year, a report that contains the following information: a record of data used in calculating and calculations of the annual sulfur dioxide emissions from each

emission unit; a record of each startup, shutdown, bypass and breakdown of process and sulfur dioxide control equipment; and a summary record of excess sulfur dioxide emissions, and exceedances of the capacity limitation, sulfur content limitation, or fuel use limitation exceedances (or the Company shall state if no exceedances or noncompliance conditions occurred in the calendar year). Annual reports shall be postmarked within 30 days following the end of each calendar year.

C. Quarterly Reports

The Company shall submit reports each calendar quarter that provides the following information:

1. No. 6 fuel oil. Percent sulfur content by weight, the heating value in million British Thermal Units per gallon and the total amount of fuel oil burned per month during the calendar quarter;
2. Asphalt. Percent sulfur content by weight of the asphalt received at the Facility during the calendar quarter;
3. Knockout oil. Results of the sulfur and heating value analyses conducted on the knockout oil and the total amount of knockout burned per month during the calendar quarter;
4. The maximum amount of No. 6 fuel oil burned, of knockout oil burned and of the combination of fuel and knockout oils burned on an hourly basis at each emission unit during the calendar quarters;
5. Summary of any exceedances of the emission limitation capacity limitation, sulfur content limitation of fuel oil limitation during the calendar quarter. The Company shall provide an explanation of each exceedance state that no exceedances occurred; and

6. Summary of any startups, shutdowns, bypasses, or breakdowns of process or control equipment during the calendar quarter.

The report shall be submitted by the 30th of the month following the monitored quarter. The Company shall state in its report if no No. 6 fuel oil or knockout oil was burned during the monitored quarter.

VI. GENERAL CONDITIONS

A. Notwithstanding any other provision of this Order, the Company must obtain a modification of this Order before it commences construction, modification or operation of equipment at the Facility that: (1) is different than allowed by Part I of this Order and (2) could result in additional sulfur dioxide emissions or changes to sulfur dioxide emission patterns assumed in the modeling conducted to attain, maintain and verify AQCR 131's compliance with the NAAQS for sulfur dioxide.

B. The Company shall not apply for a modification of this Order, nor shall this Order be modified to allow the Company to construct any new major sulfur dioxide source or to make a "major modification" to any "major stationary source" at the Facility as those terms are defined in 40 CFR pt. 52.24 (1990), until after EPA has approved Minnesota's Offset Rule or its equivalent or until the area has been redesignated as attainment.

C. This Order does not relieve the Company of the obligation, in undertaking all actions required by this Order, to comply with all applicable local, state and federal laws and regulations, including, but not limited to, federal new source performance standards, and laws and regulations related to occupational safety and health. In the event there is a conflict in applicable federal or state or local laws or regulations, the more stringent of the conflicting provisions apply.

D. This Order shall be binding upon the Company and its respective officers, employees, successors and assigns. The Company shall provide a copy of this Order to any successor in interest prior to transfer of that interest, and shall simultaneously inform the MPCA that this notice has been given. Should the Company sell or otherwise convey or assign any of its right, title or interest in the Facility, such conveyance shall not release the Company from any obligation imposed by this Order, unless the party to whom the right, title or interest has been transferred or assigned agrees in writing to fulfill the obligations of this Order and the MPCA approves such transfer or assignment. The MPCA shall not disapprove a transfer or assignment unless information demonstrates that the new owner lacks the ability to fulfill the obligation of this Order.

E. This Order mandates actions and establishes limits necessary for the Company to meet to attain, maintain and verify AQCR 131's compliance with the sulfur dioxide NAAQS. To the extent that any federal or state statute, rule, permit, Order, stipulation agreement, consent decree or schedule of compliance now in force or subsequently issued imposes limits and requires actions additional to or more stringent than those required in this Order, the Company shall comply with the more stringent requirements of the federal or state statute, rule, permit, Order, stipulation agreement, consent decree or schedule of compliance.

F. This Order is effective upon the date that it is signed by the MPCA Board Chair and by the Commissioner of the MPCA.

IT IS SO ORDERED BY THE MINNESOTA POLLUTION CONTROL AGENCY:

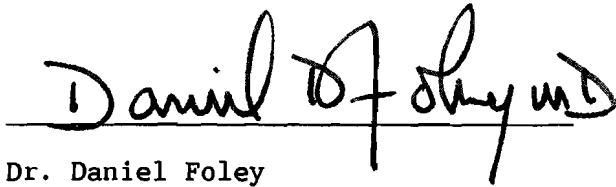


Charles W. Williams

Commissioner

Minnesota Pollution Control Agency

Date: 5/27/92



Dr. Daniel Foley

Chair

Minnesota Pollution Control Agency Board

Date: 5/27/92

EXHIBITS:

1. Facility Description

EXHIBIT 1

Emission Units and Pollution Control Equipment at GAF Building Material Corporation

The emission units, air pollution control equipment and monitoring equipment at the Facility described in this Order include the following:

1.2.1 Emission Point No. 1 Facility I.D. B1

Emission Unit- Type: Boiler
Mfr.: Cleaver Brooks
Date of Installation: 1971
Rated Heat Input: 8.369 MMBtu/hr
Fuel Usage: Primary - Natural Gas
Back-Up - No. 6 Fuel Oil
With or without Knockout Oil

Control Equipment - None

Monitoring Equipment - Type: Fuel Oil Flow Monitor

Stack Parameters - Height: 65 feet
Inside Exit Diameter: 1.3 feet
Flow Rate, acfm
(for Primary Fuel): 3400 at 510 F

1.2.2 Emission Point No. 2 Facility I.D. B2

Emission Unit - Type: Boiler
Mfr.: Cleaver Brooks
Date of Installation: 1971
Rated heat Input: 8.369 MMBtu/hr
Fuel Usage: Primary - Natural Gas
Back-up - No. 6 Fuel Oil
With or without Knockout Oil

Control Equipment - None

Monitoring Equipment - Type: Fuel Oil Flow Monitor

Stack Parameters - Height: 65 feet
Inside Exit Diameter: 1.3 feet
Flow Rate, acfm
(for primary fuel): 3400 at 510° F

1.2.3 Emission Point No. 3 Facility I.D. Tank No. 28

Emission Unit - Type: Blow Still
Mfr.: Unknown
Manufactured Date: Prior to 1979
Date of Installation: 1981
Capacity: 25,000 Gallons

