

**AIR EMISSION PERMIT NO. 13100022- 002**

**IS ISSUED TO**

**Malt-O-Meal Company**

**MALT-O-MEAL COMPANY - PLANT 2 - NORTHFIELD**

701 West 5th Street  
Northfield, Rice County, MN 55057

The emission units, control equipment and emission stacks at the stationary source authorized in this permit are as described in the following permit application(s):

Permit Type	Application Date	Issue Date	Action Number
Total Facility Operating Permit	01/17/1995	04/11/2000	001
Major Amendment	Agency Re-opening	see below	002
Administrative Amendment	<b><i>ADD application DATE</i></b>		

This permit authorizes the permittee to operate the stationary source at the address listed above unless otherwise noted in Table A. The permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are defined in the state air pollution control rules unless the term is explicitly defined in the permit.

**Permit Type:** Federal; Part 70/Limits to Avoid NSR

**Issue Date:** June 3, 2003

**Expiration:** April 11, 2005  
All Title I Conditions do not expire.

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Ann M. Foss  
Major Facilities Section Manager  
Majors And Remediation Division

for Sheryl Corrigan  
Commissioner  
Minnesota Pollution Control Agency

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**NOTICE TO THE PERMITTEE:**

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(651) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

**PERMIT SHIELD:**

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

**FACILITY DESCRIPTION:**

The Permittee operates a breakfast cereal manufacturing facility. The stationary source currently consists of 13 separate product lines. Many of these lines can produce multiple products. Cereal is made from either a wheat, rice, corn, oat, or some combination thereof. The stationary source consists of scalpers, destoners, dryers, sifters, extrusion equipment, puffing equipment, conveyors, packaging machines, various cookers, boilers, intermediate storage equipment, and truck and railcar loading facilities. The pollutants of concern are Particulate Matter, Particulate Matter less than 10 microns, Volatile Organic Compound, and Nitrogen Oxide.

**ACTION 002**

This permitting action changes the Title V modeling requirements to reflect the current MPCA policy dated August 10, 2001. This permit action is a non-mandatory agency re-opening of the permit to change the requirements from submittal of a protocol and modeling results, to the submittal of computer dispersion modeling information only. In addition, the information submittal deadline has been extended by 120 days as requested by the Permittee by the submittal of an administrative amendment application.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

**Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.**

**Subject Item: Total Facility**

<b>What to do</b>	<b>Why to do it</b>
<b>A. EMISSION LIMITS</b>	hdr
Total Particulate Matter: less than or equal to 230 tons/year using 12-month rolling sum	Title I Condition: Limit to avoid classification as a major source under 40 CFR Section 52.21
Particulate Matter < 10 micron: less than or equal to 200 tons/year using 12-month rolling sum	Title I Condition: Limit to avoid classification as a major source under 40 CFR Section 52.21
Nitrogen Oxides: less than or equal to 230 tons/year using a 12-month rolling sum	Title I Condition: Limit to avoid classification as a major source under 40 CFR Section 52.21
Volatile Organic Compounds: less than or equal to 150 tons/year using a 12-month rolling sum	Title I Condition: Limit to avoid classification as a major source under 40 CFR Section 52.21
For the first eleven months after permit issuance, each pollutant emission limit shall be the 12-month rolling sum emission limit divided by the number of months from the issuance of this permit.	Title I Condition: Limit to avoid classification as a major source under 40 CFR 52.21; Minn. R. 7007.0800, subp. 5
The facility shall have less than 249 million Btu/hr of combined rated heat input capacity to fossil fuel fired boilers.	Title I Condition: Limit to avoid classification as a major source under 40 CFR Section 52.21
<b>B. OPERATIONAL REQUIREMENTS</b>	hdr
Addition/Modification of Emission Units: The Permittee may add or modify emission units to the stationary source. The addition of any new or modification of any existing emission unit must either: 1) qualify as an insignificant activity listed in Minn. R. 7007.1300, subp. 2; subp. 3; or subp. 4 (natural gas fuel burning units); 2) qualify as an insignificant modification under Minn. R. 7007.1250, subps. 1 and 2; 3) be within a class as categorically described in Appendix C and able to calculate emission changes according to the procedure specifically provided in this permit. This includes the fuel burning emission units from the Appendix C classes; or, 4) Make changes in VOC additives that are to be accounted for in the VOC 12-month rolling sum. If the addition of or modification of existing emission units do not fit into the above four categories, the Permittee must follow the permit amendment requirements provided in Minn. R. 7007.1150 through 7007.1500.	Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7007.0800, subp. 2; Minn. R. 7007.1150 through Minn. R. 7007.1500
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all product recovery system equipment. An updated Operation and Maintenance Plan shall be developed within 180 days of permit issuance.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not federally enforceable.	Minn. R. 7030.0010 - 7030.0080
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

Inspections: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Fuel Type: Natural gas only	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21
Corrective Action. If any of the following conditions are observed, the Permittee shall take corrective actions, within 24 hours, to eliminate: 1) Excess particulate emissions beyond what would be expected during normal operations for all Appendix C stack/vents (SV's), except Product Recovery System filters identified in GP004 and GP005; 2) Visible emissions from Product Recovery System filters identified in GP004 and GP005 of Appendix C; or, 3) Significant roof dust accumulation which could reasonably be expected to become airborne and create a nuisance.	Title I Condition: To avoid classification as a major source under 40 CFR 52.21
C. PERFORMANCE TESTING	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017
Testing of New Units: In addition to the performance test requirements found in Appendix C, testing will be conducted, for new units, installed under the permit, if:  1. The new unit has a higher capacity than any unit already tested in its class; or 2. The new unit is outside of a class and is not an insignificant activity.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4
Performance Test: due before 09/30/2003 to measure PM (includes organics), PM10, and VOC for the Retro Dryers (one mill room dryer).  Performance Test Pre-test Meeting: due 7 days before each Performance Test.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.12; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
Performance Test: due before 09/30/2003 to measure PM (includes organics), PM10, and VOC for the Retro Coolers (one baked oven unit).  Performance Test Pre-test Meeting: due 7 days before each Performance Test.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
Performance Test: due before 09/30/2003 to measure PM (includes organics), PM10, and VOC, for one kettle, from the Sugar Coat Kettles/Cook Room Kettles.  Performance Test Pre-test Meeting: due 7 days before each Performance Test.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
General Performance Test (PT) Requirements:  Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.  PT Notifications (written): due 30 days before each Performance Test PT Plan: due 30 days before each Performance Test PT Pre-test Meeting: due 7 days before each Performance Test PT Report: due 45 days after each Performance Test PT Report-Microfiche: due 105 days after each Performance Test	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2
D. MONITORING REQUIREMENTS	hdr
Monitoring Equipment: Install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.	Minn. R. 7007.0800, subp. 4(D)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

<p>Daily Monitoring: Once daily, during daylight hours while in operation, monitor the rooftop and individual stack/vents (SV) within each Appendix C class as follows:</p> <p>1) All SV's for each Appendix C class, except GP004 and GP005 (Product Recovery System filters), shall be monitored for the presence of excess particulate matter emissions beyond what would be expected under normal operating conditions.</p> <p>2) All SV's for Product Recovery System filters, identified as GP004 and GP005, shall be monitored for any visible emissions.</p> <p>3) All rooftop areas shall be monitored for significant dust accumulation which could reasonably be expected to become airborne and pose a nuisance condition.</p> <p>Upon observation of any of the above three conditions, the Permittee shall investigate the process and implement corrective action, within 24 hours, to eliminate the visible emissions, excess particulate emissions, or significant roof dust accumulation.</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7007.0800, subp. 5</p>
<p>Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment.</p>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.</p>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>VOC Material Content Monitoring: Obtain from the supplier for all VOC-containing food additive materials used at the facility, the content of each VOC in each material. The supplier data shall specify the content of each VOC in each material. The VOC content may be expressed in pounds per gallon or as a percent by weight if the density of the material is also indicated. Maintain supplier data for a minimum of five years. If VOC content data is not available from the supplier, VOC content shall be determined by 40 CFR Part 60, Appendix A, Method 24. VOC content shall be determined at the highest temperature experienced by the material in the facility at or after application. This requirement only applies to food additives which are not accounted for through VOC emission factors from testing.</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7007.0800, subps. 4 and 5</p>
<p>E. RECORDKEEPING</p>	<p>hdr</p>
<p>Recordkeeping of daily monitoring: the Permittee shall keep a daily record, that contains, at a minimum, the following information:</p> <p>1) Printed name of observer;</p> <p>2) Signature of observer;</p> <p>3) Date and time of observation;</p> <p>4a) Are there any visible emissions observed from the product recovery systems or penthouse? ("yes" or "no")</p> <p>4b) Are there any excess particulate emissions observed from other sacks? ("yes" or "no")</p> <p>4c) Is there any rooftop dust accumulation that could become airborne and pose a nuisance condition? ("yes" or "no");</p> <p>5) Stack/Vent ID number for each "yes";</p> <p>6) Description of investigation and corrective actions completed for each "yes"; and,</p> <p>7) Weather conditions (temperature, cloud cover, wind, precipitation).</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7007.0800, subp. 5</p>
<p>Recordkeeping of corrective actions: If any of the following conditions are observed, the Permittee shall take corrective actions, within 24 hours, to eliminate:</p> <p>1) Excess particulate emissions beyond what would be expected during normal operations for all Appendix C SV's, except Product Recovery System filters identified in GP004 and GP005;</p> <p>2) Visible emissions from Product Recovery System filters identified in GP004 and GP005 of Appendix C; or,</p> <p>3) Significant roof dust accumulation which could reasonably be expected to become airborne and create a nuisance.</p> <p>The Permittee shall keep a record, on-site, of the corrective actions taken.</p>	<p>Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7007.0800, subp. 5</p>
<p>Recordkeeping: Maintain records describing any:</p> <p>1) addition of new units;</p> <p>2) modifications of existing units; and</p> <p>3) deletion of any existing units.</p> <p>Records do not have to be maintained for the addition, modification, or deletion of any insignificant activities listed in Minn. R. 7007.1300, subp. 2.</p> <p>Include in the records the emission increases or decreases resulting from each of the changes.</p>	<p>Minn. R. 7007.0800, subp. 5(B)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records as well as copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Recordkeeping: The Permittee shall maintain a record, at the facility, of the 12-month rolling sum of the PM, PM10, NOx, and VOC emissions.	Title I Condition: To avoid classification as a major source under 40 CFR 52.21
Record and maintain the 12-month rolling sum of the natural gas from purchase records. Keep these records on-site.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21
By the last day of each month, record and maintain the sum of the facility's combined rated heat input capacity to fossil fuel fired boilers.	Title I Condition: To avoid classification as a major source under 40 CFR 52.21
Monthly VOC Material Usage and VOC Usage Recordkeeping: by the 30th day of each month, record the quantity of each VOC-containing food additive material and each VOC used during the previous month. Separate records shall be kept for each material and VOC. This requirement only applies to food additives which are not accounted for through VOC emission factors from testing.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.2; Minn. R. 7007.0800, subp. 5
<b>F. REPORTING</b>	hdr
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3.  At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.  At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
<b>G. GENERAL REQUIREMENTS</b>	hdr
Emission Factors: The Permittee shall use the emission factors that are found in Appendix B or subsequently updated and MPCA approved for emission calculations for those emission units described in Appendix C.	Title I Condition: To avoid classification as a major source under 40 CFR 52.21
Revision of Emission Factors: If a subsequent performance test results in an emission factor that has a higher emission rate than the current emission factor, the highest test result shall become the new emission factor. The use of the updated emission factor shall commence upon receipt of written MPCA notification that the performance test results were valid.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

Natural gas emission factors:  <table><tr><td>Pollutant</td><td>Natural Gas</td></tr><tr><td>(lb/million cubic feet)</td><td></td></tr><tr><td>PM</td><td>7.6</td></tr><tr><td>PM10</td><td>7.6</td></tr><tr><td>NOx</td><td>100.</td></tr><tr><td>VOC</td><td>5.5</td></tr></table>	Pollutant	Natural Gas	(lb/million cubic feet)		PM	7.6	PM10	7.6	NOx	100.	VOC	5.5	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21								
Pollutant	Natural Gas																				
(lb/million cubic feet)																					
PM	7.6																				
PM10	7.6																				
NOx	100.																				
VOC	5.5																				
Grain Handling Fugitive Emission Factors:  <table><tr><td>Source</td><td>PM(lb/ton)</td><td>PM10(lb/ton)</td><td>Control Credit</td></tr><tr><td>FS001</td><td>0.117</td><td>0.02925</td><td>50%</td></tr><tr><td>FS002</td><td>0.0215</td><td>0.00585</td><td>75%</td></tr><tr><td>FS003</td><td>0.0215</td><td>0.00585</td><td>75%</td></tr><tr><td>FS004</td><td>0</td><td>0</td><td></td></tr></table>	Source	PM(lb/ton)	PM10(lb/ton)	Control Credit	FS001	0.117	0.02925	50%	FS002	0.0215	0.00585	75%	FS003	0.0215	0.00585	75%	FS004	0	0		Title I Condition: To avoid classification as a major source under 40 CFR 52.21
Source	PM(lb/ton)	PM10(lb/ton)	Control Credit																		
FS001	0.117	0.02925	50%																		
FS002	0.0215	0.00585	75%																		
FS003	0.0215	0.00585	75%																		
FS004	0	0																			
Calculations - Individual Class and Additives Emissions: By the 30th day of each month, the Permittee shall calculate emissions for the previous month as follows:  a. For each individual Appendix C class emission unit, calculate PM, PM10, and VOC emissions:  Emissions = Emission factor X unit design capacity X (8760/12)  where emission factor = taken from Appendix B or a subsequently MPCA approved factor unit design capacity = rated design capacity of each unit  b. For each VOC containing food additive (not already accounted for in Appendix B emission factors), multiply the percent VOC content times the quantity of each food additive used.  c. Sum the total class monthly emissions of each pollutant and VOC monthly emissions.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21																				
Calculations - Natural Gas Monthly Emissions: By the 30th day of each month, the Permittee shall calculate emissions for the previous month as follows:  d. For natural gas, calculate PM, PM10, NOx,and VOC emissions:  Emissions = Natural gas emission factor X monthly natural gas usage  where monthly natural gas usage = total natural gas quantity purchased by the facility for the previous month.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21																				
Calculations - Insignificant Modifications not already included in previous calculations a - d. By the 30th day of each month, the Permittee shall calculate emissions for the previous month for any units added an insignificant modifications that have not already been included in previous calculations a - d as follow.  e. Emissions = (the appropriate AP-42 factors or calculation method used for that modification) X the unit design capacity X (8760/12)	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21																				
Calculations - Grain Handling Fugitive Emissions: By the 30th day of each month, the Permittee shall calculate emissions for the previous month as follows:  f. For grain handling fugitive emissions, calculate PM and PM10 emissions:  Emissions = Grain handling fugitive emission factor X unit process rate X 8760/12  where unit process rate = the process rate of each unit in tons/hour	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21																				

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

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Calculations: Calculate the total facility monthly emissions of each pollutant by summing: 1) the monthly emissions for the above individual classes and additives (c); 2) natural gas (d); 3) insignificant activities listed in Minn. R. 7007.1300, subp. 3 or 4 that have not already been included in (c) or (d); 4) insignificant modifications (e) that have not already been included in (c) or (d); and 5) grain handling fugitive emission sources (f).	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21
Calculations - 12-month Rolling Sum: Calculate the 12-month rolling sum emissions for each pollutant by summing the total facility monthly emissions and add it to the total from the previous 11 months.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21
If a particular unit that has been removed that was previously included in the calculations as required in this permit, emissions from that particular unit shall not be included in the calculations in the subsequent month to its removal and henceforth.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21
Labeling Requirements: The Permittee shall permanently display on each emission unit the Emission Unit (EU) and on each item of air pollution control equipment, the Control Equipment (CE) number. The identifying number shall be legible from a safe distance. This labeling requirement shall be completed within 180 days of permit issuance.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21
Equipment List Inventory: The Permittee shall maintain a written list of all emission units on site except those insignificant activities listed as insignificant activities in Minn. R. 7007.1300, subp. 2. The list shall include the type of equipment; identifying number; dates of installation; modification and/or reconstruction; and reference to applicable Standards of Performance for New Stationary Sources (40 CFR pt. 60).	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 5
Updating the Equipment List Inventory: The list shall be updated to include new, modified, or relocated equipment before making a change.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 5
Equipment List: due 30 days after end of each calendar year following Permit Issuance to be submitted with the Compliance Certification. This report shall describe changes made to the stationary source without applying for an amendment.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21
Environmental Review: the Permittee shall not begin construction of any single project or projects that are connected or phased, which will cause a total increase in actual emissions of greater than 99 tons per year for any criteria pollutant, without first getting a permit amendment to authorize the project. Connected and phased have meanings as defined in Minn. R. 4410.0200, subps. 9(b) and 60. The Permittee shall not begin construction of any project which is listed in Minn. R. 4410.4300 or Minn. R. 4410.4400 without first obtaining a permit amendment to authorize the project. Such project(s) may require the completion of an Environmental Assessment Worksheet or an Environmental Impact Statement prior to issuance of the amendment.	Minn. R. 4410.4300; Minn. R. 4410.4400

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

**Subject Item:** GP 001 Natural Gas Boilers (Pre Dc)**Associated Items:** EU 001 Boiler No. 1

EU 002 Boiler No. 2

EU 003 Boiler No. 3

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 1
Opacity: less than or equal to 20 percent except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0510, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

**Subject Item:** GP 002 Natural Gas Boilers (Dc)**Associated Items:** EU 004 Boiler No. 4

EU 005 Future Boiler No. 5

What to do	Why to do it
Record quantity of natural gas that each of the Dc boilers combust on a monthly basis.	Title I Condition: To avoid classification as a major source under 40 CFR 52.21
Notification of the anticipated date of initial startup: due 30 days before (but no more than 60 days) prior to anticipated date of EU005 initial startup.	40 CFR 60.7(a)
Notification of Date that Construction Began: due 30 days after start of EU005 construction	40 CFR 60.7(a)
Notification of the actual date of initial startup: due 15 days after such date for EU005.	40 CFR 60.7(a)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

**Subject Item:** GP 003 Grain Handling

**Associated Items:** FS 001 Old Receiving Pad - Truck/Rail Unload - 3 sided building, one end open at all times. 10% pit unload (Heavy Br  
FS 002 Old Feed Loadout - partial enclosure - sealed truck bay, one end open during loadout. Loadout chute is aspira  
FS 003 New Feed Loadout - partial enclosure - 3-sided enclosure - one end open during loading. Area is aspirated wit  
FS 004 New Receiving Pad - Truck/Rail Unload - 100% sealed/pneumatic unload; vents through bin vent filters intern:

What to do	Why to do it
Clean up commodities spilled on facility property, as required, to minimize fugitive emissions to a level consistent with RACT	Minn. R. 7011.1005, subp. 1(A)
Maintain air pollution control equipment in proper operating condition and utilize the air pollution control systems as designed.	Minn. R. 7011.1005, subp. 1(B)
Opacity: less than or equal to 5 percent for fugitive emissions from grain unloading.	Minn. R. 7011.1005, subp. 3 (A)
Opacity: less than or equal to 10 percent for fugitive emissions from grain loading.	Minn. R. 7011.1005, subp. 3(B)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

**Subject Item: GP 004 Product Recovery Systems**

**Associated Items:** SV 006 Feed Bin Cyclone Asp  
SV 011 Old Mill Room Asp  
SV 021 Puff W/R Vit Dry Filter  
SV 022 #4 Asp Filter  
SV 023 Rice Retro Dryer Filter  
SV 024 #5 Asp Filter  
SV 026 P1 Hoffman Filter  
SV 027 Puffed Wheat Destoner  
SV 030 #3 Asp Filter  
SV 033 #7 Asp Filter  
SV 037 #8 Asp Filter  
SV 038 Mill Room Asp Filter  
SV 043 #9 Asp Filter  
SV 046 Phase 10 Cooler Area Asp  
SV 049 #10 Asp Filter  
SV 053 #11 Asp Filter  
SV 057 #12 Asp Filter

What to do	Why to do it
Operation and Maintenance of Fabric Filter: the Permittee shall operate and maintain the product recovery systems according to the control equipment manufacturer's specifications.	Tile I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7007.0800, subp. 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

**Subject Item:** GP 005 Product Recovery Systems (Penthouses)**Associated Items:** SV 025 Penthouse Ventillation

What to do	Why to do it
Operation and Maintenance of Fabric Filter: the Permittee shall operate and maintain the product recovery systems filters according to the control equipment manufacturer's specifications.	Tile I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7007.0800, subp. 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

**Subject Item:** GP 006 1/2 Product Dryers/Coolers

**Associated Items:** EU 008 Extruder #1 1/2 Product Dryer/Cooler  
 EU 009 Extruder #2 1/2 Product Dryer/Cooler  
 EU 010 Bran 1/2 Product Dryer  
 EU 046 Phase 6 - Extruder #3 1/2 Product Dryer/Cooler  
 EU 056 Phase 8 - Extruder 1/2 Product Dryer/Cooler  
 EU 079 Phase 11 - Extruder 1/2 Product Dryer/Cooler  
 EU 086 Phase 12 - Extruder 1/2 Product Dryer/Cooler

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)
Performance Test: due before 09/30/2003 to measure PM (includes organics), PM10, and VOC for one individual Emission Unit listed under GP006.  Performance Test Pre-test Meeting: due 7 days before each Performance Test.  (This is the first required test.)	Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
Performance Test: due before 09/30/2003 to measure PM (includes organics) for one Emission Unit listed under GP006.  Performance Test Pre-test Meeting: due 7 days before each Performance Test.  (This is the second required test.)	Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
General Performance Test (PT) Requirements:  Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.  PT Notifications (written): due 30 days before each Performance Test PT Plan: due 30 days before each Performance Test PT Pre-test Meeting: due 7 days before each Performance Test PT Report: due 45 days after each Performance Test PT Report-Microfiche: due 105 days after each Performance Test	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

**Subject Item: GP 007 Gun Systems (Single Cyclone)**

**Associated Items:** SV 016 #2 Preh Gun & Cyclone  
SV 017 #3 Preh Gun & Cyclone  
SV 018 #4 Preh Gun & Cyclone  
SV 019 #5 Preh Gun & Cyclone  
SV 031 #7 Preh Gun & Cyclone  
SV 035 #8 Preh Gun Cyclone  
SV 047 #10 Preh Gun & Cyclone  
SV 051 #11 Preh Gun & Cyclone

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735	Minn. R. 7011.0610, subp. 1(A)
Opacity: less than or equal to 20 percent except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0610, subp. 1(A)
Performance Test: due before 09/30/2003 to measure PM (includes organics), PM10, and VOC. At least 3 tests shall be performed on different gun units. If a new gun is installed, it will be tested. The testing of a new gun will be included as one of the required 5 tests.  Performance Test Pre-test Meeting: due 7 days before each Performance Test.  (This is the first required test.)	Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
Performance Test: due before 09/30/2003 to measure PM (includes organics). At least 3 tests shall be performed on different gun units. If a new gun is installed, it will be tested. The testing of a new gun will be included as one of the required 5 tests.  Performance Test Pre-test Meeting: due 7 days before each Performance Test.  (This is the second required test.)	Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
Performance Test: due before 09/30/2003 to measure PM (includes organics). At least 3 tests shall be performed on different gun units. If a new gun is installed, it will be tested. The testing of a new gun will be included as one of the required 5 tests.  Performance Test Pre-test Meeting: due 7 days before each Performance Test.  (This is the third required test.)	Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
Performance Test: due before 09/30/2003 to measure PM (includes organics). At least 3 tests shall be performed on different gun units. If a new gun is installed, it will be tested. The testing of a new gun will be included as one of the required 5 tests..  Performance Test Pre-test Meeting: due 7 days before each Performance Test.  (This is the fourth required test.)	Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
Performance Test: due before 09/30/2003 to measure PM (includes organics). At least 3 tests shall be performed on different gun units. If a new gun is installed, it will be tested. The testing of a new gun will be included as one of the required 5 tests.  Performance Test Pre-test Meeting: due 7 days before each Performance Test.  (This is the fifth required test.)	Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
General Performance Test (PT) Requirements:  Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.  PT Notifications (written): due 30 days before each Performance Test PT Plan: due 30 days before each Performance Test PT Pre-test Meeting: due 7 days before each Performance Test PT Report: due 45 days after each Performance Test PT Report-Microfiche: due 105 days after each Performance Test	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

**Subject Item:** GP 008 Gun Systems (Double Cyclone)**Associated Items:** SV 055 #12 Preh Gun & Cyclone

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735	Minn. R. 7011.0610, subp. 1(A)
Opacity: less than or equal to 20 percent except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0610, subp. 1(A)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

**Subject Item:** GP 009 Puffwe/Toaster (Jetzone) Dryers/Coolers**Associated Items:** EU 013 Puffer/Toaster #1

EU 016 Puffer/Toaster #2

EU 065 Phase 9 - Puffer/Toaster Dryer

EU 066 Phase 9 - Puffer/Toaster Cooler

EU 070 Phase 10 - Puffer/Toaster Dryer

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735	Minn. R. 7011.0610, subp. 1(A)
Opacity: less than or equal to 20 percent except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0610, subp. 1(A)
Performance Test: due before 09/30/2003 to measure PM (includes organics), PM10, and VOC for one Emission Unit listed under GP009.  Performance Test Pre-test Meeting: due 7 days before each Performance Test.  (This is the first required test.)	Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
Performance Test: due before 09/30/2003 to measure PM (include organics) for one Emission Unit listed under GP009.  Performance Test Pre-test Meeting: due 7 days before each Performance Test.  (This is the second required test.)	Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
General Performance Test (PT) Requirements:  Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.  PT Notifications (written): due 30 days before each Performance Test PT Plan: due 30 days before each Performance Test PT Pre-test Meeting: due 7 days before each Performance Test PT Report: due 45 days after each Performance Test PT Report-Microfiche: due 105 days after each Performance Test	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

**Subject Item:** GP 010 Sugar Coat Coolers

**Associated Items:** EU 029 Sugar Coat Cooler #2  
 EU 047 Phase 6 - Sugar Coat #3 Cereal Cooler  
 EU 053 Phase 7 - Sugar Coat Cereal Cooler  
 EU 060 Phase 8 - Sugar Coat Cereal Cooler  
 EU 067 Phase 9 - Sugar Coat Cooler  
 EU 076 Phase 10 - Sugar Coat Cooler  
 EU 083 Phase 11 - Sugar Coat Cooler  
 EU 090 Phase 12 - Sugar Coat Cooler

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)
Performance Test: due before 09/30/2003 to measure PM (includes organics), PM10, and VOC for one Emission Unit listed under GP010.  Performance Test Pre-test Meeting: due 7 days before each Performance Test.  (This is the first required test.)	Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
Performance Test: due before 09/30/2003 to measure PM (includes organics) for one Emission Unit listed under GP010.  Performance Test Pre-test Meeting: due 7 days before each Performance Test.  (This is the second required test.)	Title I Condition: To avoid classification as a major source under 40 CFR 52.21; Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
General Performance Test (PT) Requirements:  Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.  PT Notifications (written): due 30 days before each Performance Test PT Plan: due 30 days before each Performance Test PT Pre-test Meeting: due 7 days before each Performance Test PT Report: due 45 days after each Performance Test PT Report-Microfiche: due 105 days after each Performance Test	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2

## TABLE B: SUBMITTALS

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield  
Permit Number: 13100022 - 002

Table B lists most of the submittals required by this permit. Please note that some submittal requirements may appear in Table A or, if applicable, within a compliance schedule located in Table C. Table B is divided into two sections in order to separately list one-time only and recurrent submittal requirements.

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by parts 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send any application for a permit or permit amendment to:

Permit Technical Advisor  
Permit Section  
Air Quality Division  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

Also, where required by an applicable rule or permit condition, send to the Permit Technical Advisor notices of:

- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

Unless another person is identified in the applicable Table, send all other submittals to:

Supervisor  
Compliance Determination Unit  
Air Quality Division  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

Send submittals that are required to be submitted to the U.S. EPA regional office to:

Mr. George Czerniak  
Air and Radiation Branch  
EPA Region V  
77 West Jackson Boulevard  
Chicago, Illinois 60604

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency  
Clean Air Markets Division  
1200 Pennsylvania Avenue NW (6204N)  
Washington, D.C. 20460

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Computer Dispersion Modeling Information	due 1,216 days after 04/11/2000. Submit modeling data as specified in MPCA guidance for Modeling Information Requests for PM10 and NOx. This modeling information is for data collection purposes, no modeling analysis is required at this time. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Total Facility
Performance Test Notification (written)	due 30 days before Performance Test to measure PM (includes organics) for one Emission Unit listed under GP006.  This requirement also includes submittal of a written Performance Test Plan.  (This is the second required test.)	GP006
Performance Test Notification (written)	due 30 days before Performance Test to measure PM (includes organics) for one Emission Unit listed under GP009.  This requirement also includes submittal of a written Performance Test Plan.  (This is the second required test.)	GP009
Performance Test Notification (written)	due 30 days before Performance Test to measure PM (includes organics) for one Emission Unit listed under GP010.  This requirement also includes submittal of a written Performance Test Plan.  (This is the second required test.)	GP010
Performance Test Notification (written)	due 30 days before Performance Test to measure PM (includes organics), PM10, and VOC for one Emission Unit listed under GP009.  This requirement also includes submittal of a written Performance Test Plan.  (This is the first required test.)	GP009
Performance Test Notification (written)	due 30 days before Performance Test to measure PM (includes organics), PM10, and VOC for one Emission Unit listed under GP010.  This requirement also includes submittal of a written Performance Test Plan.  (This is the first required test.)	GP010
Performance Test Notification (written)	due 30 days before Performance Test to measure PM (includes organics), PM10, and VOC for one individual Emission Unit listed under GP006.  This requirement also includes submittal of a written Performance Test Plan.  (This is the first required test.)	GP006
Performance Test Notification (written)	due 30 days before Performance Test to measure PM (includes organics), PM10, and VOC for the Retro Coolers (one baked oven unit).  This requirement also includes submittal of a written Performance Test Plan.	Total Facility

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

Performance Test Notification (written)	due 30 days before Performance Test to measure PM (includes organics), PM10, and VOC for the Retro Dryers (one mill room dryer)  This requirement also includes submittal of a written Performance Test Plan.	Total Facility
Performance Test Notification (written)	due 30 days before Performance Test to measure PM (includes organics), PM10, and VOC for the Sugar Coat Kettles/Cook Room Kettles.  This requirement also includes submittal of a written Performance Test Plan.	Total Facility
Performance Test Notification (written)	due 30 days before Performance Test to measure PM (includes organics), PM10, and VOC. This requirement also includes submittal of a written Performance Test Plan.  (This is the first required test.)	GP007
Performance Test Notification (written)	due 30 days before Performance Test to measure PM (includes organics). This requirement also includes submittal of a written Performance Test Plan.  (This is the fifth required test.)	GP007
Performance Test Notification (written)	due 30 days before Performance Test to measure PM (includes organics). This requirement also includes submittal of a written Performance Test Plan.  (This is the fourth required test.)	GP007
Performance Test Notification (written)	due 30 days before Performance Test to measure PM (includes organics). This requirement also includes submittal of a written Performance Test Plan.  (This is the third required test.)	GP007
Performance Test Notification (written)	due 30 days before Performance Test to measure PM (includes organics).  This requirement also includes submittal of a written Performance Test Plan.  (This is the second required test.)	GP007
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure PM (includes organics) for each Emission Unit listed under GP006.  (This is the second required test.)	GP006
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure PM (includes organics) for one Emission Unit listed under GP009.  (This is the second required test.)	GP009
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure PM (includes organics) for one Emission Unit listed under GP010.  (This is the second required test.)	GP010
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure PM (includes organics), PM10, and VOC for the Sugar Coat Kettles/Cook Room Kettles.	Total Facility

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure PM (includes organics), PM10, and VOC for one Emission Unit listed under GP006.  (This is the first required test.)	GP006
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure PM (includes organics), PM10, and VOC for one Emission Unit listed under GP009.  (This is the first required test.)	GP009
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure PM (includes organics), PM10, and VOC for one Emission Unit listed under GP010.  (This is the first required test.)	GP010
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure PM (includes organics), PM10, and VOC for the Retro Coolers (one baked oven unit).	Total Facility
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure PM (includes organics), PM10, and VOC for the Retro Dryers (one mill room dryer)	Total Facility
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure PM (includes organics), PM10, and VOC.  (This is the first required test.)	GP007
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure PM (includes organics).  (This is the fifth required test.)	GP007
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure PM (includes organics).  (This is the fourth required test.)	GP007
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure PM (includes organics).  (This is the second required test.)	GP007
Performance Test Report - Microfiche Copy	due 105 days after Performance Test to measure PM (includes organics).  (This is the third required test.)	GP007
Performance Test Report	due 45 days after Performance Test to measure PM (includes organics) for each Emission Unit listed under GP006.  (This is the second required test.)	GP006
Performance Test Report	due 45 days after Performance Test to measure PM (includes organics) for one Emission Unit listed under GP009.  (This is the second required test.)	GP009
Performance Test Report	due 45 days after Performance Test to measure PM (includes organics) for one Emission Unit listed under GP010.  (This is the second required test.)	GP010
Performance Test Report	due 45 days after Performance Test to measure PM (includes organics), PM10, and VOC for one Emission Unit listed under GP009.  (This is the first required test.)	GP009



**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

Performance Test Report	due 45 days after Performance Test to measure PM (includes organics), PM10, and VOC for one Emission Unit listed under GP010.  (This is the first required test.)	GP010
Performance Test Report	due 45 days after Performance Test to measure PM (includes organics), PM10, and VOC for one individual Emission Unit listed under GP006.  (This is the first required test.)	GP006
Performance Test Report	due 45 days after Performance Test to measure PM (includes organics), PM10, and VOC for the Retro Coolers (one baked oven unit).	Total Facility
Performance Test Report	due 45 days after Performance Test to measure PM (includes organics), PM10, and VOC for the Retro Dryers (one mill room dryer).	Total Facility
Performance Test Report	due 45 days after Performance Test to measure PM (includes organics), PM10, and VOC for the Sugar Coat Kettles/Cook Room Kettles. .	Total Facility
Performance Test Report	due 45 days after Performance Test to measure PM (includes organics), PM10, and VOC.  (This is the first required test.)	GP007
Performance Test Report	due 45 days after Performance Test to measure PM (includes organics).  (This is the fifth required test.)	GP007
Performance Test Report	due 45 days after Performance Test to measure PM (includes organics).  (This is the fourth required test.)	GP007
Performance Test Report	due 45 days after Performance Test to measure PM (includes organics).  (This is the second required test.)	GP007
Performance Test Report	due 45 days after Performance Test to measure PM (includes organics).  (This is the third required test.)	GP007
Testing Frequency Plan	due 60 days after Computer Dispersion Modeling Results have been approved by the MPCA. The plan shall specify a future (upon completion of the testing required in this permit) testing frequency for Half Product Dryers/Coolers, Gun System-Single Cyclone, Puffer/Toaster Dryers/Coolers, Sugar Coater Coolers, Retro Dryers, Retro Coolers, and the Sugar Coat Kettles/Cook Room Kettles using the test data and MPCA guidance. Future performance tests based on year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required on written approval of MPCA per Minn. R. 7017.2020, subp. 1.	Total Facility

**TABLE B: RECURRENT SUBMITTALS**

06/03/03

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022 - 002

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 04/11/2000 . The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31.	Total Facility
Compliance Certification	due 31 days after end of each calendar year starting 04/11/2000 (for the previous calendar year). To be submitted on a form approved by the Commissioner <, both to the Commissioner, and to the U.S. EPA regional office in Chicago>. This report covers all deviations experienced during the calendar year. < The EPA copy shall be sent to: Mr. George Czerniak, Chief, Air Enforcement and Compliance Assurance Branch, Air and Radiation Division, EPA Region V, 77 West Jackson Boulevard, Chicago, Illinois 60604> Air and Radiation Branch EPA Region V 77 West Jackson Boulevard Chicago, Illinois 60604	Total Facility
Emissions Inventory Report	due 91 days after end of each calendar year starting 04/11/2000 (April 1). To be submitted on a form approved by the Commissioner.	Total Facility

# APPENDIX MATERIAL

Facility Name: Malt-O-Meal Co - Plant 2 - Northfield

Permit Number: 13100022-002

## Appendix A: Emission Unit and Stack Vent Numbers

Emission Unit Unit ID Number	Stack/Vent Unit ID Number	Emission Unit Operator's Description
1	1	Boiler #1
2	2	Boiler #2
3	3	Boiler #3
4	4	Boiler #4
5	5	Future Boiler #5
6	6	Feed bin cyclone aspiration filter
7	6	Points cont. to feed bin cyclone aspir. filter
8	7, 8	Extruder #1 ½ product dryer/cooler
9	9	Extruder #2 ½ product dryer/cooler
10	10	Bran ½ product dryer
11	11	Old mill room aspiration filter
12	11	Points cont. to old mill room aspir. Filter
13	12, 13	Puffer/toaster #1
14	25	P/T #2 dryer infeed aspiration filter
15	25	Points cont. to P/T #2 infeed aspiration
16	14, 15	Puffer/toaster #2
17	16	#2 puffing gun
18	16	Gun #2 product collection cyclone
19	16	Gun #2 preheater
20	17	#3 puffing gun
21	17	Gun #3 product collection cyclone
22	17	Gun #3 preheater
23	18	Gun #4 preheater
24	18	#4 puffing gun
25	18	Gun #4 product collection cyclone
26	19	Gun #5 preheater
27	19	#5 puffing gun
28	19	Gun #5 product collection cyclone
29	20	Sugar coat cooler #2
30	21	Puffed wheat/rice vit. Dry filter
31	21	Points cont. to puff W/R vit. Dry filter
32	25	P-4 conveying aspiration
33	25	Points cont. to P-4 conveying aspiration
34	22	#4 product collection/aspiration filter
35	22	#4 filter – points contributing to filter
36	23	Rice retro dryer infeed aspiration filter
37	23	Points contributing to rice retro asp. filter

38	24	#5 product collection/aspiration filter
39	24	#5 filter – points contributing to filter
40	25	Hoffman aspiration filter system #2
41	25	Points cont. to hoffman system #2 filter
42	26	Phase 1 hoffman aspiration filter system
43	26	Points cont. to phase 1 hoffman system filter
44	27	Puffed wheat destoner filter
45	27	Points cont. to puffed wheat destoner filter
46	28	Phase 6 – extruder #3 ½ product dryer/cooler
47	29	Phase 6 – sugar coat #3 cereal cooler
48	30	Phase 6 – sugar coat #3 system prod. collect filter
49	30	Phase 6 – points contributing to #3 sugar coat filter
50	31	Phase 7 – gund #7 preheater
51	31	Phase 7 - #7 puffing gun
52	31	Phase 7 – gun #7 product collection cyclone
53	32	Phase 7 – sugar coat cereal cooler
54	33	Phase 7 – product collection/aspiration filter
55	33	Phase 7 – units contributing to filter
56	34	Phase 8 – Extruder ½ product dryer/cooler
57	35	Phase 8 – Gun #8 preheater
58	35	Phase 8 - #8 puffing gun
59	35	Phase 8 – gun #8 product collection cyclone
60	36	Phase 8 – sugar coat cereal cooler
61	37	Phase 8 – product collection/aspiration filter
62	37	Phase 8 – points contributing to filter
63	38	Phase 9 – mill room aspiration
64	38	Phase 9 – points cont. to mill room aspiration
65	39, 40	Phase 9 – puffer/toaster dryer
66	41	Phase 9 – puffer/toaster cooler
67	42	Phase 9 –sugar coat cooler
68	43	Phase 9 – product collection/aspiration filter
69	43	Phase 9 – points contributing to filter
70	44, 45	Phase 10 – puffer/toaster dryer
71	46	Phase 10 – puffer toaster cooler area aspiration
72	46	Phase 10 – points cont. to cooler area filter
73	47	Phase 10 – gun #10 preheater
74	47	Phase 10 - #10 puffing gun
75	47	Phase 10 – gun #10 product collection cyclone
76	48	Phase 10 – sugar coat cooler
77	49	Phase 10 – product collection/aspiration filter
78	49	Phase 10 – points contributing to filter
79	50	Phase 11 – extruder ½ product dryer/cooler
80	51	Phase 11 – gun #11 preheater
81	51	Phase 11 - #11 puffing gun
82	51	Phase 11 – gun #11 product collection cyclone
83	52	Phase 11 – sugar coat cooler

84	53	Phase 11 – product collection/aspiration filter
85	53	Phase 11 – points contributing to filter
86	54	Phase 12 – extruder ½ product dryer/cooler
87	55	Phase 12 – gun #12 preheater
88	55	Phase 12 - #12 puffing gun
89	55	Phase 12 – gun #12 product collection cyclone
90	56	Phase 12 – sugar coat cooler
91	57	Phase 12 – product collection/aspiration filter
92	57	Phase 12 – points contributing to filter
93	58, 59	Phase 12 - #13 baked product oven
94	60	General additive use

## Appendix B: Class Emission Factors

Description	PM Emission Factor	PM10 Emission Factor	VOC Emission Factor
Product Recovery Systems (GP004)	0.01 gr/dscf	0.01 gr/dscf	5 % of TSP
Penthouse Product Recovery Systems (GP005) <sup>(1)</sup>	0.005 gr/dscf	0.005 gr/dscf	10 % of TSP
½ Product Dryer/Coolers (GP006)	0.242 lbs/ton	0.114 lbs/ton	0.0071 lbs/ton
Gun Systems (Single Cyclone) (GP007) <sup>(2)</sup>	0.727 lbs/ton	0.727 lbs/ton	0.009 lbs/ton
Gun Systems (Double Cyclone) (GP008) <sup>(2)</sup>	0.093 lbs/ton	0.093 lbs/ton	0.009 lbs/ton
Puffer Toaster Dryer/Coolers (GP009) <sup>(3)</sup>	0.352 lbs/ton	0.122 lbs/ton	0.009 lbs/ton
Sugar Coat Dryers <sup>(4)</sup>	0.031 lbs/ton	0.031 lbs/ton	0.031 lbs/ton
Sugar Coat Coolers (GP010)	0.151 lbs/ton	0.0093 lbs/ton	0.163 lbs/ton
Retro and Other Type 1 Dryers <sup>(4)</sup>	0.022 lbs/ton	0.026 lbs/ton	0.0071 lbs/ton
Retro and Other Type 1 Coolers <sup>(4)</sup>	0.031 lbs/ton	0.033 lbs/ton	0.0071 lbs/ton
Vitamin Dryers <sup>(4)</sup>	0.029 lbs/ton	0.005 lbs/ton	0.031 lbs/ton
Cook Room & Sugar Coat Kettles <sup>(4)</sup>	0.073 lbs/ton	0.073 lbs/ton	0.041 lbs/ton
Sugar Coat Concentrators <sup>(4)</sup>	0.016 lbs/ton	0.016 lbs/ton	0.016 lbs/ton

(1) The Penthouse Product limit applies to the exhaust from the penthouse (not into the penthouse).

(2) GP007 and GP008 include preheater fuel burning emissions.

(3) GP009 includes fuel burning emissions.

(4) These individual emission units are insignificant activities. These units are as described within the Appendix C classes.

## **Appendix C: Description of Classes**

Product Recovery Systems (GP004 & GP005): Filter systems consist of standard baghouse-type fabric filters. The units may use standard straight walled filter socks or pleated cartridge type filters. The units may range from 1,125 acfm to 20,000 acfm.

Half Product Dryer/Coolers (GP006): Half product dryer/coolers are steam heated units which remove moisture from extruded product prior to further processing (typically puffing). Product moves through the unit on perforated belts. The product on the belts is not agitated. The process rates may range from 1.35 to 3.25 tons/hour.

Gun Systems – Single Cyclone (GP007): Gun systems consist of a pre-heater, puffing gun, and a cyclone. The pre-heater is a natural gas fired unit. Product moves through the pre-heater on a belt and is somewhat fluidized by the hot air stream. The puffing gun is a cylindrical chamber in which pre-heated product and superheated steam are introduced. When the product is released from the chamber and returns to atmospheric pressure, it puffs giving the product its finished shape. Both the pre-heater and the puffing gun vent through a cyclone that separates the product from the air stream. The gun system has a single exhaust point (the cyclone exhaust). The process rates may range from 1.35 to 2.5 tons per hour. The pre-heaters rates may range from 1.125 to 1.875 million Btu/hour.

Gun Systems – Double Cyclone (GP008): Double cyclone gun systems consist of a pre-heater, puffing gun, and two cyclones. The pre-heater is a natural gas fired unit. Product moves through the pre-heater on a belt and is somewhat fluidized by the hot air stream. The puffing gun is a cylindrical chamber in which preheated product and superheated steam are introduced. When the product is released from the chamber and returns to atmospheric pressure, it puffs giving the product its finished shape. Both the pre-heater and the puffing gun vent through a series of two cyclones that separate the product from the air stream. The gun system has a single exhaust point (the exhaust from the second cyclone). The process rate may range from 1.5 to 2.5 tons/hour. The pre-heaters rates may range from 1.125 to 1.875 million Btu/hour.

Puffer/Toaster Dryer/Coolers (GP009): Puffer/toaster dryers are natural gas fired units. Product moves through the dryer on a belt and is somewhat fluidized by the hot air stream. Hot air is recirculating through the dryer through one or more cyclones. A portion of the recirculating air is exhausted to the outside through one or more stacks. Product exits the dryer section of this unit and enters the cooler section of the unit. In the cooler, product is conveyed on a perforated belt through which cool air is passed. The cooler exhaust vents to the outside through either a cyclone or filter system. The process flow rates may range from 1.35 to 2.5 tons/hour.

Sugar Coat Dryers (\*): Sugar coat dryers are steam heated units which remove moisture from the sugar coating which has been applied to the product. Product passes through the dryer on a perforated belt. The product is not agitated on the belt. The process flow rates may range from 1.2 to 3.75 tons/hour.

Sugar Coat Coolers (GP010): The sugar coat cooler is integrated with the sugar coat dryer. Product exits the dryer section of this unit and enters the cooler section of the unit. In the cooler, product is conveyed on a perforated belt through which cool air is passed. The process flow rates may range from 1.2 to 3.75 tons/hour.

Retro and Other Type 1 Dryers (\*): Type 1 dryers consist of retro dryers and mill room dryers. These dryers are steam heated units that remove moisture from cooked, milled product prior to further processing. Product entering these units contains a high level of moisture. Product passes through the dryer on a perforated belt. The product is not agitated on the belt. The process flow rate may range from 1.8 to 3.0 tons/hour. Type 1 drawers are physically located at the same process point as or prior to a retro dryer in a process line (i.e., where the inlet product has a higher moisture content, than a retro dryer).

Retro and Other Type 1 Coolers (\*): Type 1 coolers consist of retro coolers, mill room coolers and the baked product oven. In the retro and mill room coolers, air is passed through the product to cool it. In the baked product oven, natural gas heat is used to bake the product. For all units of this type, the product passes through the unit on a belt with no agitation. The process flow rate may range between 1.8 to 3.0 tons/hour. Type 1 coolers are physically located at the same point as or prior to a retro cooler in a process line (i.e., where the inlet product has a higher moisture content, than a retro cooler).

Vitamin Dryers (\*): Vitamin dryers may be steam or natural gas heated. These dryers remove a small amount of moisture that has been applied to the product with a liquid vitamin mixture. The process flow rate may range between 0.93 to 1.56 tons/hour.

Cook Room & Sugar Coat Kettles (\*): In the cook room and sugar coat kettle systems, dry commodities (sugar, salt, etc.) are pneumatically delivered to kettles through a cyclone. The cyclone exhaust and kettle exhaust pass through a scrubber that removes any of the remaining commodity from the air. The scrubber water is returned to the kettle so that all of the captured raw material is used. The scrubber is the ultimate exhaust point for the system. The process flow rate may range between 1.35 to 1.5 tons/hour.

Sugar Coat Concentrators (\*): Sugar concentrators are steam heated units that evaporate water from sugar mixtures. The process flow rate may range between 1.35 to 1.5 tons/hour.

\* = Insignificant Activities

## **Appendix D: Insignificant Activities and Applicable Requirements**

1. Minn. R. 7007.1300, subp. 3(G)  
Emission from a Laboratory (food product testing for quality control)  
Applicable Requirements: Minn. R. 7007.0715, subp. 1
2. Minn. R. 7007.1300, subp. 3(H)  
Miscellaneous (one arc welder)  
Applicable Requirements: Minn. R. 7007.0610

3. Minn. R. 7007.1300, subp. 3(I)

Process emission from small units:

Sugar Coat Dryers

Retro Dryers

Retro Coolers

Vitamin Dryers

Sugar Coat Kettles/Cook Room Kettles

Sugar Concentrators

Applicable Requirements: Minn. R. 7007.0715, subp. 1

Superheaters, glycol heaters, and other process units with fuel burning emissions and heat input less than 2.27 MMBtu/hr.

Unit and area heaters and air conditioning units with heat input less than 2.27 MMBtu/hr.

#13 cooked wheat dryer

Applicable Requirements: Minn. R. 7007.0610

4. Minn. R. 7007.1300 subp. 4(B)

Office Boilers

Unit and area heaters with heat input greater than 2.27 MMBtu/hr and less than 22.7 MMBtu/hr.

VOCs from packaging inks and cleaning chemicals. These VOC emissions are not included in the cap set by condition #5.

5. Minn. R. 7007.1300, subp. 4(C)(1) and (2)

HAP emissions from printing inks and cleaning chemicals.



**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**DRAFT AIR EMISSION PERMIT NO. 13100022-002**

This technical support document is for all the interested parties of the draft permit. The purpose of this document is to set forth the legal and factual basis for the draft permit conditions, including references to the applicable statutory or regulatory provisions.

## **1. General Information**

### **1.1. Applicant and Stationary Source Location:**

<b>Owner and Operator Address and Phone Number</b>	<b>Facility Address (SIC Code: 2043)</b>
Malt-O-Meal Company 80 South 8 <sup>th</sup> Street – Suite 2600 Minneapolis, MN 55402-2297	Malt-O-Meal Company 701 West 5th Street Northfield, MN 55057

### **1.2. Description Of The Facility**

The Permittee operates a breakfast cereal manufacturing facility. The stationary source currently consists of 13 separate product lines. Many of these lines can produce multiple products. Cereal is either a wheat, rice, corn, oat, or some combination thereof. The stationary source consists of scalpers, destoners, dryers, sifters, extrusion equipment, puffing equipment, conveyors, packaging machines, various cookers, boilers, intermediate storage equipment, and truck and railcar loading facilities. The pollutants of concern are PM, PM<sub>10</sub>, VOCs, and NO<sub>x</sub>.

### **1.3 Description of the Activities Allowed By This Permit Action**

This permitting action changes the Title V modeling requirements to reflect the current MPCA policy dated August 10, 2001. This permit changes the requirements from submittal of a protocol and modeling results, to the submittal of computer dispersion modeling information only. In addition, the information submittal deadline has been extended 120 days as requested by the Permittee in an administrative amendment permit application.

## **2. Regulatory Overview of Units Affected by the Modification**

	<b>Applicable Regulations</b>	<b>Comments</b>
Total Facility	Minn. R. 7007.0800, subp. 2	Computer Dispersion Modeling Information

### 3. Technical Information

This major amendment is a non-mandatory re-opening by the Minnesota Pollution Control Agency (MPCA) of the total facility permit according to Minn. R. 7007.1600, subp. 2.C. The Commissioner has received emissions information from the facility indicating that the source is a small Title V source as described in the August 10, 2001, MPCA Guidance For Title V Air Dispersion Modeling, and therefore the full title V modeling required by Permit No. 16900013-002 is not appropriate. As a result, this draft permit requires only submittal of modeling information.

The following table shows permitted potential and actual emissions.

	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>
Maximum Actual Emissions To Qualify As A Small Title V Source (Tons)	100	250	1000
Permitted Emissions	132.2	0.7	110.6
2001 Actual Emissions	94.8	0.1	15.9

Therefore, the facility fits the requirements for submittal of Computer Dispersion Modeling Information, instead of a modeling protocol and modeling results.

Also, after the Permittee received the November 21, 2002, letter notifying them of the MPCA intent to re-open the permit, the Permittee requested an administrative amendment to extend the original due date of 1096 days after permit issuance (April 11, 2000) by an additional 120 days. As a result, the modeling information submittal is due 1216 days after April 11, 2000.

No comments were received during the 30-day public notice period or the 45-day EPA review period.

### 4. Conclusion

Based on the information provided by Malt-O-Meal, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 13100022-002 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Marshall Cole