

**AIR EMISSION PERMIT NO. 14500003- 002**

**IS ISSUED TO**

Kraft Foods Inc - Melrose  
1000 E Kraft Drive  
Melrose, Stearns County, Minnesota 56352

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
Total Facility Operating Permit	November 1, 1994
Major Amendment	March 21, 2000

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 as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

**Permit Type:** Federal; Synthetic Minor PSD/NSR

**Issue Date:** November 30, 2000

**Expiration:** July 28, 2003

All Title I Conditions do not expire.

---

Ann M. Foss  
Manager  
North and South Major Facilities

for Karen A. Studders  
Commissioner  
Minnesota Pollution Control Agency

## **TABLE OF CONTENTS**

**Notice to the Permittee**

**Permit Shield**

**Facility Description**

**Table A: Limits and Other Requirements**

**Table B: Submittals**

**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.

**FACILITY DESCRIPTION:**

Kraft Foods Inc. operates an existing plant for the production of cheese in Melrose, Minnesota. The facility also produces ethanol using by-products of the cheese production process. The primary source of emissions from the facility is combustion of natural gas and residual oil in the three boilers.

The portion of the facility producing ethanol is subject to a 100 ton per year (tpy) emission threshold for each criteria pollutant, under the federal Prevention of Significant Deterioration (PSD) program, 40 CFR § 52.21. The capacity of the ethanol production equipment is such that emissions of each criteria pollutant resulting from the production of ethanol is below 100 tpy.

The entire facility (cheese production and ethanol production combined) is subject to the 250 tpy emission threshold under PSD. The facility has accepted emission limits and operating limitations such that the emissions of each criteria pollutant from the facility are less than 250 tpy.

The facility is a major source under the Part 70 permit program (40 CFR § 70.2).

**AMENDMENT DESCRIPTION:**

This permit amendment authorizes the following changes to the permit:

- The required VOC collection efficiency for the fermentation scrubber (CE 002) as listed under SV 004 (fermentation scrubber stack) is reduced from 98% to 75%.
- The requirement to conduct computer dispersion modeling for emissions of sulfur dioxide and nitrogen oxides from the facility is removed from the permit.
- A 36-month testing frequency is established for SV 004 based on the margin of compliance recorded in the September 29, 1999, performance test.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 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>
Production: less than or equal to 3000000 gallons/year using 12-month Rolling Sum of ethanol (prior to addition of denaturant).	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Recordkeeping: By the 15th day of every month, record the gallons of ethanol produced during the previous month, and the gallons of ethanol produced during the previous 12 months (12-month rolling sum).	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
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)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. The plan shall specify the minimum values for pressure drop and water flow rate for CE001 and CE002.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Shutdowns: Notify the Commissioner at least 24 hours in advance of a planned shutdown, or as soon as possible after an unplanned shutdown of any process or control equipment, if the shutdown would cause an increase in the emission of any regulated air pollutant. At the time of notification, notify the Commissioner of the cause of the shutdown and the estimated duration. Notify the Commissioner again when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdowns: Notify the Commissioner within 24 hours after a breakdown of more than one hour duration of any process or control equipment if the breakdown causes an increase in the emission of any regulated air pollutant. At the time of notification or as soon thereafter as possible, the permittee shall also notify the Commissioner of the cause of the breakdown and the estimated duration. Notify the Commissioner again when the breakdown is over.	Minn. R. 7019.1000, subp. 2
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)
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
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.	Minn. R. 7007.0800, subp. 4(D)
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
Initial Notification of Deviations Endangering Human Health or the Environment: Immediately after discovery, notify orally or by facsimile the Commissioner or the state duty officer, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Written 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: cause of the deviation; exact dates of the period of the deviation; if the deviation has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Emissions Inventory Report: due 91 days after the end of each calendar year following Permit Issuance (April 1). To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3010
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 002

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
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)
Record keeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007. 1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007. 0800, subp. 5(B)
Record keeping: 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, all original recordings for continuous monitoring instrumentation, and 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)
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)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 002

**Subject Item:** GP 001 Scrubber Monitoring Requirements**Associated Items:** CE 001 Gas Scrubber (General, Not Classified)

CE 002 Packed-Gas Adsorption Column

What to do	Why to do it
Record the pressure drop and water flow rate of each scrubber once each day of operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Corrective Action: if the pressure drop and/or water flow rate are not equal or greater than the minimum values specified in the Operation and Maintenance Plan, the Permittee shall take corrective action as soon as possible to achieve the required operating values. The Permittee shall keep a record of the type and date of all corrective actions taken.	Title I Condition: Corrective action to avoid major source classification under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 14
Inspect quarterly, or as required by manufacturing specifications, all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and subp. 14
Inspect monthly, or as required by manufacturing specifications, all components that are subject to wear or plugging. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and subp. 14
Calibrate the gauges annually, or as often as required by manufacturing specifications and maintain a written record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subp. 2 and subp. 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 002

**Subject Item:** GP 002 Tanks subject to NSPS subp. Kb**Associated Items:** TK 004 Ethanol

TK 005 Ethanol

TK 006 No. 6 Fuel Oil

TK 007 No. 6 Fuel Oil

What to do	Why to do it
Recordkeeping: Maintain records showing the dimensions of each tank and an analysis showing each tank's capacity.	40 CFR Section 60.116b(b); Minn. R. 7011.1520(C)



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 002

**Subject Item:** GP 003 Boiler 1 & 2 Gas Usage**Associated Items:** EU 001 Boiler No. 1

EU 002 Boiler No. 2

What to do	Why to do it
Fuel Usage: less than or equal to 751 million cubic feet/year using 12-month Rolling Sum of natural gas combusted by the boilers in GP 003.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Recordkeeping: By the 15th day of each month, calculate and record the natural gas combusted in Boilers 1 and 2 (EU 001 and EU 002) during the previous month and during the previous 12 months (12-month rolling sum). Records shall be based on the actual amount of fuel combusted, as measured using an in-line flow meter.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 002

**Subject Item:** GP 004 Residual Oil Usage**Associated Items:** EU 001 Boiler No. 1

EU 002 Boiler No. 2

EU 003 Boiler No. 3

What to do	Why to do it
A. OPERATING LIMITS	hdr
Fuel Usage: less than or equal to 1845000 gallons/year using 12-month Rolling Sum of residual fuel oil combusted by the boilers in GP 004.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Sulfur Content of Fuel: less than or equal to 1.5 percent by weight	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
B. RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping: By the 15th day of each month, calculate and record the residual fuel oil use for the previous month and for the previous 12 months (12-month rolling sum). Records shall be based on the actual amount of fuel combusted, as measured using an in-line flow meter.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Recordkeeping: Maintain residual oil vendor certifications of the sulfur content (percent by weight) for all residual fuel oil combusted by the boilers in GP 004.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose  
Permit Number: 14500003 - 002

**Subject Item:** GP 005 Other Fuel Usage  
**Associated Items:** EU 025 Office Space Heater  
EU 026 Control Room Space Heater  
EU 027 Separator Room Heater  
EU 028 Lab Heater  
EU 029 Waste Treatment Heater  
EU 030 Waste Treatment Heater  
EU 031 Waste Treatment Furnace  
EU 032 Waste Treatment Furnace  
EU 033 Emergency Generator

What to do	Why to do it
Fuel burned: Natural gas only.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 002

**Subject Item:** SV 003 Automatic cheese salter**Associated Items:** EU 004 Automatic Cheese Salter

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 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 opacity	Minn. R. 7011.0715, subp. 1(B)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 002

**Subject Item: SV 004 Fermentation scrubber**

**Associated Items:** EU 005 Fermentor No. 1  
 EU 006 Fermentor No. 2  
 EU 007 Fermentor No. 3  
 EU 008 Fermentor No. 4  
 EU 009 Fermentor No. 5  
 EU 010 Fermentor No. 6  
 EU 011 Pre-Fermentor  
 EU 012 Pre-Fermentor  
 EU 013 Yeast Tank  
 EU 014 Regeneration Vent  
 EU 015 Reflux Vents  
 EU 016 Reflux Vents  
 EU 017 Fermentor No. 7

What to do	Why to do it
<b>A. EMISSION LIMITS</b>	hdr
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Volatile Organic Compounds: less than or equal to 6.75 lbs/hour	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
<b>B. POLLUTION CONTROL REQUIREMENTS</b>	hdr
Volatile Organic Compounds: greater than or equal to 75 percent collection efficiency (See GP 001 for CE 002 monitoring and maintenance requirements).	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Each emission unit shall be controlled by the scrubber (CE 002) while in production operation ("on-line"). Equipment may only be "offline" while not in production operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
<b>C. TESTING REQUIREMENTS</b>	hdr
Performance Test: due before 09/29/2002 and every three years thereafter to measure emissions of volatile organic compounds.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before the Performance Test.	Minn. R. 7017.2030, subp. 4
Performance Test Notification (written): due 30 days before the Performance Test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before Performance Test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Report: due 45 days after the Performance Test.	Minn. R. 7017.2035, subp. 1
Performance Test Report - Microfiche Copy: due 105 days after Performance Test.	Minn. R. 7017.2035, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 002

**Subject Item:** SV 006 Emergency generator**Associated Items:** EU 033 Emergency Generator

What to do	Why to do it
Opacity: less than or equal to 20 percent opacity once operating temperature has been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input	Minn. R. 7011.2300, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 002

**Subject Item:** EU 001 Boiler No. 1**Associated Items:** GP 003 Boiler 1 & 2 Gas Usage

GP 004 Residual Oil Usage

SV 001 Boilers 1 and 2

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 opacity except as allowed in Minn. R. 7011.0510, subp. 2.	Minn. R. 7011.0510, subp. 2
Fuels Permitted: Natural gas or residual fuel oil only. (See GP 003 for additional limits on natural gas usage, and GP 004 for additional limits on fuel oil usage.)	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 002

**Subject Item:** EU 002 Boiler No. 2**Associated Items:** GP 003 Boiler 1 & 2 Gas Usage

GP 004 Residual Oil Usage

SV 001 Boilers 1 and 2

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 opacity except as allowed in Minn. R. 7011.0510, subp. 2.	Minn. R. 7011.0510, subp. 2
Fuels Permitted: Natural gas or residual fuel oil only. (See GP 003 for additional limits on natural gas usage, and GP 004 for additional limits on fuel oil usage.)	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 002

**Subject Item:** EU 003 Boiler No. 3**Associated Items:** GP 004 Residual Oil Usage

SV 002 Boiler 3

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 percent opacity except as allowed by Minn. R. 7011.0515, subp. 2.	Minn. R. 7011.0515, subp. 2
Fuels Permitted: Natural gas or residual fuel oil only. (See GP 004 for additional limits on fuel oil usage.)	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
Fuel Usage: less than or equal to 475 million cubic feet/year using 12-month Rolling Sum of natural gas for EU 003.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21
Recordkeeping: By the 15th day of each month, calculate and record the natural gas combusted in the boiler (EU 003) during the previous month and during the previous 12 months (12-month rolling sum). Records shall be based on the actual amount of fuel combusted, as measured using an in-line flow meter.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 002

**Subject Item: FS 002 Truck traffic**

What to do	Why to do it
Fugitive Emissions: Do not cause or permit the transporting of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Do not cause or permit a road or a driveway to be constructed, used, repaired, or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming airborne.	Minn. R. 7011.0150

## TABLE B: SUBMITTALS

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 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**

11/30/00

Facility Name: Kraft Foods Inc - Melrose  
Permit Number: 14500003 - 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

**TABLE B: RECURRENT SUBMITTALS**

11/30/00

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003 - 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 07/28/1998. 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. If no deviations have occurred, a report shall be submitted stating no deviations.	Total Facility
Compliance Certification	due 30 days after end of each calendar year following Permit Issuance (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.	Total Facility

APPENDIX MATERIAL

Facility Name: Kraft Foods Inc - Melrose

Permit Number: 14500003-002

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**AIR EMISSION PERMIT NO. 14500003-002**

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

**1. General Information**

**1.1 Applicant and Stationary Source Location:**

Owner/Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 2022-primary, 2869-secondary)
Kraft Foods, Inc. 1000 E Kraft Dr Melrose, MN 56352 Contact: Larry O'Donnell Phone: (320) 256-7461	1000 E Kraft Dr Melrose Stearns County

**1.2 Description of the Facility:**

Kraft Foods operates a cheese manufacturing plant and ethanol production facility in Melrose, Minnesota. The primary capability of the plant consists of the manufacture of natural cheeses, including parmesan, romano, and cheddar. A portion of the by-products from the cheese-making process are transferred to the adjoining alcohol plant, where they are fermented and used for the distillation of ethyl alcohol, which is sold as a motor vehicle fuel additive. The facility operates 24 hours per day, 365 days per year.

The portion of the facility that produces ethanol is subject to federal Prevention of Significant Deterioration (PSD) regulations when potential emissions reach 100 tons per year of any criteria pollutant. The capacity of the ethanol production facility is such that potential emissions of all criteria pollutants produced by the production of ethanol are less than 100 tons per year.

The facility as a whole (ethanol production plus cheese production) is subject to PSD when potential emissions reach 250 tons per year of any criteria pollutant. The permit contains conditions such that potential emissions of all criteria pollutants are less than 250 tons per year.

Since the potential emissions of the facility as a whole exceed 100 tons per year, the facility is subject to Part 70 permitting requirements.

### 1.3 Description of the Activities Allowed by This Permit Action:

The permit action authorizes a reduction of the required VOC collection efficiency for the fermentation scrubber (CE 002) as listed under SV 004 (fermentation scrubber stack) from 98% to 75%. The requirement to conduct computer dispersion modeling for sulfur dioxide and nitrogen oxides emissions from the facility is also being removed from the permit.

As an administrative-type change, a 36-month testing frequency is established for SV 004 based on the margin of compliance recorded in the September 29, 1999, performance test.

This permit action does not allow any new construction or any increase in allowable emission rates.

### 1.4 Facility Emissions:

This permit action does not allow for an increase in permitted emissions. The total facility potential to emit is shown below:

Table 1. Total Facility Potential to Emit Summary:

	PM tpy	PM10 Tpy	SO2 tpy	NOx tpy	CO Tpy	VOC tpy	Pb tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions	64.8	40.6	225.5	167.3	56.5	37.6	0.11	2.75	3.58

Table 2. Permit Action Classification

Classification	Major/Affected Source	*Synthetic Minor	*Minor
PSD		SO <sub>2</sub> , NO <sub>x</sub> , VOC	PM, PM <sub>10</sub> , CO, Pb
NAAR ( <b>Not applicable</b> )			
Part 70 Permit Program	SO <sub>2</sub> , NO <sub>x</sub>	VOC, PM <sub>10</sub>	CO, Pb, HAPs

\* Refers to potential emissions that are less than those specified as major by 40 CFR 52.21, 40 CFR pt. 51 Appendix S, and 40 CFR pt. 70.



## 2. Regulatory and/or Statutory Basis

Summary Regulatory and/or Statutory Basis of the Emission or operational Limit

### Regulatory Overview of Units Affected by the Modification

EU, GRP, or SV #	Applicable Regulations	Comments
Total Facility	Minn. R. 7009 and 40 CFR 50	The permit currently contains a requirement to submit computer dispersion modeling for nitrogen oxides and sulfur dioxide emissions from the facility. Based on Agency policy, this requirement is being removed from the permit.
CE 002 (SV 004)	Title I Condition: To avoid major source classification under 40 CFR Section 52.21	The current permit requires a VOC collection efficiency for CE 002 of 98%. This permit action reduces the required collection efficiency to 75%.

## 3. Technical Information

The current permit contains a 98% collection efficiency requirement for VOC emissions from the fermentation scrubber (SV 004) at the facility. The condition is a Title I Condition to avoid major source classification under 40 CFR Section 52.21. SV 004 also contains a VOC emission limit of 6.75 lb/hr.

A performance test was conducted on September 29, 1999, to measure the VOC emission rate and collection efficiency (the permit only requires a performance test to measure the VOC emission rate). The tests resulted in a VOC emission rate of 5.64 lb/hr and a VOC collection efficiency of 79%. The VOC emission rate is below the emission limit of 6.75 lb/hr, while the VOC collection efficiency is below the required collection efficiency of 98%.

Based upon the above test results, Kraft Foods submitted an application for a major amendment to reduce the required collection efficiency from 98% to 70%. However, calculations indicate that a collection efficiency of 75% is required to meet the VOC emission limit of 6.75 lb/hr. Calculations are shown below:

VOC emission limit = 6.75 lb/hr  
Tested VOC emission rate = 5.64 lb/hr  
Tested VOC collection efficiency = 79%  
Uncontrolled VOC emission rate =  $(5.64 \text{ lb/hr}) / (1 - 0.79) = 26.85 \text{ lb/hr}$   
Required VOC collection efficiency =  $1 - (6.75 / 26.85) = 74.9\% = \underline{75\%}$

#### **4. Conclusion**

Based on the information provided by Kraft Foods, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 14500003-002 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: Craig Thorstenson, Dave Crowell, Stuart Arkley

Attachment: None