

**AIR EMISSION PERMIT NO. 14500032- 002**

**IS ISSUED TO**

**ASSOCIATED MILK PRODUCERS, INC.**

Associated Milk Producers, Inc. - Paynesville  
200 Railroad Street  
Paynesville, Stearns County, Minnesota 56362

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

Permit Type	Application Date
Total Facility Operating Permit	July 26, 2001

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 Part 70/Synthetic Minor PSD/NSR

**Issue Date:** February 25, 2002

**Expiration:** February 25, 2007

All Title I Conditions do not expire.

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

for Karen A. Studders  
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:**

This Facility uses milk to produce cheese and condensed whey. The condensed whey is shipped to other AMPI facilities for drying. No drying occurs at this Facility. Three boilers are operated at the facility. The boilers are permitted to combust natural gas, distillate fuel oil, and residual fuel oil.

No physical changes are allowed by this Part 70 permit. This permit replaces an Option C Registration Permit issued in 1995. This permit authorizes a limited increase in sulfur dioxide emissions, compared to the registration permit it is replacing. Total facility emissions will remain below major source levels under 40 CFR § 52.21.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/25/02

Facility Name: Associated Milk Producers - Paynesville  
 Permit Number: 14500032 - 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
What to do	Why to do it
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
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
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
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
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
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)
Recordkeeping: 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)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/25/02

Facility Name: Associated Milk Producers - Paynesville

Permit Number: 14500032 - 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, 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)
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 enforceable by the EPA Administrator or citizens under the Clean Air Act.	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
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). The Report shall 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**

02/25/02

Facility Name: Associated Milk Producers - Paynesville

Permit Number: 14500032 - 002

**Subject Item: GP 001 Boilers (#1, #2, and #4)**

**Associated Items:** EU 001 Boiler #1

EU 002 Boiler #2

EU 003 Boiler #4

What to do	Why to do it
LIMITS AND OPERATING REQUIREMENTS	hdr
Sulfur Dioxide: less than or equal to 230 tons/year calculated on a 12-month rolling sum basis. This limit applies to the total SO2 emissions from all GP 001 boilers.	Title I Condition: To limit SO2 emissions to less than the major source level under 40 CFR Section 52.21
Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input for EU 001 and EU 002.	Minn. R. 7011.0545
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input for EU 003.	Minn. R. 7011.0550
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity for EU 001 and EU 002.	Minn. R. 7001.0510, subp. 2
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity for EU 003.	Minn. R. 7001.0515, subp. 2
Fuel types limited to pipeline natural gas and fuel oil.	Minn. R. 7007.0800, subp. 2
MONITORING AND RECORDKEEPING	hdr
GP 001 Fuel Usage: By the 15th day of each month, the Permittee shall calculate and record for the previous month, total GP 001 fuel oil usage in gallons per month, and natural gas usage in million cubic feet per month.	Title I Condition: To limit SO2 emissions to less than the major source level under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5
<p>Fuel Oil Sulfur Content Monitoring: The Permittee shall determine the sulfur content in percent by weight, of all fuel oil deliveries by one of the following two methods:</p> <p>Method 1: Fuel Oil Supplier Certification - The Permittee shall obtain and maintain a fuel oil supplier certification from the fuel supplier for each shipment of fuel oil. The certification shall specify the percent sulfur (by weight) in the fuel oil. In addition, if the Permittee uses Method 1, immediately prior to any fuel oil delivery, the Permittee shall measure and record the volume of fuel oil (in gallons) in the fuel oil storage tank.</p> <p>OR (continued below)</p>	<p>Title I Condition: To limit SO2 emissions to less than the major source level under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Fuel Oil Sulfur Content Monitoring (continued)</p> <p>Method 2: The Permittee may analyze the fuel oil in the following manner:</p> <p>a) The Permittee shall sample the fuel oil from the tank after each delivery but not more than once each calendar week when multiple deliveries are made in a calendar week. Sampling shall be conducted within 48 hours after each delivery, or within 48 hours after the last of multiple deliveries in a calendar week. Samples shall be collected from a location representative of the contents of the tank. Record the date and time of delivery, time of fuel sampling, initials of person recording the information, and the results of the fuel analysis.</p> <p>b) The Permittee shall analyze the oil sample to determine sulfur content of the fuel oil in percent by weight, in accordance with ASTM Method D-1552 or the current ASTM method.</p>	<p>Title I Condition: To limit SO2 emissions to less than the major source level under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Initial Determination of Sulfur Content Of Fuel Oil In Storage Tank: Prior to any fuel oil delivery and prior to combustion of any fuel oil after issuance of this permit, the Permittee shall sample and analyze the fuel oil in the fuel oil storage tank, in order to determine the percent sulfur by weight of the oil. Sampling and analysis shall follow the requirements of Method 2 above. The Permittee shall keep a record of the analysis.</p>	<p>Title I Condition: To limit SO2 emissions to less than the major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/25/02

Facility Name: Associated Milk Producers - Paynesville

Permit Number: 14500032 - 002

<p>Determination Of Sulfur Content Of Fuel Oil In Storage Tank: Immediately after any fuel oil delivery, the Permittee shall determine and record the sulfur content of the fuel, in percent by weight, in the fuel oil storage tank by either:</p> <ol style="list-style-type: none"> <li>1. Method 2 described above; or</li> <li>2. Calculating the prorated sulfur content based on known sulfur content and fuel volume in the tank prior to delivery, and percent sulfur content and volume of the fuel delivery. The calculation shall be made using the equation below:</li> </ol> $So = [(Ve * Se) + (Vd * Sd)]/Vt$ <p>where:</p> <p>So = prorated sulfur content after fuel delivery (% by wt)  Ve = volume of fuel oil in tank prior to delivery (gallons)  Se = sulfur content of fuel oil in tank prior to delivery (% by wt)  Vd = volume of delivery (gallons)  Sd = sulfur content of delivered fuel (% by wt) determined using Method 1 above  Vt = total fuel volume in tank after delivery, Vt = Ve + Vd (gallons)</p>	<p>Title I Condition: To limit SO2 emissions to less than the major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5</p>
<p>GP 001 Monthly SO2 Emissions Calculations: By the 15th day of each month, calculate and record:</p> <p>SO2 emissions during the previous month (tons per month) using the following equation:</p> $[(So * 0.1576 * FO) + (0.63 * NG)]/2000 = \text{Total GP 001 SO2 emissions (tons/month)}$ <p>where:</p> <p>So = % sulfur by wt. in fuel oil, as determined under the "Determination Of Sulfur Content Of Fuel Oil In Storage Tank" except the sulfur content determined under "Initial Determination Of Sulfur Content of Fuel Oil in Storage Tank" shall be used after permit issuance and up to the first fuel oil delivery after permit issuance  FO = GP 001 fuel oil usage (gallons/month)  NG = GP 001 natural gas usage (million cubic feet/month)</p>	<p>Title I Condition: To limit SO2 emissions to less than the major source level under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5</p>
<p>GP 001 12-month Rolling Sum SO2 Emissions Calculations:</p> <p>By the 15th day of each month, calculate and record the SO2 emissions for the previous 12-month period by summing the monthly Total GP 001 SO2 emissions for the previous 12 months. During the first 11 months after permit issuance, the Permittee shall use actual monthly SO2 emissions data for months prior to permit issuance, to calculate the 12-month sum.</p>	<p>Title I Condition: To limit SO2 emissions to less than the major source level under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5</p>

**TABLE B: SUBMITTALS**

02/25/02

Facility Name: Associated Milk Producers - Paynesville  
Permit Number: 14500032 - 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**

02/25/02

Facility Name: Associated Milk Producers - Paynesville

Permit Number: 14500032 - 002

<b>What to send</b>	<b>When to send</b>	<b>Portion of Facility Affected</b>
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Computer Dispersion Modeling Information	due 1,096 days after Permit Issuance. Submit modeling data as specified in MPCA guidance for Modeling Information Requests for sulfur dioxide. 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

**TABLE B: RECURRENT SUBMITTALS**

02/25/02

Facility Name: Associated Milk Producers - Paynesville

Permit Number: 14500032 - 002

<b>What to send</b>	<b>When to send</b>	<b>Portion of Facility Affected</b>
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. 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, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). The Certification shall be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**DRAFT AIR EMISSION PERMIT NO. 14500032-002**

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.

1.1. Applicant and Stationary Source Location:

Owner Address and Phone Number	Facility Address (SIC Code: 2022)
Associated Milk Producers, Inc. 315 North Broadway New Ulm, Minnesota 56073	200 Railroad Street Paynesville Stearns County (320) 243-3794

1.2. Description of the facility

This Facility uses milk to produce cheese and condensed whey. The condensed whey is shipped to other AMPI facilities for drying. No drying occurs at this Facility. Three boilers are operated at the facility. The boilers are permitted to combust natural gas, distillate fuel oil, and residual fuel oil.

1.3 Description of any changes allowed with this permit issuance

No physical changes are allowed by this (part 70) permit. This permit replaces an Option C Registration Permit issued to the Facility in 1995. This permit authorizes a limited increase in sulfur dioxide emissions, compared to the registration permit it is replacing. Total facility emissions will remain below major source levels under 40 CFR § 52.21

1.4. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary:

	PM tpy	PM <sub>10</sub> tpy	SO <sub>2</sub> tpy	NO <sub>x</sub> tpy	CO tpy	VOC tpy	Pb tpy	All HAPs tpy
Total Facility Limited Potential Emissions	16.64	14.46	230	52.16	19.13	1.25	0.0031	NR
Total Facility Actual Emissions*	0.63	0.63	0.11	8.25	6.91	0.45	0	NR

\*2000 Emissions Inventory data

Table 2. Facility and Permit Classification

Permit Action Number: No. 14500032-002

Date: 12/8/2003

Classification	Major/Affected Source	*Synthetic Minor	*Minor
PSD		SO <sub>2</sub>	PM, PM <sub>10</sub> , NO <sub>x</sub> , CO, VOC
NAAR	NA	NA	NA
Part 70 Permit Program	SO <sub>2</sub>		PM <sub>10</sub> , CO, VOC, NO <sub>x</sub> , 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 Facility

GP #	Applicable Regulations	Comments:
GP 001	Title I Conditions: 40 CFR § 52.21  Minn. R. 7007.0510 Minn. R. 7011.0515	SO <sub>2</sub> emission limit and associated monitoring and recordkeeping to avoid major source status under § 52.21  Standards of Performance for Existing/New Indirect Heating Equipment – PM and opacity limits

## 3. Technical Information

Environmental Review: No environmental review is required because there is no construction occurring at this Facility.

Part 70 Permit Program/New Source Review: This is an existing source with an option C registration permit, that is being replaced by this proposed draft part 70 permit. The part 70 permit limits SO<sub>2</sub> emissions to less than the major source level under § 52.21. Requirements to determine sulfur content of fuel oil and to calculate monthly and 12-month SO<sub>2</sub> emissions are included.

The Permittee has only one 15,000 gallon fuel oil storage tank and is permitted to burn any type of fuel oil (residual and distillate fuel oil). The Permittee requested simplification of the SO<sub>2</sub> emissions calculation formula by not having separate equation variables for residual fuel oil and distillate fuel oil. To accommodate this, the value of the fuel oil density used in the equation is the same as that for residual oil, which is worst case for SO<sub>2</sub> emission calculation (AP-42 indicates residual fuel oil density is 7.88 lb/gal whereas distillate fuel oil density is 7.05 lb/gal; therefore for a given % sulfur value, calculated SO<sub>2</sub> emissions will be higher for residual oil than for distillate oil).

Permit Action Number: No. 14500032-002

Date: 12/8/2003

New Source Performance Standards: Boiler 4 was manufactured in 1984, and operated at another location before being moved to and installed at the Facility in 1997. Therefore it is not an affected facility under 40 CFR part 60 subp. Dc.

Minnesota Standards of Performance: The indirect heating equipment rules apply to these boilers.

Changes Made During Public Notice: On December 21, 2001, the Permittee inquired about installing a 600 kW diesel generator (for peak shaving), and perhaps adding it to the draft permit. The permit writer (M. Cole) explained that it couldn't be added to this draft permit, but recommended that the SO<sub>2</sub> limit of 240 tpy in this draft permit be reduced to 230 tpy, and that the permittee submit an application for a moderate amendment. The PTE for the generator at 8760 hr/yr is about 90 tpy NO<sub>x</sub> (based on AP-42 factor of 3.2 lb/mmBtu) and 14 tpy SO<sub>2</sub> (based on MR 7011.2300). The entire facility would remain non-major under NSR. Note that reduction of limited SO<sub>2</sub> PTE changed the limited PTE for PM, PM<sub>10</sub>, NO<sub>x</sub>, and Lead as well. The PTE table in this technical support document reflects the limited PTE of these pollutants based on the limited SO<sub>2</sub> PTE of 230 tpy.

No comments were received from EPA and no changes were made during the EPA 45-day review period.

#### **4. Conclusion**

Based on the information provided by the Associated Milk Producers, Inc., the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 14500032-002 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 M. Cole, Cary Hernandez

Attachment: Emission Calculations, Limited Worst Case Calculations, SO<sub>2</sub> equation derivation