AIR EMISSION PERMIT NO. 09900002-006

IS ISSUED TO

Hormel Foods Corporation
Quality Pork Processors (QPP)
Hormel Foods Corporation - Austin
500 14th Avenue Northeast
Austin, Mower County, MN 55912

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	Issuance Date	Action Number
Total Facility Operating Permit	01/01/1995	08/05/1999	001
Minor Amendment	07/1999	10/14/1999	002
Moderate Amendment	02/2000	05/08/2000	003
Major Amendment	03/2001	02/12/2002	004
Administrative Amendment	07/10/02	08/20/2002	005
Minor Amendment	10/03/02	See below	006
Major Amendment	11/01/2002		

This permit authorizes the permittee to operate and construct 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: 07/24/2003
Expiration: 08/05/2004
All Title I Conditions do not expire.

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

for Sheryl A. 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 Hormel Facility comprises a meat processing and byproducts plant. At the plant, Quality Pork Processors (QPP) slaughters hogs, and Hormel processes hogs and produces ham, bacon, and other meat products. Byproducts comprise blood, cracklings, wet bone meal, and choice white grease.

Emissions from four gas/oil/refined animal fat-fired boilers and one gas-fired boiler (that is also permitted to combust residual oil and refined animal fat) are discharged into the atmosphere from one stack. Additionally, emissions from two natural gas/refined animal fat-fired boilers are discharged to the atmosphere through separate stacks. Emissions from five process ovens that use natural smoke and seven process ovens utilizing "liquid smoke" discharge without emission control. Emissions from four precooked bacon units and a bacon bits line are treated in demisters before discharge. Room air is vented to the atmosphere from the pre-cooked bacon area by the pre-cooked bacon oven room vent. A Fulton Heater preheats a heat transfer medium

for the Koppens Grill. Emissions from the Fulton Heater are discharged to the atmosphere. Emissions from the Koppens Grill are treated in a demister before being discharged.

A natural gas standby emergency generator is vented to the atmosphere. The emissions from a series of rendering process units are directly treated in the rendering process scrubber before discharge. Rendering process emissions not collected by the rendering process scrubber from this rendering area are treated in the rendering room air scrubber before discharge. Emissions from an existing Scott bone meal dryer and a new Duske blood dryer are vented to a venturi/packed tower scrubber, and then into the blood/bone room air scrubber.

There are also three No. 6 fuel oil storage tanks, and within the hog kill and cut area there are two hog singers that vent to the atmosphere.

Minor Amendment (Action 002): This minor permit amendment authorized the addition of boilers # 6 and #7.

Moderate Amendment (Action 003): This amendment authorized Hormel to modify an existing bacon bits cook line. Capacity of the bacon line went from 1,876 pounds per hour of bacon to 7000 pounds per hour.

Major Amendment (Action 004): This permit amendment authorized the permittee to modify the seven existing boilers to facilitate combustion of refined animal fats (RAF). Five of the boilers were previously permitted to combust No. 6 fuel oil, used oil, and natural gas. The remaining two boilers were permitted for only natural gas combustion. Due to the emission characteristics of RAF, a NO_x limit was applied to the entire group of boilers to maintain the facility's classification as a nonmajor source under the Prevention of Significant Deterioration (PSD) portion of New Source Review (NSR). Likewise, the existing SO_2 limit, that applied only to the five boilers previously capable of combusting fuels other than natural gas, now applies to the entire group of seven boilers.

Administrative Amendment (Action 005): This action granted a 120-day extension for the submittal of dispersion modeling information.

Major Amendment (Action 006): This permitting action is a combination of major amendment and minor amendment permit applications.

This permitting action authorizes the installation of a new Duske blood dryer as applied for in the minor amendment application. The Company operates an existing Scott blood/bone meal dryer, that will be used only for bone meal drying after the new Duske blood dryer is installed. The new Duske blood dryer will be fueled with natural gas and emissions will be controlled by the existing blood/bone meal dryer venturi and packed tower scrubber and blood/bone room room-air packed tower scrubber.

This action also authorizes installation of one or more temporary or permanent emergency reciprocating internal combustion engines with a combined total horsepower not to exceed 599

horsepower (hp), with no single unit greater than 500 hp. These engines can be fueled by gasoline, natural gas, butane, propane, naptha/kerosene, or diesel fuel.

In addition, all boiler requirements from GP 001, GP 008, and GP 009 were consolidated into GP 001, and GP 008 and GP 009 were retired. Also, the GP 001 SO_2 12-month limit was reduced from 247 tons per year to 235 tons per year, and the 12-month NOx limit was reduced from 200 tons per year to 180 tons per year. This was done in order to provide an adequate buffer below the 250 ton per year major source definition in 40 CFR § 52.21.

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/24/03

Facility Name: Hormel Foods Corp - Austin

Permit Number: 09900002 - 006

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
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
Emission limits and emission factors determined as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7007.0800, subp. 2 and Minn. R. 7017.2025
Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	Minn. R. 7017.2030, subp. 1-4, Minn. R. 7017.2035, subp. 1-2, and Minn. R. 7017.2018
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)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment, and the records kept to demonstrate plan implementation.	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
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

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Hormel Foods Corp - Austin

Permit Number: 09900002 - 006

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
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)
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)
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 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
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)
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

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Facility Name: Hormel Foods Corp - Austin

Permit Number: 09900002 - 006

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

07/24/03

Facility Name: Hormel Foods Corp - Austin

Permit Number: 09900002 - 006

Subject Item: **GP 001 Boilers (49, 49, 49, 25 & 7.14 MMBtu/hr)**

Associated Items: EU 001 Gas/Oil Fired Boiler

EU 002 Gas/Oil Fired Boiler

EU 003 Gas/Oil Fired Boiler

EU 004 Gas/Oil Fired Boiler

EU 005 Gas/Oil Fired Boiler

SV 001 Boiler Stack

What to do	Why to do it
EMISSION LIMITS	hdr
GP 001 is composed of EU 001, EU 002, EU 003, EU 004, EU 005, EU 044, and EU 045 (boilers 1 - 7). However, the 180 ton per year NOx limit in GP 001 applies to GP 001 and EU 051, and GP 001 NOx emission calculations include EU 051 NOx emissions. For additional requirements applicable to EU 051, refer to Subject Item EU 051.	hdr
Nitrogen Oxides: less than or equal to 180 tons/year using 12-month Rolling Sum total for GP 001 and EU 051.	Title I Condition: To limit potential NOx emissions to less than major source levels defined by 40 CFR Section 52.21
Sulfur Dioxide: less than or equal to 235 tons/year using 12-month Rolling Sum total for GP 001 combustion of fuel oil, waste oil, and refined animal fats.	Title I Condition: To limit potential SO2 emissions to less than major source levels defined by 40 CFR Section 52.21
Sulfur Dioxide: less than or equal to 2.0 lbs/million Btu heat input when combusting residual fuel oil (applies individually to EU 001 through EU 005).	Minn. R. 7011.0515, subp. 1
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input (applies individually to EU 001 through EU 005).	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity (applies individually to EU 001 through EU 005).	Minn. R. 7011.0515, subp. 2
OPERATING LIMITS	hdr
Fuel Allowed - EU 001 through EU 005: Limited to natural gas, No. 6 fuel oil, used oil, and refined animal fats (RAF). Fuels Allowed - EU 044 and EU 045: Limited to natural gas and RAF.	Minn. R. 7007.0800, subp. 2
The used oil combusted in EU 001 through EU 005 shall be used oil which is defined as any oil which has been used and as a result of such use has become contaminated by physical or chemical impurities. The used oil shall not contain any hazardous waste listed in Minn. R. 7045.0135. The used oil must be on-specification and meet the following restrictions: 1) Total Arsenic not to exceed 5 ppm 2) Total Cadmium not to exceed 2 ppm 3) Total Chromium not to exceed 10 ppm 4) Total Lead not to exceed 100 ppm 5) Flash point not less than 100 degrees F 6) Total Halogens not to exceed 1,000 ppm The Permittee must obtain and keep on-site for at least five years a laboratory analysis demonstrating that the used oil is on-specification. Laboratory analyses shall also indicate the used oil sulfur content in percent by weight.	Minn. R. 7007.0800, subp. 2
Fuel Usage: less than or equal to 15000 gallons/year using 12-month Rolling Sum of used oil as a total in EU 001 through EU 005.	Minn. R. 7007.0800, subp. 2
Limit boiler operation to a level at or below that of the most recent particulate matter performance test that measured emissions at or below the applicable particulate matter emission limit.	Minn. R. 7017.2025
MONITORING	hdr
Determination of Sulfur Content of Fuel Oil In Storage Tanks: Immediately after any fuel oil delivery, the Permittee shall determine and record the sulfur content of the fuel oil, in percent by weight, in the fuel oil storage tanks using either Method 1 or Method 2:	Minn. R. 7007.0800, subp. 4 and 5

Method 1: Using fuel supplier certification, calculate the fuel oil sulfur content as follows: Obtain and maintain a fuel supplier certification for each delivery of fuel oil that specifies actual sulfur content in percent by weight of the delivered fuel oil. Calculate and record the sulfur content after each fuel oil delivery, based on the known sulfur content and fuel volume in the tanks prior to delivery, and the percent sulfur content and volume of the fuel delivery, as follows: So = [(Ve * Se) + (Vd * Sd)]/Vt where: So = sulfur content of fuel oil after delivery (% by wt) Ve = total fuel oil volume in tanks before delivery (gallons) Se = sulfur content of oil in tanks before delivery (% by wt) Vd = volume of delivery (gallons) Sd = sulfur content (% by wt) of delivered fuel oil based on supplier certification Vt = total fuel volume in tanks after delivery, Vt = Ve + Vd (gallons) OR	Minn. R. 7007.0800, subp. 4 and 5
Method 2: Sample and anaylze the fuel oil in the common header for the three storage tanks that supplies fuel oil to EU 001 - EU 005. Sample and analyze after each delivery but not more than once each calendar week when multiple deliveries are made in a calendar week. Sample within 48 hours after any delivery or within 48 hours after the last of multiple deliveries in a calendar week. Record the date and time of each delivery and sampling, initals of person recording the information, and results of the fuel oil sulfur content analysis in percent by weight. Analyze the sample to determine sulfur content in percent by weight according to ASTM D-1552 or current ASTM method.	Minn. R. 7007.0800, subp. 4 and 5
RECORDKEEPING	hdr
Seperately record and maintain records of the quantity of natural gas combusted by EU 044 and the quantity of natural gas combusted by EU 045, on a monthly basis.	40 CFR Section 60.48c(g)
Recordkeeping - Fuel Usage: Once each day calculate and record the GP 001 usage of fuel oil (gallons), used oil (gallons), and natural gas (cubic feet), the RAF usage in EU 001 through EU 005 (gallons), and the RAF usage in EU 044 and 045 (gallons), during the previous calendar day. By the 15th day of each month, calculate and record the GP 001 usage of fuel oil (gallons), used oil (gallons), and natural gas (cubic feet), the RAF usage in EU 001 through EU 005 (gallons), and the RAF usage in EU 044 and 045 (gallons), during the previous calendar month.	Title I Condition: To limit potential SO2 and NOx emissions to less than major source levels defined by 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5
Sulfur Dioxide Emissions Monitoring: By the 15th day of each month the Permittee shall: 1) Calculate the number of tons of SO2 emitted during the previous calendar month from the combustion of fuel oil, used oil, and RAF, using the following equation: SO2 = (0.157AX + 0.157BY + 0.157CZ)/2000 where:	Minn. R. 7007.0800, subp. 4 and 5
SO2 = GP 001 sulfur dioxide emitted during the previous month (tons) A = GP 001 gallons of fuel oil burned during the previous month B = GP 001 gallons of used oil burned during the previous month C = GP 001 gallons of refined animal fat burned during the previous month X = weight percent of sulfur in fuel oil burned the previous month as determined by Method 1 or 2 described above Y = weight percent of sulfur in used oil burned the previous month Z = weight percent of sulfur in RAF burned the previous month 2) Calculate the 12-month rolling sum GP 001 SO2 emissions by summing the monthly SO2 emissions determined with the above equation, for the previous 12 months.	Minn. R. 7007.0800, subp. 4 and 5
Nitrogen Oxides Emissions Monitoring: By the 15th day of each month the Permittee shall: 1) Calculate the number of tons of NOx emitted from GP 001 and EU 051 during the previous calendar month using the following equation: NOx = (0.055A + X1B1 + X2B2 + 0.0001C + EU 051 NOx)/2000 where:	Minn. R. 7007.0800, subp. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Hormel Foods Corp - Austin

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NOx = the amount of nitrogen oxides emitted during the previous month (tons) A = GP 001 gallons of fuel oil and used oil burned during the previous month B1 = GP 001 gallons of RAF burned during the previous month in EU 001 - 005 B2 = GP 001 gallons of RAF burned during the previous month in EU 044 & 045 X1 = NOx emission factor in lb of NOx/gallon of RAF from most recent test while combusting RAF in EU 001 - 005 X2 = NOx emission factor in lb of NOx/gallon of RAF from most recent test while combusting RAF in EU 044 & 045 (if RAF NOx emission testing data is not available, X1 and/or X2 shall be 0.0366 lb/gal) C = GP 001 cubic feet of natural gas combusted during the previous month EU 051 NOx = monthly NOx emissions (lbs) calculated according to requirements in subject item EU 051	Minn. R. 7007.0800, subp. 4 and 5
(continued from above) 2) Calculate the 12-month rolling sum GP 001 and EU 051 NOx emissions by summing the monthly NOx emissions determined with the above equation, for the previous 12 months.	Minn. R. 7007.0800, subp. 4 and 5
PERFORMANCE TESTING AND ANALYSIS	hdr
RAF Sulfur Content: Perform an analysis during each 12-month period following permit issuance to determine weight percent sulfur content in RAF. The first analysis shall be performed within 180 days of permit issuance.	Title I Condition: To limit potential SO2 emissions to less than major source levels defined by 40 CFR Section 52.21
Performance Test: due before end of each calendar 60 months starting 09/15/2002 to measure NOx emissions while combusting only RAF in either EU 001, EU 002, EU 003, EU 004, or EU 005. Testing is required only if a total of more than 500,000 gallons of RAF has been combusted in EU 001 through EU 005 during the 60-month period starting 09/15/2002.	Title I Condition: To limit potential NOx emissions to less than major source levels defined by 40 CFR Section 52.21
Performance Test: due 180 days after Initial Startup of RAF combustion in EU 044 and/or EU 045, to measure NOx emissions. Testing shall be conducted when combusting only RAF, and on either EU 044 or EU 045.	Title I Condition: To limit potential NOx emissions to less than major source levels defined by 40 CFR Section 52.21

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/24/03

Facility Name: Hormel Foods Corp - Austin

Permit Number: 09900002 - 006

Subject Item: **GP 003 Natural Smoke Process**

Associated Items: EU 006 Smoked Meat Oven #6 with recirculated wood smoke

EU 007 Smoked Meat Oven #7 with recirculated wood smoke

EU 008 Smoked Meat Oven #8 with recirculated wood smoke

EU 009 Smoked Meat Oven #9 with recirculated wood smoke

EU 010 Smoked Meat Oven #10 with recirculated wood smoke

EU 031 Natural Smoke Generator

EU 032 Natural Smoke Generator

SV 002 Natural Smoke Meat Oven (For EU006)

SV 003 Natural Smoke Meat Oven (Bypass for SV002)

SV 004 Natural Smoke Meat Oven (For EU007)

SV 005 Natural Smoke Meat Oven (Bypass for SV004)

SV 006 Natural Smoke Meat Oven (For EU008)

SV 007 Natural Smoke Meat Oven (Bypass for SV006)

SV 008 Natural Smoke Meat Oven (For EU009)

SV 009 Natural Smoke Meat Oven (Bypass for SV008)

SV 010 Natural Smoke Meat Oven (For EU0010)

SV 011 Natural Smoke Meat Oven (Bypass for SV010)

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than 0.30 grains/dry standard cubic foot unless required to reduce emissions to meet the less stringent limit of either 7011.0730 or 7011.0735 (table 1 and 2, respectively). This limit applies individually to each stack/vent.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent . This limit applies individually to each stack/vent.	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/24/03

Facility Name: Hormel Foods Corp - Austin

Permit Number: 09900002 - 006

Subject Item: **GP 005 Precook Bacon Process**

Associated Items: CE 006 Mist Eliminator - High Velocity, i.e., V>250 Ft/Min

CE 007 Mist Eliminator - High Velocity, i.e., V>250 Ft/Min

CE 011 Mist Eliminator - High Velocity, i.e., V>250 Ft/Min

EU 018 Precooked Bacon, South

EU 019 Precooked Bacon, North

EU 020 Precooked Bacon, East

EU 021 Precooked Bacon, West

EU 029 Bacon Bits Precooked Line

SV 019 Precooked Bakon Stack (For EU018 & EU019)

SV 020 Precooked Bakon Stack (For EU020 & EU021)

SV 028 Bacon Bits Line (For EU029)

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than 0.30 grains/dry standard cubic foot unless required to reduce emissions to meet the less stringent limit of either 7011.0730 or 7011.0735 (table 1 and 2, respectively). This limit applies individually to each stack/vent.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity . This limit applies individually to each stack/vent.	Minn. R. 7011.0715, subp. 1(B)
OPERATING REQUIREMENTS	hdr
Vent all emissions from GP 005 precooked process equipment through the corresponding mist eliminator (CE 006, CE 007, CE 010, or CE 011).	Minn. R. 7007.0800, subp. 2
CONTROL EQUIPMENT REQUIREMENTS	hdr
The Permittee shall operate and maintain each mist eliminator in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop and water flow rate for each mist eliminator, as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the mist eliminator is controlling emissions.	Minn. R. 7007.0800, subp. 4
CE 006, CE 007, CE 010, and CE 011 Pressure Differential: Not less than 0 inches wc and not more than 2 inches wc for each mist eliminator when controlling precooked process emissions.	Minn. R. 7007.0800, subp. 14
CE 006, CE 007, CE 010, and CE 011 Minimum Water Flow Rate: Not less than 1 gallon per minute, for each mist eliminator when controlling precooked process emissions.	Minn. R. 7007.0800, subp. 14
Daily Monitoring: Once each day of operation, the Permittee shall monitor and record the pressure differential and water flow rate for each mist eliminator that is controlling precooked process emissions.	Minn. R. 7007.0800, subp. 4 and 5
Periodic Inspections: Once per calendar quarter, or at a frequency prescribed by the manufacturer, the Permittee shall inspect the components of each mist eliminator. The Permittee shall maintain a written record of the results of each inspection.	Minn. R. 7007.0800, subp. 4, 5, and 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the pressure drop across any mist eliminator is outside the required operating range; - the water flow rate for any mist eliminator is less than the required minimum; or - any mist eliminator or any of its components are found during any inspection to need repair. Corrective actions shall return the pressure drop to within the permitted range, restore the water flow rate to at least the required minimum, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the mist eliminator. The Permittee shall keep a record of the type and date of any corrective action taken for any of the mist eliminators.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/24/03

Facility Name: Hormel Foods Corp - Austin

Permit Number: 09900002 - 006

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot unless required to reduce emissions to meet the less stringent limit of either 7011.0730 or 7011.735 (table 1 and 2, respectively.)	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)
OPERATING REQUIREMENTS	hdr
Vent emissions from both the blood and bone dryers through CE 018 (venturi scrubber/packed tower and room air packed tower scrubber, respectively) and then through SV 045.	Minn. R. 7007.0800, subp. 2
CE 018 CONTROL EQUIPMENT REQUIREMENTS	hdr
The Permittee shall operate and maintain CE 018 in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop and water flow rate for CE 018, as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when CE 018 is in operation.	Minn. R. 7007.0800, subp. 4
CE 018 Pressure Differential: not less than 5 inches wc.	Minn. R. 7007.0800, subp. 14
CE 018 Water Flow Rate: not less than 10 gallons per minute.	Minn. R. 7007.0800, subp. 14
CE 018 Daily Monitoring: Once each day of operation, the Permittee shall monitor and record the pressure differential and the water flow rate for CE 018.	Minn. R. 7007.0800, subp. 4 and 5
Periodic Inspections: Once per calendar quarter, or at a frequency prescribed by the manufacturer, the Permittee shall inspect the components of CE 018. The Permittee shall maintain a written record of the results of each inspection.	Minn. R. 7007.0800, subp. 4, 5, and 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the pressure drop is outside the required operating range; - the water flow rate is below the permitted minimum; or - the scrubber or any of its components are found during any inspection to need repair. Corrective actions shall return the pressure drop to within the permitted range, the water flow rate to at least the required minimum, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for CE 018. The Permittee shall keep a record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/24/03

Facility Name: Hormel Foods Corp - Austin

Permit Number: 09900002 - 006

Subject Item: **EU 022 Standby Generator**

Associated Items: SV 021 Standby Generator Stack

What to do	Why to do it
Opacity: less than or equal to 20 percent opacity once operating temperatures have 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
Hours of Operation: The Permittee shall maintain documentation on site that the unit is an emergency generator by design that qualifies under the U.S. EPA memorandum entitled "Calculating Potential to Emit (PTE) for Emergency Generators" dated September 6, 1995, limiting operation to 500 hours per year.	Minn. R. 7007.0800, subp. 4 & 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/24/03

Facility Name: Hormel Foods Corp - Austin

Permit Number: 09900002 - 006

Subject Item: **EU 027 Rendering Area**

Associated Items: CE 008 Room Air Scrubber

SV 026 Rendering Room Scrubber Stack

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 8.38 lbs/hour	Title I Condition: to limit PM emissions to less than major source levels as defined by 40 CFR 52.21; meets requirements of Minn. R. 7011.0715, subp. 1(A)
Particulate Matter < 10 micron: less than or equal to 8.38 lbs/hour	Title I Condition: to limit PM10 emissions to less than major source levels as defined by 40 CFR 52.21
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
OPERATING REQUIREMENTS	hdr
Vent all Rendering Room Air emissions through CE 008.	Minn. R. 7007.0800, subp. 2
CE 008 (TOWER A) CONTROL EQUIPMENT REQUIREMENTS	hdr
The Permittee shall operate and maintain CE 008 in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop and water flow rate for CE 008, as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when CE 008 is in operation.	Minn. R. 7007.0800, subp. 4
CE 008 Pressure Differential: Not less than 5 inches wc.	Minn. R. 7007.0800, subp. 14
CE 008 Water Flow Rate: Not less than 100 gallons per minute.	Minn. R. 7007.0800, subp. 14
CE 008 Daily Monitoring: Once each day of operation, the Permittee shall monitor and record the pressure differential and the water flow rate for CE 008.	Minn. R. 7007.0800, subp. 4 and 5
Periodic Inspections: Once per calendar quarter, or at a frequency prescribed by the manufacturer, the Permittee shall inspect the components of CE 008. The Permittee shall maintain a written record of the results of each inspection.	Minn. R. 7007.0800, subp. 4, 5, and 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the pressure drop is below the required minimum; - the water flow rate is below the permitted minimum; or - the scrubber or any of its components are found during any inspection to need repair. Corrective actions shall return the pressure drop to within the permitted range, the water flow rate to at least the required minimum, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for CE 008. The Permittee shall keep a record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/24/03

Facility Name: Hormel Foods Corp - Austin

Permit Number: 09900002 - 006

Subject Item: **EU 028 Rendering Machinery**

Associated Items: CE 009 Venturi Scrubber/pkd twr

SV 027 Rendering Process Scrubber Stack (For EU028)

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 7.34 lbs/hour for SV 027. This limit applies when EU 028 emissions are controlled by CE 009 and vented through SV 027 (rendering process equipment bypass stack). See EU 027 for applicable limit when EU 028 emissions are controlled by CE 009 & CE 008 and vented through SV 026 (main stack).	Title I Condition: To limit potential PM emissions to less than major source levels as defined by 40 CFR 52.21; meets requirements of Minn. R. 7011.0715, subp. 1(A)
Particulate Matter < 10 micron: less than or equal to 7.34 lbs/hour for SV 027. This limit applies when EU 028 emissions are controlled by CE 009 and vented through SV 027 (rendering process equipment bypass stack). See EU 027 for applicable limit when EU 028 emissions are controlled by CE 009 & CE 008 and vented through SV 026 (main stack).	Title I Condition: To limit potential PM10 emissions to less than major source levels as defined by 40 CFR 52.21
Opacity: less than or equal to 20 percent opacity for SV 027.	Minn. R. 7011.0715, subp. 1(B)
OPERATING REQUIREMENTS	hdr
Vent all emissions from Rendering Machinery through CE 009.	Minn. R. 7007.0800, subp. 2
CE 009 CONTROL EQUIPMENT REQUIREMENTS	hdr
The Permittee shall operate and maintain CE 009 in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop and water flow rate as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when CE 009 is in operation.	Minn. R. 7007.0800, subp. 4
CE 009 Pressure Differential: Not less than 5 inches wc for B Tower, not less than 5 inches wc for C Tower, and not less than 5 inches wc for the venturi scrubber.	Minn. R. 7007.0800, subp. 14
CE 009 Water Flow Rate: Not less than 20 gallons per minute for B Tower, not less than 30 gallons per minute for C Tower, and not less than 50 gallons per minute for the venturi scrubber.	Minn. R. 7007.0800, subp. 14
CE 009 Daily Monitoring: Once each day of operation, the Permittee shall monitor and record the pressure differential and water flow rate for the two packed towers and the venturi scrubber in CE 009.	Minn. R. 7007.0800, subp. 4 and 5
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer, the Permittee shall inspect the components of CE 009. The Permittee shall maintain a written record of the results of each inspection.	Minn. R. 7007.0800, subp. 4, 5, and 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the pressure drop of the venturi scrubber or any packed tower is below the required minimum; - the water flow rate of the venturi scrubber or any packed tower is below the permitted minimum; or - the venturi scrubber or the packed towers or any of their components are found during any inspection to need repair. Corrective actions shall return the pressure drop to within the permitted range, return the water flow rate to at least the permitted minimum, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the venturi scrubber and packed towers. The Permittee shall keep a record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

07/24/03

Facility Name: Hormel Foods Corp - Austin

Permit Number: 09900002 - 006

What to do	Why to do it
LIMITS AND OPERATING REQUIREMENTS	hdr
Operating Hours: less than or equal to 500 hours/year using 12-month Rolling Sum as a total for all emergency RICE.	Minn. R. 7007.0800, subp. 2 and September 6, 1995, U.S. EPA memorandum entitled "Calculating Potential to Emit for Emergency Generators"
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input	Minn. R. 7011.2300, subp. 2
Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Emergency Reciprocating Internal Combustion Engine (RICE) Operation: The Permittee is authorized to operate temporary or permanent emergency RICE at the facility, providing the total horsepower of all emergency RICE does not exceed 599 hp on a calendar-day basis, and any single engine does not exceed 500 hp.	Minn. R. 7007.0800, subp. 2
Permitted Fuels: gasoline, diesel fuel, natural gas, kerosene/naptha, butane, or propane.	Minn. R. 7007.0800, subp. 2
Operation of Emergency RICE(s): The EU 051 Emergency RICE(s) shall only operate under emergency situations. An emergency RICE is a reciprocating internal combustion engine which only operates when no other mechanical power source is available to meet life safety and temporary production requirements, and operates for necessary routine periodic equipment testing. Life safety and temporary production requirements do not occur during routine operation or production and are circumstances demanding power to avoid death, illness, injury, or damage to process equipment or product. An emergency RICE is a power source used to generate electricity, pump water or other liquids, or other application. Emergency RICE does not include RICE electric generators operated by an electric customer during periods of intentional electric service disruption by the electric service provider or a RICE used as a substitute for another power source that is undergoing scheduled maintenance.	Minn. R. 7007.0800, subp. 2
RECORDKEEPING	hdr
Recordkeeping: For each emergency RICE that is operated at the facility, the Permittee shall record the arrival and departure date of the engine. Once each day, the Permittee shall record in a log the serial number, model, manufacturer, horsepower rating and hours of operation of each emergency RICE that operated at the facility during the previous calendar day. If no emergency RICE were operated, the log shall indicate this. By the 15th day of each month, the Permittee shall calculate and record the total emergency RICE operating hours for the previous month, and the previous 12-month period.	Minn. R. 7007.0800, subp. 4 and 5
Diesel Fuel Supplier Certification: For each delivery of diesel fuel, the Permittee shall obtain a supplier certification that either states the actual sulfur content in percent by weight in the diesel fuel, or guarantees that the sulfur content does not exceed a prescribed maximum amount, in percent by weight.	Minn. R. 7007.0800, subp. 4 and 5
Recordkeeping - Fuel Usage: Once each day calculate and record the EU 051 usage of gasoline (gallons), diesel fuel (gallons), natural gas (cubic feet), kerosene/naptha (gallons), butane (gallons), or propane (gallons), during the previous calendar day. By the 15th day of each month, calculate and record the EU 051 usage of gasoline (gallons), diesel fuel (gallons), natural gas (cubic feet), kerosene/naptha (gallons), butane (gallons), or propane (gallons), during the previous calendar month. The Permittee shall convert and record the monthly fuel usage from a volume basis, to a heat input basis according to the procedure in the appendix.	Title I Condition: To limit potential NOx emissions to less than major source levels defined by 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5
Nitrogen Oxides Emissions Monitoring: By the 15th day of each month the Permittee shall: 1) Calculate and record the tons of NOx emitted from EU 051 during the previous calendar month using the following equation: NOx = (Fa * Ha) + (Fb * Hb) + (Fc * Hc) + (Fd * Hd) + (Fe * He) + (Ff * Hf) (continued)	Minn. R. 7007.0800, subp. 4 and 5

where: NOx = EU 051 pounds NOx/month Fa = diesel fuel emission factor Ha = diesel fuel heat input Fb = natural gas emission factor Hb = natural gas heat input Fc = gasoline emission factor Hc = gasoline heat input Fd = propane emission factor Hd = propane heat input Fe = kerosene/naptha emission factor He = kerosene/naptha heat input Ff = butane emission factor Hf = butane heat input All heat input are in units of mmBtu per month and determined according to the procedure in the appendix. Emission factors (lb/mmBtu) are listed in the appendix, or obtained from the current version of AP-42 or the current MPCA emission calculation form for internal combustion engines, if more current that the appendix.	Minn. R. 7007.0800, subp. 4 and 5

TABLE B: SUBMITTALS

07/24/03

Facility Name: Hormel Foods Corp - Austin

Permit Number: 09900002 - 006

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: RECURRENT SUBMITTALS

07/24/03

Facility Name: Hormel Foods Corp - Austin

Permit Number: 09900002 - 006

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 08/05/1999 . 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 08/05/1999 (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

APPENDIX MATERIAL
Facility Name:Hormel Foods Corporation - Austin
Permit Number: 09900002-006

EU 051 Nitrogen Oxides Emission Factors and Fuel Heat Contents

Fuel Type	NOx Emission Factor (lb/mmBtu)	Fuel Heat Content
Gasoline	1.63	0.13 mmBtu/gallon
Diesel Fuel	4.41	0.137 mmBtu/gallon
Natural Gas	4.08	0.0105 mmBtu/cubic foot
Kerosene/naptha	3.474	0.135 mmBtu/gallon
Propane	1.519	0.0915 mmBtu/gallon
Butane	1.355	0.1026 mmBtu/gallon

Conversion of Fuel Volume to Heat Input:

Fv * Fh = Fuel Heat Input (mmBtu/month)

Where:

Fv = volume of fuel used (gallons or cubic feet per month)
Fh = fuel heat content as listed above (mmBtu/gallon or mmBtu/cubuc foot)

TECHNICAL SUPPORT DOCUMENT
For
DRAFT AIR EMISSION PERMIT NO. 09900002-006

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:

Owner/Operator Address	Facility Address and Telephone Number (SIC Code: 3644)
Hormel Foods Corporation 1 Hormel Place Austin, Minnesota 55912	Hormel Foods Corporation 500 14th Avenue North East Austin, Minnesota 55912 (507) 437-5972

1.2. Description Of The Facility

The Hormel Foods Corporation (Hormel) facility is a meat processing plant. At the plant, Quality Pork Processors (QPP) slaughters hogs, and Hormel then processes the hogs and produces ham, bacon, dry sausage, fresh sausage, Spam™, and other meat products. Byproducts consist of blood, cracklings, bone meal, and choice white grease (CWG), a component of a broader category of substances known as Refined Animal Fats (RAF).

Emissions from four gas/oil/refined animal fat-fired boilers and one gas-fired boiler (that is also permitted to combust residual oil and refined animal fat) are discharged into the atmosphere from one stack. Additionally, emissions from two natural gas/refined animal fat-fired boilers are discharged to the atmosphere through separate stacks. Emissions from five process ovens that use natural smoke and seven process ovens utilizing "liquid smoke" discharge without emission control. Emissions from four precooked bacon units and a bacon bits line are treated in demisters before discharge. Room air is vented to the atmosphere from the pre-cooked bacon area by the pre-cooked bacon oven room vent. A Fulton Heater preheats a heat transfer medium for the Koppens Grill. Emissions from the Fulton Heater are discharged to the atmosphere. Emissions from the Koppens Grill are treated in a demister before being discharged.

A natural gas standby emergency generator is vented to the atmosphere. The emissions from a series of rendering process units are directly treated in the rendering process scrubber before discharge. Rendering process emissions not collected by the rendering process scrubber from this rendering area are treated in the rendering room air scrubber before discharge. Emissions from an existing Scott bone meal dryer (and a new Duske

blood dryer) are vented to a venturi/packed tower scrubber, and then into the blood/bone room air scrubber.

1.3a. Description of the Activities Allowed By This Permit Action

This permitting action is a combination of major amendment and minor amendment permit applications.

This permitting action authorizes the installation of the new Duske blood dryer as applied for in the minor amendment application. The Company operates an existing Scott blood/bone meal dryer, that will be used only for bone meal drying after the new dryer is installed. The new dryer will be fueled with natural gas and emissions will be controlled by an existing blood/bone meal dryer venturi scrubber and room air packed tower scrubber.

This action also authorizes installation of one or more temporary or permanent emergency reciprocating internal combustion engines with a combined total horsepower (hp) not to exceed 599 hp, and a single engine limit of 500 hp, as applied for in the major amendment application. These engines can be fueled by gasoline, natural gas, butane, propane, naptha/kerosene, or diesel fuel. The temporary/permanent engine(s) is EU 051.

1.3b. Description of the Revisions Made to this Permit by the Minnesota Pollution Control Agency (MPCA).

All boiler requirements from GP 001, GP 008, and GP 009 were consolidated into GP 001, and GP 008 and GP 009 were retired. Also, the GP 001 SO_2 12-month limit was reduced from 247 tons per year (tpy) to 235 tpy, and the 12-month NO_x limit was reduced from 200 tpy to 180 tpy (initially the permit writer reduced the NO_x limit to 195 tpy, but the Permittee requested to lower it to 180 tpy to allow for installation of possible future additional NO_x sources as insignificant activities, or according to the minor or moderate permit amendment requirements of chapter 7007). This was necessary to provide an adequate buffer for the total facility NOx and SO_2 emissions below the 250 tpy Prevention of Significant Deterioration (PSD) major source threshold.

GP 001 fuel oil sulfur determination requirements were revised to increase the accuracy of sulfur content data produced by the sulfur monitoring requirements.

Also, expanded updated requirements for scrubber operation, monitoring, and recordkeeping have been added to GP 005, GP 010, EU 027, and EU 028 based on current Control Equipment Requirements Guidance in Delta.

Finally, the computer dispersion modeling information requirement has been completed, so it was removed from the Total Facility subject item of the permit.

1.4. Facility Emissions:

Table 1. Emissions From the Modification

EU #	Emission Unit Description	PM tpy	PM_{10} tpy	SO_2 tpy	NOx tpy	CO tpy	VOC tpy
EU 050 (in GP 010)	New Blood Dryer	13.6	13.6	0.0092	1.53	1.3	13.7
EU 051	Emergency Reciprocating Engine(s)	0.33	0.33	0.31	4.64	65.7	3.23
Total		13.9	13.9	0.32	6.2	67.0	17.0

Table 2. Permitted Total Facility Emissions

	PM Tpy	PM_{10} tpy	SO_2 tpy	NOx tpy	CO tpy	VOC tpy	Pb tpy	All HAPs tpy
Total Facility Limited Potential Emissions	197.8	195.4	236.0	220.1	224.6	122.2	0.056	2.5
Total Facility Actual Emissions*	26.72	9.54	182.99	74.56	23.76	1.35	0.01	NR

* 2001 Emission Inventory data

Table 3. Total Facility Classification

Classification	Major/Affected Source	*Synthetic Minor	*Minor
PSD		SO_2, NOx, PM, PM_{10}	VOC, CO, Pb
Part 70 Permit Program	PM_{10}, SO_2, NOx, CO, VOC		HAP

* 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

Table 4. Regulatory Overview

*EU, GRP, or SV #	Applicable Regulations	**Comments
GP 001	Title I Conditions	Limits and recordkeeping for NOx and SO_2 to remain a nonmajor source under §52.21
EU 050 (in GP 010)	Minn. R. 7011.0715 Minn. R. 7007.0800	Particulate matter and opacity limits Control Equipment Requirements
EU 051	Title I Condition Minn. R. 7011.2300 Minn. R. 7007.0800	Recordkeeping for NOx emissions to remain a nonmajor source under §52.21 Opacity and SO_2 emissions limits. Fuel and Operating Restrictions

3. Technical Information

New Source Review: Total facility emissions are limited to less than the major source level under 40 CFR §52.21 through SO_2 and NOx limits in GP 001, and by the use of control equipment for Particulate Matter (PM)/Particulate Matter less than 10 (PM_{10}) emissions from various process lines. The modifications allowed by this permit action are not significant under 40 CFR §52.21. All other pollutants are either natural minor or limited indirectly by the NOx and/or SO_2 limits. Therefore, new source review does not apply to this permitting action.

In PER 006, all boiler requirements including the NOx and SO_2 limits were consolidated into GP 001, and GP 008 and GP 009 were removed. The GP 001 NOx and SO_2 limits were revised (lowered) to provide an appropriate buffer between the 250 tpy major source level and total facility limited NOx (220.1 tpy) and SO_2 (236.0 tpy). This is appropriate because all emissions are determined by calculation using emission factors or fuel sampling, and not determined by real time monitoring (i.e. CEMS). In addition, emissions from EU 051 are included in calculations of the actual monthly and 12-month rolling sum NOx emissions.

Total heat input of all fossil fuel-fired boilers is 238.336 mmBtu/hr (including office boiler which is an insignificant activity). Therefore, the facility is subject to the 250 tpy PSD major source cutoff. However, the total rated heat input from all direct and indirect heating equipment exceeds 250 mmBtu/hr therefore, the boilers that burn fuel oil are subject to a 2.0 lb/mmbtu SO_2 emission limit when burning fuel oil.

EU 051: The 500 hr/yr limit is not a title I condition because the September 1995 U.S. Environmental Protection Agency (EPA) memorandum prescribes 500 hr/yr as a reasonable annual operating level for use in calculating potential emissions for emergency engines. However, it is necessary to include this limit in the permit because EU 051 may actually be

multiple engines and although one engine is not designed for 8760 hr/yr operation, successive use of separate engines could occur which could result in multiple engines, all listed as EU 051, operating at 8760 hr/yr. If EU 051 was limited to only one engine, then the limit may not have been necessary.

Calculation of actual monthly EU 051 NOx emissions is required. Results of the calculations are included in the calculations of the actual monthly and 12-month rolling sum NOx emissions in GP 001. This was requested by the Permittee in order to not further restrict the 180 tpy GP 001 NOx limit by the 4.64 tpy EU 051 NOx PTE (at 500 hr/yr per 1995 EPA memorandum).

EU 022: This existing "standby" 55 kilowatts (KW) generator installed in 1982 (an insignificant activity) has been added to the permit. This was done to ensure that the generator does not exceed the requirements for an emergency generator as described in the 1995 EPA memorandum for calculating emergency generator Potential to Emit (PTE). This was determined necessary in order to avoid excessive usage of EU 022 which may occur if the Permittee has already maximized permitted usage of EU 051 and still needs additional electrical power when electric power is not available from the electric service provider.

EU 050: New Duske blood dryer emission calculations were made using the IPER for PM/PM_{10}, the assumption that all PM/PM_{10} is also Volatile Organic Compound (VOC), and emission products from combustion of natural gas based on AP-42 ch. 1.4. EU 050 requirements are located in
GP 010.

Title V Monitoring and Control Equipment Requirements in GP 005, GP 010, EU 027, and EU 028: Compliance requirements for all scrubbers were updated based on current Delta requirements guidance for control equipment maintenance, operation, monitoring, and recordkeeping. These control equipment requirements are needed to ensure proper control equipment operation. In addition, no emission factors are available for these processes so emissions were calculated using the Minnesota Industrial Process Equipment Rule.

Also, the emissions from these processes are both VOCs and condensable particulate matter (and PM_{10}). According to the Minnesota Industrial Process Equipment Rule, particulate matter emissions are measured using EPA method 5 including condensable particulate matter. Because the control equipment is needed to control condensable particulate matter (and for GP 10, EU 027, and EU 028 also controls odors), control equipment compliance requirements such as monitoring, recordkeeping, inspections, and corrective actions, are appropriate.

Also note that unlimited total facility potential PM and PM_{10} emissions exceed 250 tpy (in part due to the high emission rates allowed by the IPER), but limited PTE is less than 250 tpy (due to the SO_2 limit that restricts No. 6 fuel oil usage, which collaterally restricts PM and PM_{10} from GP 001.) Therefore, as long as the stack emission from GP 005, GP 010, EU 027, and EU 028 meet the applicable limit (which will be ensured through the use of control equipment and made enforceable by imposing control equipment compliance requirements), total facility emissions will be less than major for PM and PM_{10} as defined by §52.21.

Environmental Review: Not triggered by this permitting action.

Part 63 and 112g: Not applicable to this permitting action. Hormel is not a major source of HAPs, is not constructing or reconstructing a major source of HAPs, and EU 051 will not be a major source of HAPs.

New Source Performance Standards: Not applicable to this permitting action.

GP 001 Changes: Refined Animal Fat (RAF) NOx Testing and Emission Factor - Testing conducted in September 2002 on boiler 3 showed an emission rate of 9.95 lb NOx/1000 gallons RAF. The NOx emission factor used in the RAF application was 36.6 lb NOx/1000 gallons RAF. On February 5, 2003, the Permittee indicated that no piping has been hooked up to boilers 6 and 7 (EU 044 and 045, respectively) for RAF combustion, and therefore as of this time, no NOx performance test has been conducted on either boiler 6 or 7, and no NOx emission factor is available for boiler 6 or 7. As a result, a requirement was added to the NOx equation that specifies the use of the 0.0366 lb NOx/gallon RAF emission factor until a NOx test is conducted and an emission factor for EU 044 and 045 is obtained. Also, language was added at the request of the Permittee so that RAF NOx testing in EU 001 - EU 005 is contingent on combustion of 500,000 gallons of RAF in the 5 year period from 9/2002 to 9/2007. This is to avoid testing for RAF NOx emissions when little or no RAF has been combusted in the 5 boilers (RAF is not an always-available fuel). At 500,000 gallons in 5 years, this represents less than 1% of the total heat input capacity of these five boilers.

> Total heat input capacity is 179.14 mmBtu/hr = 1,569,266 mmBtu/yr.
>
> 100,000 gal RAF * 0.146 mmBtu/gal = 14,600 mmBtu/yr (0.93% of total annual heat input capacity for blrs 1-5)

Residual Oil Sulfur Content Monitoring - Requirements for determining sulfur content in residual oil were expanded to provide more accurate sulfur content information. According to the Permittee, the three residual oil storage tanks are interconnected, are individually valved, and a recirculating supply line feeds a common header with branch lines to each of the five boilers that are permitted to combust residual fuel oil. As a result, the permit requires determination of sulfur content by either sampling after each delivery the fuel oil in the common header, or calculating sulfur content based on existing and delivered fuel volume, and supplier certification of fuel oil sulfur content.

Public notice and EPA 45-day Review Comments: No comments were received during the public notice period or EPA review period.

4. Conclusion

Based on the information provided by Hormel, Foods Corporation, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 09900002-006 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, Greg Berger, Jenny Reinertsen (peer review)

Attachment: Emission calculations for new blood dryer EU 050 and emergency RICE(s) EU 051.

EU 051 New Blood Dryer Emission Calculations

There are no factors available for calculating process emissions from a blood dryer, so the Permittee has requested that the Minnesota Industrial Process Equipment Rule limit be used for determining PM (and PM_{10} assuming all PM is PM_{10}) potential emissions for non-combustion emissions from the new blood dryer. Also, the Permittee has assumed that all PM is condensable and therefore all PM is VOC.

Also, the new blood dryer will vent through the same control equipment and stack/vent as the existing blood dryer, and therefore, the air flow rate for the new dryer is not readily determined so it is conservatively assumed that the process weight rate table (Table 1) will yield the least restrictive emission limit.

Blood dryer process throughput capacity is 3300 lbs/hr at 48% solids = 1584 lb solids/hr = 0.792 tph (water not included because process weight is defined as “materials introduced into any industrial process equipment that may cause any emission of particulate matter”).

$E = 3.59\ (0.792)^{0.62}$
E = 3.107 lb/hr = 3.11 lb/hr PM and PM_{10}

For NG combustion emissions at 3.5 mmBtu/hr, the IPER does not include the emissions from gaseous fuels under the definition of process weight, so PM (and PM_{10}) combustion emissions are not added to the IPER PM (and PM_{10}) potential emission calculations.

At 3.5 mmBtu/hr from Natural Gas,

SO2 = 0.0021 lb/hr = 0.0092 tpy
NOx = 0.35 lb/hr = 1.53 tpy
VOC = 0.019 lb/hr + 3.107 lb/hr = 3.13 lb/hr = 13.7 tpy (condensable PM = VOC so it was added to the VOC from combustion of NG)
CO = 0.29 lb/hr = 1.29 tpy

Emission Unit: EU 051 temporary or permanent RICE(s) total hp ≤599 hp; single RICE not to exceed 500 hp

Fuel: ***Diesel***

Fuel Consumption Rate: *na* gallons/hr *(based on HP rating)*

Calculations Summary:

Pollutant	Emission Factor (lbs/hp-hr)	Emission Rate (lbs/hr)	Maximum Uncontrolled Emissions (tons/yr)	Pollution Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Actual Emissions (tons/yr)
PM	*0.0022*	***1.32***	*0.33*	*0.00*	*1.32*	***0.33***	
PM_{10}	*0.0022*	***1.32***	*0.33*	*0.00*	*1.32*	***0.33***	
SOx	*0.00205*	***1.23***	*0.31*	*0.00*	*1.23*	***0.31***	
NOx	*0.031*	***18.57***	*4.64*	*0.00*	*18.57*	***4.64***	
VOC	*0.002514*	*1.51*	*0.38*	*0.00*	*1.51*	*0.38*	
CO	*0.00668*	*4.00*	*1.00*	*0.00*	*4.00*	*1.00*	
Lead	*na*						

Fuel: ***Gasoline***

Fuel Consumption Rate: *na* gallons/hr *(based on HP rating)*

Calculations Summary:

12a	12b	12c	12d	12e	12f	12g	12h
Pollutant	Emission Factor (lbs/hp-hr)	Emission Rate (lbs/hr)	Maximum Uncontrolled Emissions (tons/yr)	Pollution Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Actual Emissions (tons/yr)
PM							
PM_{10}							
SOx							
NOx							
VOC	*0.021591*	***12.93***	*3.23*	*0.00*	*12.93*	***3.23***	
CO	*0.43900*	***262.96***	*65.74*	*0.00*	*262.96*	***65.74***	
Lead							
Operating Limits - Hours			500			500	

Emission Factor Comparison
Based on MPCA Form EC-03 Page 6 of 12; and Chapter 3.2 of AP-42

Convert all factors to lbs/mmBtu for determination of worst case emissions
Worst Case highlighted in **bold.**

lbs/mmBtu equivalents

	PM	PM_{10}	SOx	NOx	VOC	CO
Diesel	**0.31**	**0.31**	**0.29**	**4.41**	0.36	0.95
Gasoline	0.1	0.1	0.084	1.63	**3.03**	**62.7**
NG	0.048	0.048	0.000588	4.08	0.12	3.72
Kerosene	0.248	0.237	0.046	3.474	2.378	0.756
Propane	0.055	0.055	0.004	1.519	0.907	1.410
Butane	0.049	0.049	0.003	1.355	0.809	1.257

Reflects worst case of rich/lean, 2/4 stroke

lbs/unit

	PM	PM_{10}	SOx	NOx	VOC	CO	Heat Value per unit	unit
Kerosene	0.0335	0.032	0.0062	0.469	0.321	0.102	135000	gallon
Propane	0.005	0.005	0.00035	0.139	0.083	0.129	91500	gallon
Butane	0.005	0.005	0.00035	0.139	0.083	0.129	102600	gallon