

**AIR EMISSION PERMIT NO. 09900002-010**

**Major Amendment**

**IS ISSUED TO**

**HORMEL FOODS CORPORATION**

**and**

**Quality Pork Processors (co-operator)**

Hormel Foods Corporation

500 14<sup>th</sup> Avenue Northeast

Austin, Mower County, Minnesota 55912

The emission units, control equipment and emission stacks at the stationary source authorized in this permit amendment are as described in the Permit Applications Table.

This permit amendment supersedes Air Emission Permit No. 09900002-009 and authorizes the Permittee to operate and modify 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 as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Unless otherwise indicated, all the Minnesota rules cited as the origin of the permit terms are incorporated into the SIP under 40 CFR § 52.1220 and as such as are enforceable by U.S. Environmental Protection Agency (EPA) Administrator or citizens under the Clean Air Act.

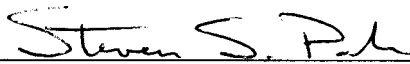
**Permit Type:** Federal; Part 70/Limits to Avoid New Source Review

**Operating Permit Issue Date:** 11/02/2005

**Major Amendment Issue Date:** August 16, 2011

**Expiration Date:** 11/02/2010\* – Title I Conditions do not expire.

\* The Permittee may continue to operate this facility after the expiration date of the permit, as provided by Minn. R. 7007.0450, subp. 3. (Title V Reissuance Application was received 05/03/2010.)

  
for Don Smith, P.E., Manager  
Air Quality Permits Section  
Industrial Division

for Paul Aasen  
Commissioner

TDD (for hearing and speech impaired only): (651) 282-5332

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### Permit Applications Table

Permit Type	Application Date	Permit Action
Total Facility Operating Permit -Reissuance	02/06/2004 & 08/22/2005	008
Major Amendment	01/17/2006	009
Major Amendment	03/03/2011 & 06/17/2011	010

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2. Insignificant Activities Required to be Listed
3. GP 011 Modeling Parameters
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5. CE 008 and CE 026 CAM Plans

**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 Foods Corporation operates a meat processing plant in Austin, Minnesota. At the facility, Quality Pork Processor (QPP) processes hogs, and the Permittee manufactures the hogs into ham, bacon, dry sausage, fresh sausage, SPAM<sup>®</sup>, and other meat products. Byproducts consist of blood, cracklings, bone meal, and choice white grease (a component of a broader category of substances known as refined animal fats). QPP is a co-permittee however Hormel Foods owns all equipment and operates the majority of it; QPP only operates some of the emissions equipment (insignificant combustion sources) in the processing area.

There are many emission sources at the facility, however most of them qualify as insignificant activities under Minn. R. 7007.1300, subparts 3 and 4. Most of these insignificant activities are natural gas-fired combustion sources such as makeup air heaters, space heaters, and process ovens. Some of these insignificant activities are included in the following facility discussion.

Seven boilers combusting mainly natural gas provide process steam. In addition, twelve natural gas-fired process ovens produce meat products using natural or liquid smoke. Pre-cooked process lines produce pre-cooked bacon and bacon bits.

Rendering emissions are treated in a venturi scrubber and packed tower scrubbers before discharge to the atmosphere. Emissions from a bone meal dryer and a blood dryer are also treated by a venturi scrubber and packed tower scrubbers before discharge to the atmosphere.

## **ACTION 009**

This amendment authorized construction and operation of seven identical 2000 kW diesel electric generators. The engines are Caterpillar model 3516 units and operate as peaking and emergency power units.

## **ACTION 010 AMENDMENT DESCRIPTION:**

This is a major amendment to the title V operating permit to authorize installation of a regenerative thermal oxidizer (RTO; CE 026), retirement of three packed tower scrubbers (CE 022, CE 023, and CE 024), and re-routing of emissions from rendering machinery, and bone and blood meal dryers. The RTO will replace existing packed tower scrubbers CE 022, CE 023, and CE 024 that control condensable particulate matter and VOC emissions from rendering machinery (EU 028), a blood dryer (EU 050) and a bone meal dryer (EU 036).

This permit action also adds a 94,700 ton pr year CO<sub>2</sub>e limit to maintain minor source status under New Source Review.

Finally, this permit action adds GP 003 PM and opacity testing (due October 16, 2011 and thereafter at 60-month intervals unless/until revised by future test results) as specified in the August 9, 2007 MPCA test frequency approval letter, clarifies that the GP 012 used oil analysis frequency is 60 months, and updates the total facility requirement pertaining to operating limits established through performance testing. This permit action also updates the NO<sub>x</sub> emission factor and opacity testing requirements for GP 011 peaking generators based on a January 14, 2010 Notice of Compliance.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-1 08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

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

**Subject Item: Total Facility**

<b>What to do</b>	<b>Why to do it</b>
<b>TOTAL FACILITY CARBON DIOXIDE EQUIVALENT (CO<sub>2</sub>e) LIMIT</b>	hdr
Carbon Dioxide Equivalent: less than or equal to 94700 tons/year using 12-month Rolling Sum for all CO <sub>2</sub> e emitting sources at the facility.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
Carbon Dioxide Equivalent Emissions Monitoring: By the 15th day of each month the Permittee shall calculate and record the following:  1. the type and amount of each fuel combusted at the facility in the previous calendar month;  2. the total facility CO <sub>2</sub> e emissions from the previous calendar month using Equations 1 and 2 in Appendix 4 of this permit;  3. the total facility CO <sub>2</sub> e emissions during the previous 12 calendar months by summing the monthly total CO <sub>2</sub> e emissions from the past 12 months.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
The Permittee is prohibited from emitting any greenhouse gases as defined at title 40 CFR Section 98.6 other than carbon dioxide (CO <sub>2</sub> ), nitrous oxide (N <sub>2</sub> O), and methane (CH <sub>4</sub> ).	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
<b>OPERATIONAL REQUIREMENTS</b>	hdr
Ambient Air Quality Standards: The Permittee shall comply with and upon written request demonstrate compliance with National Primary and Secondary Ambient Air Quality Standards in Title 40 CFR part 50, and the Minnesota Ambient Air Quality Standards at Minn. R. 7009.0010 to 7009.0080.	40 CFR part 50; Minn. Stat. Sec. 116.07, subds. 4a and 9; Minn. R. 7007.0100, subps. 7A, 7L and 7M; Minn. R. 7007.0800, subps. 1, 2, and 4; Minn. R. 7009.0010-7009.0080
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
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. 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)
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
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
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)
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-2** 08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

<b>PERFORMANCE TESTING</b>	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A and/or B.	Minn. R. ch. 7017
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
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change.	Minn. R. 7017.2025, subp. 3
<b>MONITORING REQUIREMENTS</b>	hdr
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 and/or B, 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)
<b>RECORDKEEPING</b>	hdr
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)
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)
If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. These records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format.	Minn. R. 7007.1200, subp. 4
<b>REPORTING/SUBMITTALS</b>	hdr
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3.  At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-3**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

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
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)
Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. Submit the report on a form or alternative media 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****A-4**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item: GP 001 SO2 and NOx Limits**

**Associated Items:**

- EU 001 Boiler #1
- EU 002 Boiler #2
- EU 003 Boiler #3
- EU 004 Boiler #4
- EU 005 Boiler #5
- EU 044 Boiler #6
- EU 045 Boiler #7
- EU 051 Emergency RICE(s)
- EU 080 Generator #1
- EU 081 Generator #2
- EU 082 Generator #3
- EU 083 Generator #4
- EU 084 Generator #5
- EU 085 Generator #6
- EU 086 Generator #7

What to do	Why to do it
GP 001 ASSOCIATED ITEMS  GP 001 is composed of GP 011 and GP 012 emission units, and EU 051. GP 011 is composed of EU 080 through EU 086. GP 012 is composed of EU 001 - EU 005, EU 044, and EU 045.	hdr
EMISSION LIMITS	hdr
Nitrogen Oxides: less than or equal to 180 tons/year using 12-month Rolling Sum total for GP 001.	Title I Condition: To limit potential NOx emissions to less than major source levels defined by 40 CFR Section 52.21; Minn. R. 7007.3000
Sulfur Dioxide: less than or equal to 235 tons/year using 12-month Rolling Sum total for GP 001 combustion of diesel fuel, fuel oil, waste oil, and refined animal fats. This does not include any SO2 emissions from distillate oil or diesel fuel combustion in EU 051.	Title I Condition: To limit potential SO2 emissions to less than major source levels defined by 40 CFR Section 52.21; Minn. R. 7007.3000
RECORDKEEPING	hdr
Sulfur Dioxide Emissions Monitoring and Recordkeeping: By the 15th day of each month the Permittee shall:  1) Calculate and record GP 001 SO2 emissions during the previous calendar month using the following equation:  $SO_2 = GP\ 011 + GP\ 012$  where:  SO2 = GP 001 calendar month SO2 emissions, in tons GP 011 = GP 011 calendar month SO2 emissions, in tons, determined under GP 011 GP 012 = GP 012 calendar month SO2 emissions, in tons, determined under GP 012  (continued)	Minn. R. 7007.0800, subp. 4 and 5
(continued from above)  2) Calculate and record the 12-month rolling sum GP 001 SO2 emissions by summing the monthly GP 001 SO2 emissions determined with the above equation, for the previous 12 months.	Minn. R. 7007.0800, subp. 4 and 5



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-5**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

<p>Nitrogen Oxides Emissions Monitoring and Recordkeeping: By the 15th day of each month the Permittee shall:</p> <p>1) Calculate and record GP 001 NOx emissions during the previous calendar month using the following equation:</p> $\text{NOx} = \text{GP 011} + \text{GP 012} + (\text{EU 051}/2000)$ <p>where:</p> <p>NOx = GP 001 calendar month NOx emissions, in tons GP 011 = GP 011 calendar month NOx emissions, in tons, determined under GP 011 GP 012 = GP 012 calendar month NOx emissions, in tons, determined under GP 012 EU 051 = EU 051 calendar month NOx emissions, in pounds, determined under EU 051</p> <p>(continued)</p>	Minn. R. 7007.0800, subp. 4 and 5
<p>(continued from above)</p> <p>2) Calculate and record the 12-month rolling sum GP 001 NOx emissions by summing the monthly GP 001 NOx emissions determined with the above equation, for the previous 12 months.</p>	Minn. R. 7007.0800, subp. 4 and 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-6**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

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

**Associated Items:**

- EU 006 Smoked Meat Oven #6 with recirculated natural wood smoke
- EU 007 Smoked Meat Oven #7 with recirculated natural wood smoke
- EU 008 Smoked Meat Oven #8 with recirculated natural wood smoke
- EU 009 Smoked Meat Oven #9 with recirculated natural wood smoke
- EU 010 Smoked Meat Oven #10 with recirculated natural wood smoke
- EU 011 Smoked Meat Oven #11 with recirculated natural wood smoke
- EU 031 Natural Smoke Generator
- EU 032 Natural Smoke Generator
- SV 003 Natural Smoke Meat Oven (EU 006)
- SV 005 Natural Smoke Meat Oven (EU 007)
- SV 007 Natural Smoke Meat Oven (EU 008)
- SV 009 Natural Smoke Meat Oven (EU 009)
- SV 011 Natural Smoke Meat Oven (EU 010)
- SV 012 Natural Smoke Meat Oven (EU 011)

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)
PERFORMANCE TEST REQUIREMENTS	hdr
Performance Test: due before end of each calendar 60 months starting 10/17/2006 to measure PM and opacity from one of the GP 003 emission units while using natural smoke from EU 031 or EU 032. The next PM and opacity tests are due 10/16/2011.	Minn. R. 7017.2020, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-7** 08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item: GP 005 Precook Processes**

**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 025 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 Bacon Stack N/S (EU 018 & EU 019/CE 006)  
 SV 020 Precooked Bacon Stack E/W (EU 020 & EU 021/CE 007)  
 SV 050 Bacon Bits Line (EU 029/CE 025)

What to do	Why to do it
<b>EMISSION LIMITS</b>	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)
<b>OPERATING REQUIREMENTS</b>	hdr
Vent all emissions from GP 005 precooked process equipment through the corresponding mist eliminator (CE 006, CE 007, or CE 025).	Minn. R. 7007.0800, subp. 2
<b>CONTROL EQUIPMENT REQUIREMENTS</b>	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 and CE 007 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 and CE 007 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
CE 025 Pressure Differential: Less than 2 inches wc when controlling process emissions.	Minn. R. 7007.0800, subp. 14
CE 025 Minimum Water Flow Rate when controlling process emissions:	Minn. R. 7007.0800, subp. 14
Filter: not less than 2 gallon per minute; Upper Intake: not less than 1 gallon per minute Lower Intake: not less than 1 gallon per minute	
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 any GP 005 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

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-8**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

<p>Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:</p> <ul style="list-style-type: none"><li>- the pressure drop across any mist eliminator is outside the required operating range;</li><li>- the water flow rate for any mist eliminator is less than the required minimum; or</li><li>- any mist eliminator or any of its components are found during any inspection to need repair.</li></ul> <p>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 &amp; 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.</p>	Minn. R. 7007.0800, subp. 4, 5, and 14
The Permittee shall calibrate or replace the CE 006, CE 007, and CE 025 pressure differential and flow rate monitors at least annually and shall maintain a written record of any action resulting from the calibration or replacement.	Minn. R. 7007.0800, subps. 4, 5, and 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-9** 08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item: GP 010 Blood and Bone Meal Dryers****Associated Items:** CE 018 Venturi Scrubber

CE 019 Packed-Gas Adsorption Column

CE 024 Packed-Gas Adsorption Column

CE 026 Thermal Oxidizer

EU 036 Existing Scott Bone Dryer

EU 050 New Duske Blood Dryer

EU 071 Room Air - Blood &amp; Bone Drying

SV 033 Blood &amp; Bone Dryers CE 018/CE 024 (venturi &amp; packed tower E; bypasses packed tower F) (EU 036/EU 050)

SV 045 Blood &amp; Bone Dryers CE 019 (packed tower F) (EU 036/EU 050)

SV 058 Regenerative Thermal Oxidizer (CE 026)

What to do	Why to do it
<p>Subject Item GP 010 contains requirements applicable either:</p> <ol style="list-style-type: none"> <li>1. prior to the startup of CE 026;</li> <li>2. after the startup of CE 026; or,</li> <li>3. both prior and after the startup of CE 026.</li> </ol> <p>Requirements under any header that states 'APPLY ONLY BEFORE CE 026 STARTUP' are no longer effective upon CE 026 startup.</p> <p>Prior to CE 026 startup, EU 036 and EU 050 emissions will vent to CE 018 (venturi scrubber) and then through CE 024 (Tower E) and then either to CE 019 (Tower F), and vent to the atmosphere through SV 045, or bypass CE 019 and vent emissions to the atmosphere from CE 024 through SV 033.</p> <p>After CE 026 startup, EU 036 and EU 050 emissions will be vented to CE 018 and then to CE 026 and then to the atmosphere through SV 058, and CE 024 will be shutdown.</p>	hdr
<p>EMISSION LIMITS - APPLY BEFORE AND AFTER CE 026 STARTUP</p> <p>Refer to SV 058 for additional applicable limits and requirements that apply after CE 026 startup</p>	hdr
<p>Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.</p> <p>After CE 026 startup, this limit applies at the outlet of CE 018 and does not apply to SV 058.</p>	Minn. R. 7011.0610, subp. 1(A)(1)
<p>Opacity: less than or equal to 20 percent except for one six-minute period per hour of not more than 60 percent opacity.</p> <p>After CE 026 startup, this limit applies at the outlet of CE 018 and does not apply to SV 058.</p>	Minn. R. 7011.0610, subp. 1(A)(2)
<p>OPERATING REQUIREMENTS - APPLY AFTER CE 026 STARTUP</p>	hdr
<p>Vent emissions from both the blood and bone dryers through CE 018 (venturi scrubber) and CE 026 (RTO) and then through SV 058. After CE 026 startup, the Permittee shall not route GP 010 emissions through CE 019 and CE 024.</p>	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000
<p>CE 018 CONTROL EQUIPMENT REQUIREMENTS - APPLY AFTER CE 026 STARTUP</p>	hdr
<p>The Permittee shall operate and maintain CE 018 to achieve a control efficiency for Total Particulate Matter: greater than or equal to 94 percent control efficiency</p>	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000
<p>The Permittee shall operate and maintain CE 018 to achieve a control efficiency for PM &lt; 10 micron: greater than or equal to 84 percent control efficiency</p>	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000
<p>The Permittee shall operate and maintain CE 018 venturi scrubber at all times that any emission unit controlled by CE 018 is in operation. The Permittee shall document periods of non-operation of CE 018.</p>	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000
<p>The Permittee shall operate and maintain CE 018 in accordance with the Operation and Maintenance (O &amp; M) Plan. The Permittee shall keep copies of the O &amp; M Plan available onsite for use by staff and MPCA staff.</p>	Minn. R. 7007.0800, subp. 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-10** 08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

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: greater than or equal to 5.0 inches w.c.	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
CE 018 Water Flow Rate: greater than or equal to 10 gallons per minute.	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
CE 018 Daily Monitoring and Recordkeeping: Once each day of EU 036 and/or EU 050 operation, the Permittee shall monitor and record the pressure differential and the water flow rate for CE 018.	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 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, subps. 4, 5, and 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:  - the CE 018 pressure drop is below the permitted minimum; - the CE 018 water flow rate is below the permitted minimum; or - CE 018 or any of its components are found during any inspection to need repair.  Corrective actions shall return the CE 018 pressure drop to at or above the minimum, the CE 018 water flow rate to at or above 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 CE 018 O & M Plan. The Permittee shall keep a record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subps. 4, 5, and 14
The Permittee shall calibrate or replace the CE 018 pressure differential and flow rate monitors at least annually and shall maintain a written record of any action resulting from the calibration or replacement.	Minn. R. 7007.0800, subps. 4, 5, and 14
OPERATING REQUIREMENTS - APPLY ONLY BEFORE CE 026 STARTUP	hdr
Vent emissions from both the blood and bone dryers through CE 018 (venturi scrubber) and then through CE 024 (Tower E). After CE 024 the Permittee has the option of routing emissions to CE 019 (Tower F), and then through SV 045, or bypass CE 019 and vent emissions from CE 024 through SV 033.	Minn. R. 7007.0800, subp. 2
CE 018 (VENTURI SCRUBBER), CE 019 (TOWER F) AND CE 024 (TOWER E) CONTROL EQUIPMENT REQUIREMENTS - APPLY ONLY BEFORE CE 026 STARTUP	hdr
The Permittee shall operate and maintain CE 019 and CE 024 so that each achieves a control efficiency for Total Particulate Matter: greater than or equal to 85 percent control efficiency	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain CE 019 and CE 024 so that each achieves a control efficiency for PM < 10 micron: greater than or equal to 85 percent control efficiency	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain CE 018 so that the scrubber achieves a total control efficiency for Total Particulate Matter: greater than or equal to 94 percent control efficiency	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain CE 018 so that the scrubber achieves a total control efficiency for PM < 10 micron: greater than or equal to 84 percent control efficiency	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain CE 018, CE 019, and CE 024 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, CE 019, and CE 024, as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when CE 018, CE 019, and CE 024 are in operation.	Minn. R. 7007.0800, subp. 4
CE 018 Pressure Differential: greater than or equal to 5 inches wc. CE 019 Pressure Differential: less than 7 inches wc. CE 024 Pressure Differential: less than 5 inches wc.	Minn. R. 7007.0800, subp. 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-11**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

CE 018 Water Flow Rate: not less than 10 gallons per minute CE 019 Water Flow Rate: not less than 150 gallons per minute CE 024 Water Flow Rate: not less than 50 gallons per minute	Minn. R. 7007.0800, subp. 14
CE 018, CE 019, and CE 024 Daily Monitoring: Once each day of operation, the Permittee shall monitor and record the pressure differential and the water flow rate for CE 018, CE 019, and CE 024.	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 018, CE 019, and CE 024. The Permittee shall maintain a written record of the results of each inspection.	Minn. R. 7007.0800, subp. 4, 5, and 14
<p>Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:</p> <ul style="list-style-type: none"><li>- the pressure drop of CE 018, CE 019, or CE 024 is below the required minimum;</li><li>- the water flow rate of CE 018, CE 019, or CE 024 is below the permitted minimum; or</li><li>- CE 018, CE 019, or CE 024 or any of their components are found during any inspection to need repair.</li></ul> <p>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 &amp; M Plan for CE 018, CE 019, or CE 024. The Permittee shall keep a record of the type and date of any corrective action taken.</p>	Minn. R. 7007.0800, subp. 4, 5, and 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-12**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item: GP 011 Electric Power Generators****Associated Items:** EU 080 Generator #1

EU 081 Generator #2

EU 082 Generator #3

EU 083 Generator #4

EU 084 Generator #5

EU 085 Generator #6

EU 086 Generator #7

What to do	Why to do it
LIMITS AND OPERATIONAL REQUIREMENTS	hdr
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
Permitted fuel: diesel fuel only.	Minn. R. 7007.0800, subp. 2
Diesel fuel sulfur content: less than or equal to 0.05 percent by weight.	Minn. R. 7007.0800, subp. 2
Total GP 011 Operating Hours: less than or equal to 65 hours/day	Minn. R. 7007.0800, subp. 2
MONITORING AND RECORDKEEPING	hdr
Diesel Fuel Supplier Certification: For each diesel fuel delivery, obtain a supplier certification either stating the actual sulfur content in percent by weight or certifying that the sulfur content does not exceed 0.05 percent by weight.	Minn. R. 7007.0800, subp. 4 and 5
Recordkeeping - GP 011 Operating Hours: Once each day the Permittee shall calculate and record the total GP 011 operating hours for the previous calendar day. By the 15th day of each month, calculate and record the total GP 011 operating hours for the previous calendar month.	Title I Condition: To limit potential NOx emissions to less than the major source levels defined in 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 and 5
Recordkeeping - Fuel Usage: Once each day the Permittee shall calculate and record the GP 011 diesel fuel usage (gallons) for the previous calendar day. By the 15th day of each month, calculate and record the total GP 011 diesel fuel usage (gallons) for the previous calendar month.	Title I Condition: To limit potential SO2 emissions to less than the major source levels defined in 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 and 5
Sulfur Dioxide Emissions Monitoring: by the 15th day of each month, calculate and record GP 011 SO2 emissions for the previous calendar month using the following equation:  GP 011 SO2 = (Dg * 6.92E-03)/2000  where:  GP 011 SO2 = GP 011 SO2 emissions, in tons Dg = diesel fuel combusted by GP 011 units during the previous month, in gallons 6.92E-03 = conversion factor derived from fuel heat content (0.137 mmBtu/gallon) and sulfur content limit (0.05% by weight equivalent to 0.0505 lb/mmBtu)	Minn. R. 7007.0800, subp. 4 and 5
Nitrogen Oxides Emissions Monitoring: by the 15th day of each month, calculate and record GP 011 NOx emissions for the previous calendar month using the following equation:  GP 011 NOx = (OH * EF)/2000  where:  GP 011 NOx = GP 011 NOx emissions, in tons OH = GP 011 units total operating hours during the previous month EF = NOx lb/hr emission factor; upon issuance of this permit the Permittee shall use the manufacturer's 48.92 lb/hr NOx emission factor  This NOx lb/hr emission factor will be revised upon written MPCA approval of the latest NOx emission factor performance test results. An EF determined for one unit applies to all seven units for determining the GP 011 12-month rolling sum NOx emissions.	Minn. R. 7007.0800, subp. 4 and 5
PERFORMANCE TESTING	hdr
Performance Test: due before 11/03/2012 to determine the lb/hr NOx emission factor from one generator GP 011 that has not been previously tested for NOx. If all GP 011 generators have been tested for NOx, test the generator with the least current NOx emission factor test.	Title I Condition: To limit potential NOx emissions to less than the major source levels defined in 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7017.2020, subp. 1



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-13**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

Performance Test: due before 11/03/2014 to measure opacity from one GP 011 generator that has not been previously tested for opacity. If all GP 011 generators have been tested for opacity, test the generator with the least current opacity test.

Minn. R. 7017.2020, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-14**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item: GP 012 Boilers****Associated Items:** EU 001 Boiler #1

EU 002 Boiler #2

EU 003 Boiler #3

EU 004 Boiler #4

EU 005 Boiler #5

EU 044 Boiler #6

EU 045 Boiler #7

What to do	Why to do it
<b>EMISSION LIMITS</b>	hdr
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 004).	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
<b>OPERATING LIMITS</b>	hdr
Permitted Fuels:  EU 001 through EU 004: Limited to natural gas, No. 6 fuel oil, used oil, and refined animal fats (RAF) EU 005: natural gas only EU 044, and EU 045: natural gas and RAF	Minn. R. 7007.0800, subp. 2
The used oil combusted in EU 001 through EU 004 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 shall obtain a laboratory analysis of the used oil at intervals not exceeding 60 months to demonstrate the used oil is on-specification. Each analysis shall be kept on-site until a new analysis is obtained. 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 004.	Minn. R. 7007.0800, subp. 2
<b>MONITORING</b>	hdr
Determination of Sulfur Content of Fuel Oil In Storage Tanks: Immediately after any delivery of fuel oil for use in EU 001, EU 002, EU 003, and/or EU 004, 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

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-15**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

<p>Method 1: Using fuel supplier certification, calculate the fuel oil sulfur content as follows:</p> <p>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:</p> $So = [(Ve * Se) + (Vd * Sd)]/Vt$ <p>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, <math>Vt = Ve + Vd</math> (gallons)</p> <p>OR</p>	Minn. R. 7007.0800, subp. 4 and 5
<p>Method 2: Sample and analyze the fuel oil in the common header for the three storage tanks that supplies fuel oil to EU 001 - EU 004. 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.</p> <p>Record the date and time of each delivery and sampling, initials 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.</p>	Minn. R. 7007.0800, subp. 4 and 5
<b>RECORDKEEPING</b>	hdr
Separately 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)
<p>Recordkeeping - Fuel Usage: Once each day calculate and record the GP 012 usage of fuel oil (gallons), used oil (gallons), and natural gas (cubic feet), the RAF usage in EU 001 through EU 004 (gallons), and the RAF usage in EU 044 and 045 (gallons), during the previous calendar day.</p> <p>By the 15th day of each month, calculate and record the GP 012 usage of fuel oil (gallons), used oil (gallons), and natural gas (cubic feet), the RAF usage in EU 001 through EU 004 (gallons), and the RAF usage in EU 044 and 045 (gallons), during the previous calendar month.</p>	Title I Condition: To limit potential SO <sub>2</sub> and NO <sub>x</sub> emissions to less than major source levels defined by 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 and 5
<p>Sulfur Dioxide Emissions Monitoring: By the 15th day of each month the Permittee shall calculate and record the tons of SO<sub>2</sub> emitted during the previous calendar month from the GP 012 combustion of fuel oil, used oil, and RAF, using the following equation:</p> $SO_2 = (0.157AX + 0.157BY + 0.157CZ)/2000$ <p>where:</p> <p>SO<sub>2</sub> = GP 012 sulfur dioxide emissions during the previous month (tons)  A = GP 012 gallons of fuel oil burned during the previous month  B = GP 012 gallons of used oil burned during the previous month  C = GP 012 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</p>	Minn. R. 7007.0800, subp. 4 and 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-16**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

<p>Nitrogen Oxides Emissions Monitoring: By the 15th day of each month the Permittee shall calculate and record the tons of NOx emitted from GP 012 during the previous calendar month using the following equation:</p> $\text{NOx} = (0.055A + X1B1 + X2B2 + 0.0001C)/2000$ <p>where:</p> <p>NOx = GP 012 nitrogen oxides emissions during the previous month (tons)  A = GP 012 gallons of fuel oil and used oil burned during the previous month  B1 = GP 012 gallons of RAF burned during the previous month in EU 001 - 004  B2 = GP 012 gallons of RAF burned during the previous month in EU 044 &amp; 045  X1 = NOx emission factor in lb of NOx/gallon of RAF from most recent test while combusting RAF in EU 001 - 004  X2 = NOx emission factor in lb of NOx/gallon of RAF from most recent test while combusting RAF in EU 044 &amp; 045 (if RAF NOx emission testing data is not available, X1 and/or X2 shall be 0.0366 lb/gal)  C = GP 012 cubic feet of natural gas combusted during the previous month</p>	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; Minn. R. 7007.3000
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, or EU 004. Testing is required only if a total of more than 500,000 gallons of RAF has been combusted in EU 001 through EU 004 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; Minn. R. 7007.3000
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; Minn. R. 7007.3000
Performance Test: due before end of each calendar 60 months starting 01/01/2006 to measure PM and opacity while combusting No. 6 fuel oil in EU 001, EU 002, or EU 003, and while combusting No. 6 fuel oil in EU 004. For EU 001 through EU 003, the Permittee shall always test the emission unit whose previous test is the least current. EU 004 shall be tested every 60 months.	Minn. R. 7017.2020, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-17** 08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item: SV 058 Regenerative Thermal Oxidizer (CE 026)****Associated Items:** EU 028 Rendering Machinery

EU 036 Existing Scott Bone Dryer

EU 050 New Duske Blood Dryer

EU 087 Regenerative Thermal Oxidizer (CE 026)

GP 010 Blood and Bone Meal Dryers

MR 001 CE 026/EU 087 Combustion Chamber Temperature

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 6.37 lbs/hour for SV 058.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; meets requirements of Minn. R. 7011.0610, subp. 1(A)(1) and Minn. R. 7011.0715, subp. 1.A
PM < 10 micron: less than or equal to 6.37 lbs/hour for SV 058.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
PM < 2.5 micron: less than or equal to 6.37 lbs/hour from SV 058.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 6.37 lbs/hour for SV 058.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Opacity: less than or equal to 20 percent opacity for SV 058.	Minn. R. 7011.0715, subp. 1.B; meets requirements of Minn. R. 7011.0610, subp. 1(A)(2)
OPERATING REQUIREMENTS	hdr
Vent all CE 009 (EU 028) and CE 018 (EU 036 and EU 050) emissions through CE 026.	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000
CE 026 CONTROL EQUIPMENT REQUIREMENTS	hdr
The Permittee shall operate and maintain CE 026 to achieve a total control efficiency for Total Particulate Matter: greater than or equal to 62 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain CE 026 to achieve a total control efficiency for PM < 10 micron: greater than or equal to 62 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain CE 026 to achieve a total control efficiency for PM < 2.5 micron: greater than or equal to 62 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain CE 026 to achieve a total control efficiency for Volatile Organic Compounds: greater than or equal to 97 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain CE 026 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
CE 026 Combustion Chamber Temperature: greater than or equal to 1350 F on a 3-hour rolling average, unless a new minimum is set pursuant to Minn. R. 7017.0225, subp. 3, based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new minimum shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The minimum is final upon issuance of a permit amendment incorporating the change.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
MONITORING AND RECORDKEEPING	hdr
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring CE 026 combustion chamber temperature, as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when CE 026 is in operation.	40 CFR Section 64.7(b); Minn. R. 7017.0200

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-18**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

<p>CE 026 Temperature Monitoring and Recordkeeping: The Permittee shall operate and maintain a continuous CE 026 combustion chamber temperature monitor and continuously record the combustion chamber temperature. The temperature monitoring device shall have a margin of error less than the greater of +/- 0.75 percent of the temperature being measured or +/- 2.5 degrees Celsius (4.5 degrees Fahrenheit).</p> <p>The Permittee shall maintain a hard copy readout or computer disk file of the temperature readings for the RTO combustion chamber including the calculated 3-hour rolling average temperature values. The Permittee shall verify once each shift, not to exceed 12 hours, if all observed 3-hour rolling average temperature readings were at or above the minimum specified in this permit. Recorded values below the minimum specified in this permit are considered deviations as defined by Minn. R. 7007.0100, subp. 8a.</p>	<p>Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 &amp; 5; 40 CFR Section 64.3; Minn. R. 7017.0200</p>
<p>Periodic Inspections: Once per calendar quarter, or at a frequency prescribed by the manufacturer, the Permittee shall inspect the components of CE 026. The CE 026 burner may be inspected annually. The Permittee shall maintain a written record of the results of each inspection.</p>	<p>40 CFR Section 64.3; Minn. R. 7017.0200</p>
<p>Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:</p> <ul style="list-style-type: none"> <li>- the 3-hour rolling average combustion chamber temperature is below the required minimum;</li> <li>- the RTO or any of its components are found during any inspection to need repair.</li> </ul> <p>Corrective actions shall return the combustion chamber temperature to at or above 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 &amp; M Plan for CE 026. The Permittee shall keep a record of the type and date of any corrective action taken.</p>	<p>40 CFR Section 64.7(d); Minn. R. 7017.0200</p>
<p>The Permittee shall calibrate or replace the CE 026 temperature gauge at least once every 12 months and shall maintain a written record of any action resulting from the calibration or replacement.</p>	<p>40 CFR Section 64.3; Minn. R. 7017.0200</p>
<p>Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing required minimum CE 026 combustion chamber temperature, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring change.</p>	<p>40 CFR Section 64.7(e); Minn. R. 7017.0200</p>
<p>As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64:</p> <ol style="list-style-type: none"> <li>1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and</li> <li>2) Summary information on the number, duration, and cause for monitor downtime incidents.</li> </ol>	<p>40 CFR Section 64.9(a)(2); Minn. R. 7017.0200</p>
<p>The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.</p>	<p>40 CFR Section 64.9(b); Minn. R. 7017.0200</p>
<p>PERFORMANCE TESTING</p>	<p>hdr</p>
<p>Initial Performance Test: due 180 days after Initial Startup of CE 026/EU 087 (regenerative thermal oxidizer) to measure PM<sub>2.5</sub> emissions.</p>	<p>Minn. R. 7017.2020, subp. 1</p>
<p>Initial Performance Test: due 180 days after Initial Startup of CE 026/EU 087 (regenerative thermal oxidizer) to measure PM emissions (including condensables).</p>	<p>Minn. R. 7017.2020, subp. 1</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-19** 08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item:** EU 027 Rendering Room Air**Associated Items:** CE 008 Packed-Gas Adsorption Column

SV 026 Rendering Room Air Packed Tower 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 potential PM emissions to less than major source levels as defined by 40 CFR 52.21; Minn. R. 7007.3000; 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 potential PM10 emissions to less than major source levels as defined by 40 CFR 52.21; Minn. R. 7007.3000
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
OPERATING REQUIREMENTS	hdr
The Permittee shall operate and maintain the packed tower A (CE 008) at all times that the process equipment (EU 028 rendering machinery that emits EU 027 rendering room air emissions) controlled by CE 008 is in operation. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
Vent all emissions from EU 027 through CE 008.	
CE 008 (TOWER A) CONTROL EQUIPMENT REQUIREMENTS	hdr
The Permittee shall operate and maintain CE 008 so it achieves a control efficiency for Total Particulate Matter: greater than or equal to 85 percent control efficiency	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain CE 008 so it achieves a control efficiency for PM < 10 micron: greater than or equal to 85 percent control efficiency	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
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
CE 008 Pressure Differential: Greater than or equal to 5 inches w.c., unless a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new minimum shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The minimum is final upon issuance of a permit amendment incorporating the change.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
CE 008 Water Flow Rate: Greater than or equal to 100 gallons per minute, unless a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new minimum shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The minimum is final upon issuance of a permit amendment incorporating the change.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
MONITORING AND RECORDKEEPING	hdr
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.	40 CFR Section 64.7(b); Minn. R. 7017.0200
Daily Inspections: Once each calendar day when EU 027 is operating, the Permittee shall read and record the following:  1. the CE 008 pressure differential; 2. the CE 008 water flow rate.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14; 40 CFR Section 64.3; Minn. R. 7017.0200
Recordkeeping of Pressure Drop and Water Flow Rate: The Permittee shall record the time and date of each pressure drop reading and water flow rate reading, and whether or not the observed value was within the range specified in this permit. Recorded values outside the range specified in this permit are considered deviations as defined by Minn. R. 7007.0100, subp. 8a.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5; 40 CFR Section 64.3; Minn. R. 7017.0200
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.	40 CFR Section 64.3; Minn. R. 7017.0200

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-20**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

<p>Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:</p> <ul style="list-style-type: none"> <li>- the pressure drop is below the required minimum;</li> <li>- the water flow rate is below the permitted minimum; or</li> <li>- the scrubber or any of its components are found during any inspection to need repair.</li> </ul> <p>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 &amp; M Plan for CE 008. The Permittee shall keep a record of the type and date of any corrective action taken.</p>	40 CFR Section 64.7(d); Minn. R. 7017.0200
The Permittee shall calibrate or replace the CE 008 pressure differential and flow rate monitors at least annually and shall maintain a written record of any action resulting from the calibration or replacement.	40 CFR Section 64.3; Minn. R. 7017.0200
Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing pressure drop range, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring change.	40 CFR Section 64.7(e); Minn. R. 7017.0200
<p>As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64:</p> <ol style="list-style-type: none"> <li>1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and</li> <li>2) Summary information on the number, duration, and cause for monitor downtime incidents.</li> </ol>	40 CFR Section 64.9(a)(2); Minn. R. 7017.0200
The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.	40 CFR Section 64.9(b); Minn. R. 7017.0200



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-21**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item: EU 028 Rendering Machinery**

**Associated Items:** CE 008 Packed-Gas Adsorption Column  
CE 009 Venturi Scrubber  
CE 022 Packed-Gas Adsorption Column  
CE 023 Packed-Gas Adsorption Column  
CE 026 Thermal Oxidizer  
SV 026 Rendering Room Air Packed Tower Scrubber Stack  
SV 027 Rendering Cooker Stack  
SV 058 Regenerative Thermal Oxidizer (CE 026)

What to do	Why to do it
<p>Subject Item EU 028 contains requirements applicable either:</p> <ol style="list-style-type: none"> <li>1. prior to the startup of CE 026;</li> <li>2. after the startup of CE 026; or,</li> <li>3. both prior and after the startup of CE 026.</li> </ol> <p>Requirements under any header that states 'APPLY ONLY BEFORE CE 026 STARTUP' are no longer effective upon CE 026 startup.</p> <p>Prior to CE 026 startup, EU 028 emissions will vent to CE 009, CE 022, and CE 023 and then either vented to the atmosphere through SV 027, or routed to CE 008 and then vented to the atmosphere through SV 026.</p> <p>After CE 026 startup, EU 028 emissions will be vented to CE 009 and then to CE 026 and then to the atmosphere through SV 058, and CE 022 and CE 023 will be shutdown.</p>	hdr
<p>EMISSION LIMITS - APPLY BEFORE AND AFTER CE 026 STARTUP</p> <p>Refer to SV 058 for additional applicable limits and requirements that apply after CE 026 startup</p>	hdr
<p>Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.</p> <p>After CE 026 startup, this limit applies at the outlet of CE 009 and does not apply to SV 058.</p>	Minn. R. 7011.0715, subp. 1(A)
<p>Opacity: less than or equal to 20 percent opacity .</p> <p>After CE 026 startup, this limit applies at the outlet of CE 009 and does not apply to SV 058.</p>	Minn. R. 7011.0715, subp. 1(B)
<p>OPERATING REQUIREMENTS - APPLY AFTER CE 026 STARTUP</p>	hdr
<p>The Permittee shall operate and maintain the venturi scrubber (CE 009) at all times that the process equipment (EU 028 rendering machinery) controlled by CE 009 is in operation. The Permittee shall document periods of non-operation of the control equipment.</p> <p>Vent all emissions from Rendering Machinery through CE 009, CE 026 (RTO), and then through SV 058. After CE 026 startup, the Permittee shall not route EU 028 emissions through CE 022 and CE 023.</p>	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
<p>CONTROL EQUIPMENT REQUIREMENTS - APPLY AFTER CE 026 STARTUP</p> <p>Refer to SV 058 for CE 026 applicable requirements</p>	hdr
<p>The Permittee shall operate and maintain CE 009 to achieve a total control efficiency for Total Particulate Matter: greater than or equal to 94 percent control efficiency</p>	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
<p>The Permittee shall operate and maintain CE 009 to achieve a total control efficiency for PM &lt; 10 micron: greater than or equal to 84 percent control efficiency</p>	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
<p>The Permittee shall operate and maintain CE 009 in accordance with the Operation and Maintenance (O &amp; M) Plan. The Permittee shall keep copies of the O &amp; M Plan available onsite for use by staff and MPCA staff.</p>	Minn. R. 7007.0800, subps. 2 and 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-22** 08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

CE 009 Pressure Differential: Greater than or equal to 5 inches w.c.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
CE 009 Water Flow Rate: Greater than or equal to 50 gallons per minute.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
MONITORING AND RECORDKEEPING - APPLY AFTER CE 026 STARTUP	hdr
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop and water flow rate for CE 009, as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when CE 009 is in operation.	40 CFR Section 64.7(b); Minn. R. 7017.0200
Daily Inspections: Once each calendar day when EU 028 is operating, the Permittee shall read and record the following:  1. the CE 009 pressure differential; 2. the CE 009 water flow rate.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14; 40 CFR Section 64.3; Minn. R. 7017.0200
Recordkeeping of CE 009 Pressure Drop and Water Flow Rate: The Permittee shall record the time and date of each pressure drop reading and water flow rate reading, and whether or not the observed value was within the range specified in this permit. Recorded values outside the range specified in this permit are considered deviations as defined by Minn. R. 7007.0100, subp. 8a.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5; 40 CFR Section 64.3; Minn. R. 7017.0200
Periodic Inspections: Once per calendar quarter, or at a frequency prescribed 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.	40 CFR Section 64.3; Minn. R. 7017.0200
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:  - the CE 009 pressure drop is below the required minimum; - the CE 009 water flow rate is below the permitted minimum; or - CE 009 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 009. The Permittee shall keep a record of the type and date of any corrective action taken.	40 CFR Section 64.7(d); Minn. R. 7017.0200
The Permittee shall calibrate or replace the CE 009 pressure differential and flow rate monitors at least annually and shall maintain a written record of any action resulting from the calibration or replacement.	40 CFR Section 64.3; Minn. R. 7017.0200
Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing pressure drop range, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring change.	40 CFR Section 64.7(e); Minn. R. 7017.0200
As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64:  1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and  2) Summary information on the number, duration, and cause for monitor downtime incidents.	40 CFR Section 64.9(a)(2); Minn. R. 7017.0200
The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.	40 CFR Section 64.9(b); Minn. R. 7017.0200
EMISSION LIMITS - APPLY ONLY BEFORE CE 026 STARTUP	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-23** 08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

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 (venturi scrubber), CE 022 (Tower B), and CE 023 (Tower C) 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 (Tower A) 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; Minn. R. 7007.3000; meets requirements of Minn. R. 7011.0715, subp. 1(A)
PM < 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 (venturi scrubber), CE 022 (Tower B), and CE 023 (Tower C) 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 (Tower A) 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; Minn. R. 7007.3000
OPERATING REQUIREMENTS - APPLY ONLY BEFORE CE 026 STARTUP	hdr
Vent all emissions from Rendering Machinery through CE 009 (venturi scrubber), and then CE 022 (Tower B) and CE 023 (Tower C). After CE 023 the Permittee has the option of routing emissions to CE 008 (Tower A) and then through SV 026, or bypass CE 008 and vent from CE 023 through SV 027.	Minn. R. 7007.0800, subp. 2
CE 009 (VENTURI SCRUBBER), CE 022 (TOWER B), AND CE 023 (TOWER C) CONTROL EQUIPMENT REQUIREMENTS - APPLY BEFORE CE 026 STARTUP	hdr
The Permittee shall operate and maintain CE 022 and CE 023 so that each achieves a control efficiency for Total Particulate Matter: greater than or equal to 85 percent control efficiency	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain CE 022 and CE 023 so that each achieves a control efficiency for PM < 10 micron: greater than or equal to 85 percent control efficiency	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain CE 009 so that the scrubber achieves a total control efficiency for Total Particulate Matter: greater than or equal to 94 percent control efficiency	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain CE 009 so that the scrubber achieves a total control efficiency for PM < 10 micron: greater than or equal to 84 percent control efficiency	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain CE 009, CE 022, and CE 023 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 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, CE 022, and CE 023 are in operation.	Minn. R. 7007.0800, subp. 4
CE 009, CE 022, and CE 023 Pressure Differential: Less than 5 inches wc for CE 022, less than 5 inches wc for CE 023, and not less than 5 inches wc for CE 009.	Minn. R. 7007.0800, subp. 14
CE 009, CE 022, and CE 023 Water Flow Rate: Not less than 20 gallons per minute for CE 022, not less than 30 gallons per minute for CE 023, and not less than 50 gallons per minute for CE 009.	Minn. R. 7007.0800, subp. 14
CE 009, CE 022, and CE 023 Daily Monitoring: Once each day of operation, the Permittee shall monitor and record the pressure differential and water flow rate for CE 009, CE 022, and CE 023.	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, CE 022, and CE 023. 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 CE 009, CE 022, or CE 023 is below the required minimum; - the water flow rate of CE 009, CE 022, or CE 023 is below the permitted minimum; or - CE 009, CE 022, or CE 023 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 CE 009, CE 022, or CE 023. 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****A-24**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item:** EU 051 Emergency RICE(s)**Associated Items:** GP 001 SO2 and NOx Limits

SV 044 Emergency RICE(s) (EU 051)

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/naphtha, butane, liquified petroleum gases (LPG), 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/naphtha (gallons), butane (gallons), liquified petroleum gases (LPG) (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/naphtha (gallons), butane (gallons), liquified petroleum gases (LPG) (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. 7007.3000; 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 EU 051 NOx emissions during the previous calendar month using the following equation:  $\text{NOx} = (\text{Fa} * \text{Ha}) + (\text{Fb} * \text{Hb}) + (\text{Fc} * \text{Hc}) + (\text{Fd} * \text{Hd}) + (\text{Fe} * \text{He}) + (\text{Ff} * \text{Hf})$ (continued)	Minn. R. 7007.0800, subp. 4 and 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-25**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

<p>where:</p> <p>NOx = EU 051 pounds NOx/month</p> <p>Fa = diesel fuel emission factor</p> <p>Ha = diesel fuel heat input</p> <p>Fb = natural gas emission factor</p> <p>Hb = natural gas heat input</p> <p>Fc = gasoline emission factor</p> <p>Hc = gasoline heat input</p> <p>Fd = propane/liquified petroleum gases (LPG) emission factor</p> <p>Hd = propane/liquified petroleum gases (LPG) heat input</p> <p>Fe = kerosene/naphtha emission factor</p> <p>He = kerosene/naphtha heat input</p> <p>Ff = butane emission factor</p> <p>Hf = butane heat input</p> <p>All heat inputs 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 than the appendix.</p>	<p>Minn. R. 7007.0800, subp. 4 and 5</p>
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**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-26**

08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item:** EU 087 Regenerative Thermal Oxidizer (CE 026)**Associated Items:** SV 058 Regenerative Thermal Oxidizer (CE 026)

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0610, subp. 1(A)(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.	Minn. R. 7011.0610, subp. 1(A)(2)
Permitted fuel: natural gas only. Combustion of only natural gas ensures compliance with Minn. R. 7011.0715, subp. 1.A.	Minn. R. 7007.0800, subp. 2

**TABLE B: SUBMITTALS**

B-1 08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin  
Permit Number: 09900002 - 010

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 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

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.

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

Send any application for a permit or permit amendment to:

AQ Permit Document Coordinator  
Industrial 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 Document Coordinator 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:

AQ Compliance Tracking Coordinator  
Industrial Division  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS****B-2** 08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup of CE 026/EU 087 or 15 days after permit issuance, whichever is later. The notification shall specify the date that fuel was first combusted by CE 026/EU 087.	SV058
Testing Frequency Plan	due 60 days after Initial Performance Test for PM and PM2.5 emissions. The plan shall specify a testing frequency based on the initial performance test results for PM and PM2.5 and MPCA guidance. Future performance tests at 12-month, 36-month, or 60-month intervals, or as applicable, shall be required upon written approval of the test frequency plan.	SV058
Testing Frequency Plan	<p>due 60 days after Performance Test for determining opacity. The plan shall specify a testing frequency for opacity based on the opacity performance test (due 11/03/2014) data and MPCA guidance. Future performance tests based on 12-month, 36-month, or 60-month intervals, or as applicable, shall be required upon written approval of the plan by the MPCA.</p> <p>Future testing shall be conducted on a unit not previously tested. After testing all units, testing shall be conducted on the unit whose previous test is least current.</p>	GP011
Testing Frequency Plan	<p>due 60 days after Performance Test for determining the NOx lb/hr emission factor. The plan shall specify a testing frequency for NOx based on the NOx emission factor performance test (due 11/03/2012) data and MPCA guidance. Future performance tests based on 12-month, 36-month, or 60-month intervals, or as applicable, shall be required upon written approval of the plan by the MPCA.</p> <p>Future testing shall be conducted on a unit not previously tested. After testing all units, testing shall be conducted on the unit whose previous test is least current.</p>	GP011



**TABLE B: RECURRENT SUBMITTALS****B-3** 08/16/11

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

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

## APPENDICES

Facility Name: Hormel Foods Corp./QPP - Austin

Permit Number: 09900002-010

### 1. 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/naphtha	3.474	0.135 mmBtu/gallon
Propane/ Liquid Petroleum Gas	1.519	0.0915 mmBtu/gallon
Butane	1.355	0.1026 mmBtu/gallon

Conversion of Fuel Volume to Heat Input:

$F_v * F_h$  = Fuel Heat Input (mmBtu/month)

Where:

$F_v$  = volume of fuel used (gallons or cubic feet per month)

$F_h$  = fuel heat content as listed above (mmBtu/gallon or mmBtu/cubic foot)

### 2. Insignificant Activities Required to be Listed

Minn. R. 7007.1300, subp.	Activity	Applicable Minn. R. Standard
3.A	Space Heaters - N Holding Pen 2 @0.32 mmBtu/hr	7011.0515 PM and opacity
3.A.	Shop Space Heater 0.75 mmBtu/hr	7011.0515 PM and opacity
3.A.	Break Room Space Heater 0.125 mmBtu/hr	7011.0515 PM and opacity
3.E(1)	500 gallon gasoline tank at QPP	
3.F	Laundry units 2 @0.25 mmBtu/hr & 2 @0.20 mmBtu/hr	7011.0515 PM and opacity
3.H(3)	4 welding stations and several portable welders	7011.0715 PM and opacity
3.I	Nine vacuum pump vents	7011.0715 PM and opacity
3.I	GP Salt System	7011.0715 PM and opacity
3.I	GP Sugar System	7011.0715 PM and opacity
3.I	12 smoked meat/prepared sausage ovens w/smoke flavor spray	7011.0610 PM and opacity
3.I	Precooked Bacon Oven Room Vent	7011.0715 PM and opacity
3.I	Three vacuum pump vents	7011.0715 PM and opacity
3.I	MP Salt System	7011.0715 PM and opacity
3.I	17 dry sausage ovens	7011.0715 PM and opacity
3.I	Two vacuum pump vents	7011.0715 PM and opacity
3.I	Two 200,000 gallon fuel oil tanks	7011.1505
3.I	One 100,000 gallon fuel oil tank	7011.1505
3.I	One 500 gallon diesel fuel tank @QPP	
3.I	One 200,000 gallon lard tank - steam heated	
3.I	One 200,000 gallon tallow tank - steam heated	

## APPENDICES

Facility Name: Hormel Foods Corp./QPP - Austin

Permit Number: 09900002-010

Minn. R. 7007.1300, subp.	Activity	Applicable Minn. R. Standard
3.l	Five dehairing room vents	
3.l	KC-7 MAH @2.16 mmBtu/hr	7011.0515 PM and opacity
3.l	Kill Floor MAU @1.0 mmBtu/hr	7011.0515 PM and opacity
3.l	Dessicant Air Handler @0.273 mmBtu/hr	7011.0515 PM and opacity
3.l	RWO MAU @0.243 mmBtu/hr	7011.0515 PM and opacity
3.l	Drench Cabinet MAU @0.21 mmBtu/hr	7011.0515 PM and opacity
3.l	Pig Skin Salt System	7011.0715 PM and opacity
3.l	Office boiler @0.396 mmBtu/hr	7011.0515 PM and opacity
3.l	Rendering MAU @2.17 mmBtu/hr	7011.0515 PM and opacity
3.l	Hog Hair Hydrolyzer	7011.0715 PM and opacity
3.l	New Boiler Room MAU @1.361 mmBtu/hr	7011.0515 PM and opacity
3.l	Natural Gas Standby Generator	7011.2300 SO <sub>2</sub> and opacity
4	Three vapor smoke generators	7011.0715 PM and opacity
4	Old Boiler Room MAU @5.616 mmBtu/hr	7011.0515 PM and opacity
4	Two Radiant Wall Ovens @3.0 mmBtu/hr each	7011.0610 PM and opacity
4	Hog Hair Singer #1 @8 mmBtu/hr	7011.0715 PM and opacity
4	Hog Hair Singer #2 @6.5 mmBtu/hr	7011.0715 PM and opacity
4	KC-9 MAH @5.612 mmBtu/hr	7011.0515 PM and opacity
4	Two Rendering MAH @2.48 mmBtu/hr each	7011.0515 PM and opacity
4	Room Air - Blood/Bone Drying	7011.0715 PM and opacity
4	Dock Area Room Air	7011.0715 PM and opacity
4	Dock Area Surface Vents	7011.0715 PM and opacity
4	Two Hog Cut Space Heaters @ 4mmBtu/hr each	7011.0515 PM and opacity
4	Two Pretreatment Space Heaters @ 2.313 mmBtu/hr each	7011.0515 PM and opacity
4	Two Front End Kill Space Heaters @3.255 mmBtu/hr each	7011.0515 PM and opacity
Minn. R. 7008.4110	Maintenance grinding & sawdust cyclone vented indoors 100% of the time	7011.0715 PM and opacity

### 3. GP 011 Modeling Parameters

stack/vent number	emission unit	stack height (feet)	flow rate (acfm)	stack diameter (feet)	stack temperature °F	UTM Easting (m)	UTM Northing (m)	NOx lb/hr
SV 051	EU 080	35	15185	1.33	835	502805.2	4835695.6	48.92
SV 052	EU 081	35	15185	1.33	835	502805.2	4835791.0	48.92
SV 053	EU 082	35	15185	1.33	835	502805.2	4835814.5	48.92
SV 054	EU 083	35	15185	1.33	835	502805.2	4835838.0	48.92
SV 055	EU 084	35	15185	1.33	835	502797.0	4836094.5	48.92
SV 056	EU 085	35	15185	1.33	835	502797.0	4836102.3	48.92
SV 057	EU 086	35	15185	1.33	835	502797.0	4836110.1	48.92

### 4. Greenhouse Gas Emission Calculation Equations and Combustion Unit Inventory

## APPENDICES

Facility Name: Hormel Foods Corp./QPP - Austin

Permit Number: 09900002-010

Heat Contents and CO<sub>2</sub>e emission factors obtained from part 98 subp. C Table C-1 and C-2

Equation 1.

$$\text{CO}_2\text{e} = [(\text{NG} \times 1028 \times 117.0036) + (\text{RO} \times 150 \times 166.1159) + (\text{UO} \times 135 \times 163.6908) + (\text{RAF} \times 125 \times 156.7864) + (\text{EU 051 CO}_2\text{e}) + (\text{DO} \times 138 \times 163.6026)] / 2000$$

Where:

CO<sub>2</sub>e = monthly total facility CO<sub>2</sub>e (tons/month)

NG = total facility monthly natural gas usage (mmcf/month)

1028 = natural gas heat content (mmBtu/mmcf)

117.0036 = total natural gas CO<sub>2</sub>e factor for CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> emissions (lb/mmBtu)

RO = total facility monthly residual oil usage (1000 gallons/month)

150 = residual oil heat content (mmBtu/1000 gallons)

166.1159 = total residual oil CO<sub>2</sub>e factor for CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> emissions (lb/mmBtu)

UO = total facility monthly used oil usage (1000 gallons/month)

135 = used oil heat content (mmBtu/1000 gallons)

163.6908 = total used oil CO<sub>2</sub>e factor for CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> emissions (lb/mmBtu)

RAF = total facility monthly refined animal fat usage (1000 gallons/month)

125 = refined animal fat heat content (mmBtu/1000 gallons)

156.7864 = total refined animal fat CO<sub>2</sub>e factor for CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> emissions (lb/mmBtu)

EU 051 CO<sub>2</sub>e = total EU 051 CO<sub>2</sub>e emissions from LPG, propane, butane, gasoline, and naphtha/kerosene calculated with Equation 2 (lb/month)

DO = total facility monthly No. 2 distillate oil (diesel fuel in peaking generators) usage (1000 gallons/month)

138 = distillate oil heat content (mmBtu/1000 gallons)

163.6026 = total No. 2 distillate oil CO<sub>2</sub>e factor for CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> emissions (lb/mmBtu)

Equation 2.

$$\text{EU 051 CO}_2\text{e} = [(\text{LPG} \times 92 \times 139.3959) + (\text{P} \times 91 \times 136.0449) + (\text{B} \times 101 \times 144.1799) + (\text{G} \times 125 \times 155.3574) + (\text{NK} \times 135 \times 159.7666)]$$

Where:

EU 051 CO<sub>2</sub>e = monthly EU 051 CO<sub>2</sub>e from LPG, butane, gasoline, and naphtha/kerosene (lb/month)

LPG = EU 051 monthly LPG usage (1000 gallons/month)

92 = LPG heat content (mmBtu/1000 gallons)

139.3959 = total LPG CO<sub>2</sub>e factor for CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> emissions (lb/mmBtu)

P = EU 051 monthly propane usage (1000 gallons/month)

91 = propane heat content (mmBtu/1000 gallons)

136.0449 = total propane CO<sub>2</sub>e factor for CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> emissions (lb/mmBtu)

B = EU 051 monthly butane usage (1000 gallons/month)

101 = butane heat content (mmBtu/1000 gallons)

144.1799 = total butane CO<sub>2</sub>e factor for CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> emissions (lb/mmBtu)

G = EU 051 monthly gasoline usage (1000 gallons/month)

125 = gasoline heat content (mmBtu/1000 gallons)

155.3574 = total gasoline CO<sub>2</sub>e factor for CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> emissions (lb/mmBtu)

NK = EU 051 monthly naphtha usage (1000 gallons/month)

# APPENDICES

Facility Name: Hormel Foods Corp./QPP - Austin

Permit Number: 09900002-010

135 = naphtha/kerosene heat content (mmBtu/1000 gallons)

159.7666 = total naphtha/kerosene CO<sub>2</sub>e factor for CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> emissions (lb/mmBtu)

## HORMEL COMBUSTION EQUIPMENT LIST

Emission Unit ID #	Equipment	Max Firing Rate (mmBtu/hr)	Permitted or Design Fuel
Group 012			
EU001	Boiler 1	49.00	NG, FO #6, Used oil, RAF (refined animal fat)
EU002	Boiler 2	49.00	NG, FO #6, Used oil, RAF
EU003	Boiler 3	49.00	NG, FO #6, Used oil, RAF
EU004	Boiler 4	25.10	NG, FO #6, Used oil, RAF
EU005	Boiler 5	7.14	Natural Gas
EU044	Boiler 6	29.40	NG, RAF
EU045	Boiler 7	29.40	NG, RAF
Group 011			
EU080	Generator 1	18.03	FO #2 (No. 2 distillate oil)
EU081	Generator 2	18.03	FO #2
EU082	Generator 3	18.03	FO #2
EU083	Generator 4	18.03	FO #2
EU084	Generator 5	18.03	FO #2
EU085	Generator 6	18.03	FO #2
EU086	Generator 7	18.03	FO #2
EU051	Emergency Generator	4.19	Gasoline, FO #2, NG, kerosene, butane, propane (LPG)
IA EU078	Emergency Generator	1.30	Natural Gas
Other NG Sources			
	Ovens (1.5 mmBtu/hr each * 12 ovens)	18.00	Natural Gas
	Scott Bone Dryer	9.00	Natural Gas
	Duske Blood Dryer	3.50	Natural Gas
	Singer #1	8.00	Natural Gas
	Singer #2	6.50	Natural Gas
	Radiant Wall Oven (1st)	3.00	Natural Gas
	Laundry (2)	0.50	Natural Gas
	Laundry (2)	0.40	Natural Gas
	Livestock Office Boiler	0.40	Natural Gas
	Hog Cut (2)	8.00	Natural Gas
	Pretreatment (2)	4.63	Natural Gas
	Front End Kill (2)	6.51	Natural Gas
	N. Holding Pen (2)	0.64	Natural Gas
	Shop	0.75	Natural Gas
	KC-9	5.62	Natural Gas
	KC-7	2.16	Natural Gas

APPENDICES

Facility Name: Hormel Foods Corp./QPP - Austin

Permit Number: 09900002-010

Emission Unit ID #	Equipment	Max Firing Rate (mmBtu/hr)	Permitted or Design Fuel
	MP-11 Belt Grill	0.28	Natural Gas
	RWO	0.24	Natural Gas
	Rendering (2)	4.95	Natural Gas
	Corvette Building	0.21	Natural Gas
	Old Boiler Room	5.62	Natural Gas
	New Boiler Room	1.36	Natural Gas
	Break Room QPP	0.21	Natural Gas
	Break Room QPP	0.13	Natural Gas
	Kill Floor (Sticking)	1.00	Natural Gas
	Rendering	2.17	Natural Gas
	MP-130 Desiccant Unit	0.86	Natural Gas
	Trim/Blend Desiccant	0.36	Natural Gas
	QPP Office MAU1	0.26	Natural Gas
	QPP Office RTU1	0.39	Natural Gas
	QPP Office RTU2	0.27	Natural Gas
	QPP Office RTU3	0.57	Natural Gas
	QPP Office RTU4	0.78	Natural Gas
	QPP Office water htrs	1.50	Natural Gas
	DS 11 Hall Desiccant	0.40	Natural Gas
	Livestock Boilers (2)	6.00	Natural Gas

APPENDICES

Facility Name: Hormel Foods Corp./QPP - Austin

Permit Number: 09900002-010

**CAM Submittal**

**Hormel Foods Corporation**

April 13, 2011

I. Background

A. Emission Unit

Description:	Rendering Room Air
Identification:	EU027
APCD ID:	CE008, Packed-Gas Adsorption Column
Facility:	Austin, Minnesota

B. Applicable Regulation, Emissions Limit, and Monitoring Requirements

Regulation: Title I Condition: To limit potential PM emissions to less than major source levels as defined by 40 CFR 52.21; Minn. R. 7007.3000; meets requirements of Minn. R. 7011.0715, subp. 1(A)

Emissions Limits:

Particulate Matter (PM):	8.38 lb/hr (based on state process equipment rule)
PM <sub>10</sub> :	8.38 lb/hr (based on state process equipment rule)

Monitoring Requirements: Pressure differential, water flow rates and quarterly inspections.

C. Control Technology:

Packed-Gas Adsorption Column

APPENDICES

Facility Name: Hormel Foods Corp./QPP - Austin

Permit Number: 09900002-010

II. Monitoring Approach:

The key elements of the monitoring approach are presented in the table below:

	Indicator No. 1	Indicator No. 2	Indicator No. 3
I. Indicator Measurement Approach	Pressure Differential	Water Flow Rate	Work practice
II. Indicator Range	A deviation is defined as pressure differential less than 5 inches wc. Deviations trigger an inspection, corrective action, and a reporting requirement.	A deviation is defined as a water flow rate less than 100 gal/min. Deviations trigger an inspection, corrective action, and a reporting requirement.	A deviation is defined as failure to perform inspection quarterly or at the frequency prescribed by the manufacturer.
Performance Criteria	Not applicable	Not applicable	Not applicable
a. Data Representativeness			
b. Verification of Operational Status	The monitoring equipment must be in use and properly maintained when CE 008 is in operation	The monitoring equipment must be in use and properly maintained when CE 008 is in operation	Not applicable
c. QA/QC Practices and Criteria	Not applicable	Not applicable	Not applicable
d. Monitoring Frequency	Instantaneous. The pressure differential is recorded once each day when in operation.	Instantaneous. The water flow rate is recorded once each day when in operation.	Inspection of the control equipment components quarterly or at the frequency prescribed by the manufacturer.
Data Collection Procedures	The operator records the pressure drop and whether or not the reading was within the range specified once per day when in operation.	The operator records the water flow rate and whether or not the reading was within the range specified once per day when in operation.	Record results quarterly or at the frequency prescribed by the manufacturer.
Averaging Period	Not applicable	Not applicable	Not applicable



## APPENDICES

Facility Name: Hormel Foods Corp./QPP - Austin

Permit Number: 09900002-010

### III. Basis and Implementation

The proposed monitoring approach is based on the currently applicable requirements.

The data listed in the monitoring approach is already addressed in the current permit and the facility air pollution control equipment maintenance plan.

### IV. Rationale for Selection of Indicator Ranges

Indicator ranges for the pressure differential and water flow rate have been developed based on the manufacturer's design operating guidelines.

# APPENDICES

Facility Name: Hormel Foods Corp./QPP - Austin

Permit Number: 09900002-010

## CAM Submittal

### Hormel Foods Corporation

May 10, 2011

#### I. Background

##### A. Emission Unit

Description: Regenerative Thermal Oxidizer

Identification: EU028, 036, 050

APCD ID: CE 026

Facility: Austin, Minnesota

##### B. Applicable Regulation, Emissions Limit, and Monitoring Requirements

Regulation: Title I Condition: To limit potential PM emissions to less than major source levels as defined by 40 CFR 52.21; Minn. R. 7007.3000; meets requirements of Minn. R. 7011.0715, subp. 1(A)

Emissions Limits:

Particulate Matter (PM): 6.37 lb/hr (based on state process equipment rule)

PM<sub>10</sub>: 6.37 lb/hr (based on state process equipment rule)

Monitoring Requirements: Regenerative thermal oxidizer combustion chamber temperature and annual inspections.

##### C. Control Technology:

Regenerative thermal oxidizer

	Indicator No. 1	Indicator No. 2
I. Indicator Measurement Approach	Combustion chamber temperature	Work practice
	The combustion chamber temperature is monitored with a thermocouple.	Inspection and maintenance of burner.
II. Indicator Range	An excursion is defined as temperature readings less than 1350 deg F. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as failure to perform annual inspection
Performance Criteria a. Data Representativeness	The sensor is located in the incinerator chamber as in integral part of the design. The minimum tolerance of the thermocouple is $\pm 10.0$ deg F or $\pm 0.75\%$ .	Not applicable
b. Verification of Operational Status	Not applicable	Not applicable
c. QA/QC Practices and Criteria	Accuracy of the thermocouple will be verified by a second or redundant thermocouple probe inserted into the	Not applicable

## APPENDICES

Facility Name: Hormel Foods Corp./QPP - Austin

Permit Number: 09900002-010

### II. Monitoring Approach:

The key elements of the monitoring approach are presented in the table below:

#### I. Background

##### A. Emission Unit

Description: Regenerative Thermal Oxidizer

Identification: EU028, 036, 050

APCD ID: CE 026

Facility: Austin, Minnesota

##### B. Applicable Regulation, Emissions Limit, and Monitoring Requirements

Regulation: Title I Condition: To limit potential PM emissions to less than major source levels as defined by 40 CFR 52.21; Minn. R. 7007.3000; meets requirements of Minn. R. 7011.0715, subp. 1(A)

Emissions Limits:

Particulate Matter (PM): 6.37 lb/hr (based on state process equipment rule)

PM<sub>10</sub>: 6.37 lb/hr (based on state process equipment rule)

Monitoring Requirements: Regenerative thermal oxidizer combustion chamber temperature and annual inspections.

##### C. Control Technology:

Regenerative thermal oxidizer

	Indicator No. 1	Indicator No. 2
I. Indicator Measurement Approach	Combustion chamber temperature	Work practice
	The combustion chamber temperature is monitored with a thermocouple.	Inspection and maintenance of the burner.
II. Indicator Range	An excursion is defined as temperature readings less than 1350	An excursion is defined as failure to perform annual inspection

### III. Basis and Implementation

The proposed monitoring approach is based on the currently applicable requirements.

The data listed in the monitoring approach is already addressed in the enclosed permit application.

## APPENDICES

Facility Name: Hormel Foods Corp./QPP - Austin

Permit Number: 09900002-010

### IV. Rationale for Selection of Indicator Ranges

The incinerator chamber temperature was selected because it is indicative of a thermal incinerator operation. If the chamber decreases significantly, complete combustion may not occur.

The work practice comprised of an annual inspection and tuning of the incinerator burner was selected because an inspection verifies equipment integrity and periodic tuning will maintain proper burner operation and efficiency.

Indicator ranges for the combustion chamber temperature has been developed based on the manufacturer's design operating guidelines.

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**AIR EMISSION PERMIT NO. 09900002-010**

This Technical Support Document (TSD) is intended for all parties interested in the permit and to meet the requirements that have been set forth by the federal and state regulations (40 CFR § 70.7(a)(5) and Minn. R. 7007.0850, subp. 1). The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the preliminary determination to issue the draft/proposed permit.

**1. General Information**

**1.1 Applicant and Stationary Source Location:**

**Table 1. Applicant and Source Address**

Applicant/Address	Stationary Source/Address (SIC Code: 2013/2011)
Hormel Foods Corporation 1 Hormel Place Austin, MN 55912-3680	Hormel Foods Corporation 500 14 <sup>th</sup> Avenue Northeast Austin, Mower County
Contact: Rich Johnson Phone: (507) 437-5955 rrjohnson@hormel.com	

**1.2 Facility Description**

Hormel Foods Corporation (Permittee) operates a meat processing plant (Facility) in Austin, Minnesota. At the Facility, Quality Pork Processor (QPP) processes hogs, and the Permittee manufactures the hogs into ham, bacon, dry sausage, fresh sausage, SPAM<sup>®</sup>, and other meat products. Byproducts consist of blood, cracklings, bone meal, and choice white grease (a component of a broader category of substances known as Refined Animal Fats). QPP is a co-permittee however Hormel Foods owns all equipment and operates the majority of it; QPP only operates some of the emissions equipment (insignificant combustion sources) in the processing area.

**1.3 Description of the Activities Allowed by this Permit Action**

This is a major amendment to the title V operating permit to authorize installation of a regenerative thermal oxidizer (RTO; CE 026/EU 087), retirement of three packed tower scrubbers, and re-routing of emissions from rendering machinery, and bone and blood meal dryers. The RTO will replace existing packed tower scrubbers CE 022, CE 023, and CE 024 (packed towers B, C, and E, respectively) that control condensable particulate matter and VOC emissions from rendering machinery (EU 028), a blood dryer (EU 050) and a bone meal dryer (EU 036). This permit also removes EU 071, CE 019, and SV 045 from GP 010 because EU 071 will no longer be able to vent through CE 018/SV 033 (control equipment and stack/vent for EU 050 blood dryer prior to RTO installation and emission re-routing) after RTO installation. EU 071 is apparently an insignificant activity (that will continue to vent through CE 019/SV 045); it is room air scrubbing in the blood/bone meal dryers area and no emission factors are available however it is likely that uncontrolled potential PM<sub>10</sub> or VOC emissions do not exceed the threshold in Minn. R. 7007.1300, subp. 3.I. In addition, the applicable Minnesota Standard of Performance for GP 010

dryers is corrected from the industrial process rule (Minn. R. 7011.0700 – 7011.0735) to the direct heating equipment rule (Minn. R. 7011.0600 – 7011.0625) because the dryers are direct-fired heating equipment.

This permit action also adds a total facility 94,700 ton per year CO<sub>2</sub>e limit to maintain minor source status under New Source Review. This limit applies to all fuel combustion CO<sub>2</sub> e but does not include the potential 3319 tpy CO<sub>2</sub>e emissions from CE 026 combustion of odorous hydrocarbons.

Finally, this permit action adds GP 003 PM and opacity testing (due October 16, 2011 and thereafter at 60-month intervals unless/until revised by future test results) as specified in the August 9, 2007 MPCA test frequency approval letter, clarifies that the GP 012 used oil analysis frequency is 60 months, and updates the total facility requirement pertaining to operating limits established through performance testing. This permit action also updates the NO<sub>x</sub> emission factor and opacity testing requirements for GP 011 peaking generators based on a January 14, 2010 Notice of Compliance.

#### 1.4. Facility Emissions:

**Table 2. Title I Emissions Increase Summary**

<b>Pollutant</b>	<b>Unlimited Potential Emissions from Modification (tpy)</b>	<b>Limited Potential Emissions from the Modification (tpy)</b>	<b>NSR/112(g) Threshold for New Major Source (tpy)</b>	<b>NSR/ 112(g) Review Required? (Yes/No)</b>
PM	0.26	0.26	250	NO
PM <sub>10</sub>	0.26	0.26	250	NO
PM <sub>2.5</sub>	0.26	0.26	250	NO
NO <sub>x</sub>	3.44	3.44	250	NO
SO <sub>2</sub>	0.02	0.02	250	NO
CO	2.89	2.89	250	NO
Ozone (VOC)	0.19	0.19	250	NO
Lead	0	0	250	NO
CO <sub>2</sub> e*	7441	7441	100,000	NO
Hexane/ Total HAPs	0.06/0.06	0.06/0.06	10/25	NO

\*Carbon dioxide equivalents as defined in Minn. R. 7007.0100.

**Table 3. Facility Classification**

<b>Classification</b>	<b>Major/Affected Source</b>	<b>Synthetic Minor</b>	<b>Minor</b>
PSD		PM, PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO, CO <sub>2</sub> e, VOC	
Part 70 Permit Program	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO	VOC	
Part 63 NESHAP			single and total HAPs

## **2. Regulatory and/or Statutory Basis**

### New Source Review

The Facility is an existing minor source under New Source Review regulations. Changes authorized by this permit will not change this status. This permit action adds a 94,700 tpy (12-month rolling sum) CO<sub>2</sub>e limit to continue to maintain minor source status for NSR as requested by the Permittee.

### Part 70 Permit Program

The Facility is a major source under the Part 70 permit program.

### New Source Performance Standards (NSPS)

The changes authorized by this permit action are not subject to any NSPS.

### National Emission Standards for Hazardous Air Pollutants (NESHAP)

HAP emissions from the entire Facility after the modification will remain less than the major source level as defined under 40 CFR pt. 63, and no the facility is not subject to any area source NESHAPs. Therefore no NESHAPs apply.

### Compliance Assurance Monitoring (CAM)

CAM applies to the rendering machinery and rendering room air particulate matter (PM and PM<sub>10</sub>) and VOC emissions. The Permittee has submitted CAM plans for these sources, and the plans are incorporated into and attached to the permit by this permit action.

### Environmental Review & AERA

No environmental review or risk analysis is triggered by this major amendment.

### Minnesota State Rules

Proposed changes at the Facility are subject to the following Minnesota Standards of Performance:

- Minn. R. 7011.0610 Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment
- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment

**Table 4. Regulatory Overview of Units Affected by the Modification/Permit Amendment**

<b>Subject Item*</b>	<b>Applicable Regulations</b>	<b>Comments:</b>
Total Facility	Title I Condition: limit to avoid major source status for GHG	Permittee has elected to impose a 94,700 tpy CO <sub>2</sub> e limit to avoid NSR major source status
SV 058 (EU 087/ CE 026)	Title I Conditions PM, PM <sub>10</sub> , PM <sub>2.5</sub> , and VOC limits; Minn. R. 7007.0800, subp. 2 Minn. R. 7011.0610	Limits to avoid NSR major source status  Self-imposed more restrictive than IPER PM limit Standards of Performance for Direct Heating Equipment
EU 028 (SV 058)	Minn. R. 7011.0715	Standards of Performance for Post-1969 Industrial Process Equipment
EU 036, EU 050 (SV 058)	Minn. R. 7011.0610	Standards of Performance for Direct Heating Equipment

\*Location of requirement in the permit

### **3. Technical Information**

Rendering Emission Factors: Rendering process emission factors are not available from AP-42 or any other source. Nor is there any available factor from a similar process. As a result and as has been done in the past, the MPCA accepts the Permittee's use of the industrial process rule limit calculated using Table 2 at Minn. R. 7011.0735 as the basis for back-calculating an uncontrolled PM emission factor.

Note the PM limit based on Table 2 is more restrictive than the limit based on Table 1 at Minn. R. 7011.0730. The Permittee has opted to use the Table 2 method because they consider it a more accurate determination of emissions than the limit based on Table 1, due to the uncertainty of the process weight capacity for the rendering machinery.

The MPCA also accepts that Permittee's assumptions that all rendering emissions are condensable particulate matter, and that all condensable particulate matter is smaller than 2.5 microns and are also volatile organic compounds. The Permittee also elects to subject the entire RTO emissions from SV 058 (which include rendering (EU 028), bone drying (EU 036), and blood drying (EU 050) emissions) to the PM limit based on Table 1 of the industrial process equipment rule, and the PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC limits based on the above-described assumptions.

**3.1 Emission Calculations** - Attached to this TSD.

**3.2 Periodic and Compliance Assurance Monitoring (CAM)**

New periodic monitoring requirements are imposed by this permit action for tracking monthly CO<sub>2</sub>e emissions for determining compliance with the 94,700 tpy CO<sub>2</sub>e limit. This permit retains GP 010 existing periodic monitoring requirements for packed tower scrubbers CE 019 (a control equipment/venting option for GP 010 dryers; CE 019 will continue to control EU 071 which is an insignificant activity) and CE 024 but the permit indicates that the requirements are no longer effective upon CE 026 startup. EU 028 periodic monitoring requirements for packed tower scrubbers CE 022 and CE 023 were also revised to indicate they are no longer effective upon CE 026 startup. This permit action also imposes new CAM requirements for EU 027 and EU 028.



The Permittee submitted a CAM proposal for EU 028/CE 026 as part of the application for CE 026 installation. During permit drafting it became evident that CAM applicability was overlooked by the current title V re-issuance permit No. 09900002-008 issued 11/2/05 for CE 009 (venturi scrubber on EU 028) and CE 008 (packed tower scrubber on EU 027). Both EU 027 and EU 028 are 'other' pollutant specific emission units. As a result the MPCA requested the Permittee submit a CAM plan for EU 028/CE 009 and for EU 027/CE 008, as required by 40 CFR § 64.3. The plans are included as Attachment 4 to this TSD.

Table 5 contains additional discussion regarding these periodic monitoring CAM requirements.

**Table 5. Periodic and Compliance Assurance Monitoring**

Subject Item*	Requirement (rule basis)	Additional Monitoring	Discussion
Total Facility	CO <sub>2</sub> e: ≤94,700 tpy (12-month rolling sum) Title I Condition: limit to avoid major source status for GHG	Monthly monitoring and recordkeeping of all CO <sub>2</sub> e emitting activities	Emissions are from combustion sources primarily in GP 011 and GP 012 however, all CO <sub>2</sub> e emissions except for the CO <sub>2</sub> from the RTO (CE 026/EU 087) conversion of odorous VOC emissions to CO <sub>2</sub> (potential emission approximately 3300 tpy), will be tracked and recorded as part of determining compliance with the limit.
SV 058/ EU 028  (CE 026/ EU 087)	6.34 lb/hr PM, PM <sub>10</sub> , PM <sub>2.5</sub> , and VOC (Title I Conditions PM, PM <sub>10</sub> , PM <sub>2.5</sub> , and VOC limits); ≤0.30 gr PM/dscf & Opacity: ≤ 20 % with exceptions (Minn. R. 7011.0610)	Continuous monitoring of regenerative thermal oxidizer (EU 087/CE 026) combustion chamber temperature, recordkeeping, O&M, and periodic inspections.	CE 026 (EU 087) capable of combusting only NG ensuring compliance with Minn. R. 7011.0610. Continuously maintaining temperature ≥1350F ensures complete combustion of condensable particulate matter/VOCs. Temperature records, proper O&M, and periodic inspections allow ongoing compliance determination. Initial performance testing required for PM <sub>2.5</sub> emissions to evaluate RTO performance. Only EU 028 is subject to CAM; not EU 036/EU 050 which also vent through CE 026/SV 058.
EU 028 (CE 009)	Vents to CE 026; refer to SV 058 CAM requirements above	Daily water flow rate and pressure drop monitoring, recordkeeping, O&M, and periodic inspections.	Replaced existing periodic monitoring requirements with CAM requirements. Water flow and pressure drop records, proper O&M and periodic inspections allow ongoing compliance determination.
EU 027 (CE 008)	Title I PM and PM <sub>10</sub> limits		

\*Location of requirement in the permit (e.g., EU, SV, GP, etc.)

### 3.3 Insignificant Activities

No changes to insignificant activities are authorized by this permit action.

### 3.4 Permit Organization

EU 028, EU 036, and EU 050 emissions are vented to venturi scrubbers. Emissions from the scrubbers will be vented to and controlled by the new RTO EU 087/CE 026. As a result, requirements for the scrubbers are located under the applicable emission unit. RTO requirements and SV 058 emission limits are found under the RTO stack/vent, SV 058.

### **3.5 Comments Received**

Public Notice Period: June 27, 2011 – July 26, 2011

EPA 45-day Review Period: June 27, 2011 – August 10, 2010

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

## **4. Permit Fee Assessment**

This is a major amendment based on an application initially received March 4, 2011. The application fee has been paid with the application. Additional points for establishing new Title I limits to avoid new source review major source status for SV 058 and the Total Facility apply to this permit action. Refer to attachment 3.

## **5. 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. 09900002-010 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team:     Marshall Cole (permit writer/engineer)  
   Jennifer Lovett (enforcement)  
   Jim Kolar (stack testing)  
   Peggy Bartz (peer reviewer)

AQ File No. 418; DQ 3410

Attachments:    1. Emission Calculations  
                         2. Facility Description and CD-01 Forms  
                         3. Points Calculator  
                         4. CAM Plans

Permit No.. 09900002-010

- 1) AQD Facility Number: 09900002
- 2) Company/Facility Name: Hormel Foods Corporation/Quality Pork Processors
- 3) Emission Unit Identification Number: EU036 - Bone Dryer
- 4) Stack/Vent Designation Number: SV058
- 5) Pollution Control Equipment Identification Number(s): CE026
- 6) Process Type: Batch Process ☐ Continuous Process ☒
- 7) Maximum Capacity: 3 dry ton/hr 12,000 lbs/hr @ 60% moisture
- 8) Source of Emission Factors used in table below: AP-42 Chapter 9.9.1 - Use Grain Drying - Rack Dryer as surrogate  
Since grain will be much dryer as a raw material, adjust weight to 10% moisture  
to compare to the emissions factor.

9) Calculations Summary:

a) Pollutant	b) Uncontrolled Emission Factor (lb/ton)	c) Emission Rate (lb/hr)	d) Maximum Uncontrolled Emissions (ton/yr)	e) Pollution Control Efficiency* (%)	f) Maximum Controlled Emissions (lb/hr)	g) Maximum Controlled Emissions (ton/yr)	h) Limited Controlled Emissions (tons/yr)	i) Actual Emissions (tons/yr)
<b>PM</b>	3.00	9.00	39.42	97.72%	0.21	0.90	0.90	See
<b>PM10</b>	0.75	2.25	9.86	93.92%	0.14	0.60	0.60	Emissions
<b>PM2.5</b>	0.13	0.39	1.71	62%	0.15	0.65	0.65	Inventory
<b>SOx</b>	na	na	na	na	na	na	na	na
<b>NOx</b>	na	na	na	na	na	na	na	na
<b>VOC</b>	unknown	0.00	0.00	97%	0.00	0.00	0.00	na
<b>CO</b>	na	na	na	na	na	na	na	na
<b>Lead</b>	na	na	na	na	na	na	na	na

\*Control efficiency for proposed RTO.

*It is unknown whether this process emits HAPs. It is assumed that any HAP emissions are negligible.*

Permit No.. 09900002-010

- 1) AQD Facility Number: 09900002
- 2) Company/Facility Name: Hormel Foods Corporation/Quality Pork Processors
- 3) Emission Unit Identification Number: EU050 - Blood Dryer
- 4) Stack/Vent Designation Number: SV058
- 5) Pollution Control Equipment Identification Number(s): CE026
- 6) Process Type: Batch Process X Continuous Process
- 7) Maximum Capacity: 1.65 ton/hr dried blood meal product
- 8) Source of Emission Factors used in table below: AP-42 Chapter 9.5.3 - Table 9.5.3-2, Controlled Blood Dryers  
\*\*Assume Condensible PM equal to VOC, no VOC data provided.

9) Calculations Summary:

a) Pollutant	b) Uncontrolled Emission Factor (lb/ton)	c) Emission Rate (lb/hr)	d) Maximum Uncontrolled Emissions (ton/yr)	e) Pollution Control Efficiency * (%)	f) Maximum Controlled Emissions (lb/hr)	g) Maximum Controlled Emissions (ton/yr)	h) Limited Controlled Emissions (tons/yr)	i) Actual Emissions (tons/yr)
<b>PM</b>	1.22	2.01	8.82	97.72%	0.05	0.20	0.20	See
<b>PM10</b>	0.46	0.76	3.32	93.92%	0.05	0.20	0.20	Emissions
<b>PM2.5</b>	0.46	0.76	3.32	62%	0.29	1.26	1.26	Inventory
<b>SOx</b>	na	na	na	na	na	na	na	na
<b>NOx</b>	na	na	na	na	na	na	na	na
<b>VOC**</b>	0.46	0.76	3.32	97%	0.02	0.10	0.10	na
<b>CO</b>	na	na	na	na	na	na	na	na
<b>Lead</b>	na	na	na	na	na	na	na	na

\*Control efficiency for proposed RTO.

It is unknown whether this process emits HAPs. It is assumed that any HAP emissions are negligible.

Substitute Permit Application Form **EC-08**  
**EXTERNAL COMBUSTION (BOILER)**  
**CALCULATION FORM**

Permit No.. 09900002-010

- 1) AOD Facility ID: 09900002  
 2) Facility Name: Hormel Foods  
 3) Emission Unit: Regenerative Thermal Oxidizer (CE 026/EU 087)  
 4) Stack/Vent Designation Number: SV 058  
 5) Maximum Rated Capacity: 8 million BTU/hr  
 6) Control Equipment: na  
 7) Fuel Paramaters  
 7a) Fuel Type: Natural Gas ONLY No secondary fuel  
 7b) % sulfur: na  
 7c) % ash: na  
 7d) Heat Value: 1020 Btu/cf  
 7e) Fuel Consumption Rate: 7843 cf/hr  
 Source of Emission Factors: AP-42 Chapter 1.4 - 0.3-100 MMBtu/hr

8) Calculations Summary:

F U E L  C O M B U S T I O N	8a)	8b)	8d)	8e)	8g)	na	8h)	8i)
	Pollutant	Emission Factor (lb/cf)	Emission Rate (lbs/hr)	Maximum Uncontrolled Emissions (tpy)	Pollution Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Limited Controlled Emissions (tons/yr)
	PM	0.0000076	0.060	0.26	0.00	0.060	0.26	0.26
	PM10	0.0000076	0.060	0.26	0.00	0.060	0.26	0.26
	PM2.5	0.0000076	0.060	0.26	0.00	0.060	0.26	0.26
	SOX	0.0000006	0.0047	0.0206	0.00	0.0047	0.0206	0.0206
	NOX	0.0001000	0.78	3.44	0.00	0.78	3.44	3.44
	VOC	0.0000055	0.043	0.189	0.00	0.043	0.19	0.19
	CO	0.0000840	0.66	2.89	0.00	0.66	2.89	2.89
	CO2	0.1200000	941.18	4122.35	0.00	941.18	4122.35	4122.35
O D O R  C O M B U S T I O N			Uncontrolled Emission Rate before RTO (lbs/hr )	Uncontrolled Emission Rate before RTO (tpy)	Conversion Rate (same as Pollution Control Efficiency)	Emission Rate after RTO (lbs/hr)	Emission Rate after RTO (tpy)	Limited Emission Rate after RTO (tpy)
	Process VOC		781.21	3421.69	97%			
	CO2*					757.77	3319.04	3319.04
						Total CO2e After RTO (lb/hr)	Total CO2e After RTO (tpy)	Limited Total CO2e After RTO (tpy)
	Total CO2e					1698.95	7441.39	7441.39

\* CO2e emissions from combustion of odorous hydrocarbons (based on mass balance of carbon in to CO2 out).  
 AP-42 Section 9.5.3, Meat Rendering Plant does not provide emission factors for hydrocarbons. Therefore, all VOC emissions from EU 028, EU036 and EU 050 are assumed to be hydrocarbons.

9), 10) - backup fuels - NA

11) worst case - see primary fuel

12) Operating Limitations, if applicable  
NA

	MW
C	12
O	16
CO2	44



MINNESOTA POLLUTION CONTROL AGENCY  
AIR QUALITY DIVISION  
520 LAFAYETTE ROAD  
ST. PAUL, MN 55155-4194

PERMIT APPLICATION FORM

EC-13C

**HAZARDOUS AIR POLLUTANTS  
CALCULATION FORM (FUEL COMBUSTION)**

5/27/1998

#N/A

Permit No.. 09900002-010

1) AQD Facility ID No.:	09900002
2) Facility Name:	Hormel Foods Corporation/Quality Pork Processors
3) Emission Unit Identification No.:	Regenerative Thermal Oxidizer (CE 026/EU 087)
4) Stack/Vent Designation No.:	SV 058
5) Maximum Rated Boiler Capacity:	8.00 MMBTU/hr
6) Control Equipment:	NA
7) Fuel Parameters	

7a) Fuel Type	7b) % Sulfur	7c) % Ash	7d) Heat Value	Units	7e) Maximum Fuel Consumption Rate	Units
Natural Gas	0.0001	negligible	1,020	Btu/scf	0.0078	MMscf/hr

When calculating Potential Emissions, use items 8a, 8b, 8d, 8e, 8g, 8h, and 8i (if a limit is proposed in item 12).

When calculating Actual Emissions, use items 8a, 8b, 8c, 8f, 8g, and 8j.

**8) Calculations Summary - Primary Fuel : Natural Gas**

8a) HAP Name (CAS)	8b) Emission Factor  (lbs/MMcf) <sup>a</sup>	8c) Actual Annual Fuel Use (MMcf)	8d) Emission Rate (lbs/hr)	8e) Maximum Uncontrolled Emissions (tons/yr)	8f) Actual Uncontrolled Emissions (tons/yr)	8g) Pollution Control Efficiency (%)	8h) Maximum Controlled Emissions (tons/yr)	8i) Limited Controlled Emissions (tons/yr)	8j) Actual Controlled Emissions (tons/yr)
Benzene (71-43-2)	2.1E-03	NA	1.6E-05	7.21E-05	NA	0.0	7.2E-05	7.2E-05	NA
Dichlorobenzene (25321-22-6)	1.2E-03	NA	9.4E-06	4.12E-05	NA	0.0	4.1E-05	4.1E-05	NA
Formaldehyde (50-00-0)	7.5E-02	NA	5.9E-04	2.58E-03	NA	0.0	2.6E-03	2.6E-03	NA
Hexane (110-54-3)	1.8E+00	NA	1.4E-02	6.18E-02	NA	0.0	6.2E-02	6.2E-02	NA
Naphthalene (91-20-3) <sup>b</sup>	6.1E-04	NA	4.8E-06	2.10E-05	NA	0.0	2.1E-05	2.1E-05	NA
Toluene (108-88-3)	3.4E-03	NA	2.7E-05	1.17E-04	NA	0.0	1.2E-04	1.2E-04	NA
Polycyclic Organic Matter (POM) <sup>c</sup>	8.6E-05	NA	6.8E-07	2.97E-06	NA	0.0	3.0E-06	3.0E-06	NA
Arsenic (7440-38-2)	2.0E-04	NA	1.6E-06	6.87E-06	NA	0.0	6.9E-06	6.9E-06	NA
Beryllium (7440-41-7)	1.2E-05	NA	9.4E-08	4.12E-07	NA	0.0	4.1E-07	4.1E-07	NA
Cadmium (7440-43-9)	1.1E-03	NA	8.6E-06	3.78E-05	NA	0.0	3.8E-05	3.8E-05	NA
Chromium (7440-47-3)	1.4E-03	NA	1.1E-05	4.81E-05	NA	0.0	4.8E-05	4.8E-05	NA
Manganese (7439-96-5)	3.8E-04	NA	3.0E-06	1.31E-05	NA	0.0	1.3E-05	1.3E-05	NA
Mercury (7439-97-6)	2.6E-04	NA	2.0E-06	8.93E-06	NA	0.0	8.9E-06	8.9E-06	NA
Nickel (7440-02-0)	2.1E-03	NA	1.6E-05	7.21E-05	NA	0.0	7.2E-05	7.2E-05	NA
Selenium (7782-49-2)	2.4E-05	NA	1.9E-07	8.24E-07	NA	0.0	8.2E-07	8.2E-07	NA
<b>Totals</b>			<b>0.01</b>	<b>0.06</b>			<b>0.06</b>	<b>0.06</b>	

<sup>a</sup>All emissions are calculated based on emission factors from AP-42, Section 1.4 "Natural Gas Combustion"(7/98).

<sup>b</sup>Naphthalene is included in the Polycyclic Organic Matter (POM) emissions and is not double-counted in the total HAPs.

<sup>c</sup>Total POM emission factor is equal to the sum of the individual POM compounds.

When calculating Actual Emissions, use items 9a, 9b, 9c, 9f, 9g, and 9j.

[illegible]

10a)  HAP Name (CAS)	10b) <i>Before Operating Limits</i> (lb/hr)	10c) <i>Before Operating Limits</i> (ton/yr)	10d) <i>After Operating Limits</i> (ton/yr)
Benzene (71-43-2)	1.6E-05	7.2E-05	7.2E-05
Dichlorobenzene (25321-22-6)	9.4E-06	4.1E-05	4.1E-05
Formaldehyde (50-00-0)	5.9E-04	2.6E-03	2.6E-03
Hexane (110-54-3)	1.4E-02	6.2E-02	6.2E-02
Naphthalene (91-20-3) <sup>a</sup>	4.8E-06	2.1E-05	2.1E-05
Toluene (108-88-3)	2.7E-05	1.2E-04	1.2E-04
POM <sup>b</sup>	6.8E-07	3.0E-06	3.0E-06
Arsenic (7440-38-2)	1.6E-06	6.9E-06	6.9E-06
Beryllium (7440-41-7)	9.4E-08	4.1E-07	4.1E-07
Cadmium (7440-43-9)	8.6E-06	3.8E-05	3.8E-05
Chromium (7440-47-3)	1.1E-05	4.8E-05	4.8E-05
Manganese (7439-96-5)	3.0E-06	1.3E-05	1.3E-05
Mercury (7439-97-6)	2.0E-06	8.9E-06	8.9E-06
Nickel (7440-02-0)	1.6E-05	7.2E-05	7.2E-05
Selenium (7782-49-2)	1.9E-07	8.2E-07	8.2E-07
<b>Totals (tpy)</b>		<b>0.06</b>	<b>0.06</b>

<sup>b</sup>Total POM emission factor is equal to the sum of the individual POM compounds.

NA

AQD Facility ID No.: 09900002 Permit No.. 09900002-010  
Facility Name: Hormel Foods Corporation/Quality Pork Processors

EU 028 IPER PM limit calculations

**Process weight rate (dry):**

2.88 EU 028 dry process weight rate (tph) assuming 1800 gal/hr capacity at 8 lb/gal; 60% moisture

10000 lb/hr process weight rate IPER limit	9.73 lb/hr IPER limit based on process weight rate (table 1 M.R. 7011.0730)
20000 lb/hr process weight rate IPER limit	14.99 lb/hr IPER limit based on process weight rate (table 1 M.R. 7011.0730)

15060 lb/hr process weight rate total for EU 028, EU 036, EU 050

**12.39 lb/hr IPER limit based on process weight rate (table 1 M.R. 7011.0730)**

**Airflow:**

8110 acfm  
100 F  
0.0 % moisture  
7,647 scfm  
7,647 dscfm

Allowable Emissions:

0.097 gr/dscf

**6.37 lb/hr IPER limit based on airflow (table 2 M.R. 7011.0735)**

Table 1 yields the less restrictive limit however the Permittee has self imposed the more restrictive table 2 limit and also applied this limit value to PM10, PM2.5, and VOC by assuming that all PM is condensable and is PM10, PM2.5, and VOC





## FACILITY DESCRIPTION: EMISSION UNIT (EU)

Show: Pending Records Only  
Action: PER 010  
AQD Facility ID: 09900002  
Facility Name: Hormel Foods Corp/QPP - Austin

	ID No.	Emission Unit Status	Added By (Action)	Retired By (Action)	Insignificant Activity	Operator ID for Item	Stack/Vent ID No(s).	Control Equip. ID No(s).	Operator Description	Manufacturer	Model Number	SIC	Max. Design Capacity	Maximum Design Capacity			Max Fuel Input (mil Btu)
														Materials	Units n	Units d	
1	EU 028	Active	PER 010		<input type="checkbox"/>		SV 026 (M) SV 027 (B) SV 058 (M)	CE 008 CE 009 CE 022 CE 023 CE 026	Rendering Machinery	Dupps	260J	2013	1800		Gal	Hr	
2	EU 036	Active	PER 010		<input type="checkbox"/>		SV 058	CE 018 CE 026	Existing Scott Bone Dryer	Scott	4815/144LVS144	2013	12000		Lb	Hr	9
3	EU 050	Active	PER 010		<input type="checkbox"/>		SV 058	CE 018 CE 026	New Duske Blood Dryer	Duske	TPD-1250	2013	3300	Meal, Blood	Lb	Hr	3.5
4	EU 087	Active	PER 010		<input type="checkbox"/>		SV 058 (M)		Regenerative Thermal Oxidizer (CE 026)	Tann Corp/ Langbein E	TR 5096C	2013	8.0	Heat	Mmbtu		8.0

**FACILITY DESCRIPTION: EMISSION UNIT (EU)**

	ID No.	Emission Unit Status	Added By (Action)	Commence Const. Date	Initial Startup Date	Removal Date	Firing Method	Pct. Fuel/ Space Heat	Bottleneck	Elevator Type
1	EU 028	Active	PER 010	01/01/1982	01/01/1982					
2	EU 036	Active	PER 010	10/01/1996	11/15/1996					
3	EU 050	Active	PER 010	10/14/2002	10/14/2002					
4	EU 087	Active	PER 010	08/01/2011	10/01/2011					



## FACILITY DESCRIPTION: STACK/VENTS (SV)

Show: Pending Records Only

Action: PER 010

AQD Facility ID: 09900002

Facility Name: Hormel Foods Corp/QPP - Austin

	ID No.	Stack/ Vent Status	Added By (Action)	Retired By (Action)	Operator ID for Item	Operators Description	Height of Opening From Ground (feet)	Inside Dimensions		Design Flow Rate at Top (ACFM)	Exit Gas Temperature at Top (°F)	Flow Rate/ Temperature Information Source	Discharge Direction
								Diameter or Length (feet)	Width (feet)				
1	SV 003	Active	PER 010			Natural Smoke Meat Oven (EU 006)	41	1.50		4000	130		Up, With Cap
2	SV 005	Active	PER 010			Natural Smoke Meat Oven (EU 007)	41	1.50		4000	130		Up, With Cap
3	SV 007	Active	PER 010			Natural Smoke Meat Oven (EU 008)	41	1.50		4000	130		Up, With Cap
4	SV 019	Active	PER 010			Precooked Bacon Stack N/S (EU 018 & EU 019/CE 006)	52	1.50		3000	120		Up, With Cap
5	SV 020	Active	PER 010			Precooked Bacon Stack E/W (EU 020 & EU 021/CE 007)	52	1.50		3000	120		Up, With Cap
6	SV 026	Active	PER 010			Rendering Room Air Packed Tower Scrubber Stack	71	2.83		50000	80		Up, With Cap
7	SV 045	Active	PER 010			Blood & Bone Dryers CE 019 (packed tower F) (EU 036/EU 050)	62.4	60		58000	70		
8	SV 058	Active	PER 010			Regenerative Thermal Oxidizer (CE 026)	75	4.5		50000	120	Manufacturer	Up, No Cap



## FACILITY DESCRIPTION: CONTROL EQUIPMENT (CE)

Show: Pending Records Only

Action: PER 010

AQD Facility ID: 09900002

Facility Name: Hormel Foods Corp/QPP - Austin

	ID No.	Control Equip. Status	Added By (Action)	Retired By (Action)	Operator ID for Item	Control Equip. Type	Control Equipment Description	Manufacturer	Model	Pollutants Controlled	Capture Efficiency (%)	Destruction/Collection Efficiency (%)	Afterburner Combustion Parameters
1	CE 008	Active	PER 010		Tower A	050	Packed-Gas Adsorption Column	EU 027	Rendering	PM10 PM PM VOC VOC	100 100 100 100 100	85 90 85 70 0	
2	CE 009	Active	PER 010			053	Venturi Scrubber	EU 028	Rendering	PM10 PM PM VOC VOC	100 100 100 100 100	84 90 94 70 0	
3	CE 018	Active	PER 010			053	Venturi Scrubber	EU 036 & 050	Blood/Bone Meal Dryers	PM10 PM PM VOC	100 100 100 100	84 90 94 70	
4	CE 019	Active	PER 010		Tower F	050	Packed-Gas Adsorption Column	EU 036 & 050		PM10 PM PM VOC	100 100 100 100	85 90 85 70	
5	CE 024	Active	PER 010		Tower E	050	Packed-Gas Adsorption Column	EU 036 & 050		PM10 PM PM VOC	100 100 100 100	85 90 85 70	
6	CE 026	Active	PER 010			131	Thermal Oxidizer	Tann Corp/Langbein Engelbracht	TR 5096C	PM2.5 PM10 PM VOC	100 100 100 100	62 62 62 97	1350F; 0.8 sec retention



MINNESOTA POLLUTION CONTROL AGENCY  
AIR QUALITY  
520 LAFAYETTE ROAD  
ST. PAUL, MN 55155-4194

11 August, 2011 11:18

## FACILITY DESCRIPTION: CONTINUOUS MONITORS (MR)

Show: Active and Pending Records

Action: PER 010

AQD Facility ID: 09900002

Facility Name: Hormel Foods Corp/QPP - Austin

	ID No.	Monitor Status	Added By (Action)	Retired By (Action)	Monitored Item (ID No(s).)	Operator ID for Item	Monitor Description	Manufacturer	Model Number	Serial Number	Parameters Monitored
1	MR 001	Active	PER 010		SV 058		CE 026/EU 087 Combustion Chamber Temperature	tbd	tbd	tbd	Temp

## **FACILITY DESCRIPTION: CONTINUOUS MONITORS (MR)**

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	ID No.	Monitor Status	Added By (Action)	Span Value	System Full-Scale Value	Bypass Capability?	Optical Path Length Ratio	Installation Date	Removal Date
1	MR 001	Active	PER 010			No		08/01/2011	

## FACILITY DESCRIPTION: Potential-to-emit (by item)

Show: Active and Pending Records

AQD Facility ID: 09900002

Facility Name: Hormel Foods Corp/QPP - Austin

Item	Pollutant	Added By (Action)	Retired By (Action)	Hourly Potential (lbs per hr)	Unrestricted Potential (tons per yr)	Limited Potential (tons per yr)	Actual Emissions (tons per yr)
<b>FC 000</b>							
	Carbon Dioxide Equivalent	PER 010				9.80E+04	

## FACILITY DESCRIPTION: Potential-to-emit (by item)

Show: Pending Records Only

AQD Facility ID: 09900002

Facility Name: Hormel Foods Corp/QPP - Austin

Item	Pollutant	Added By (Action)	Retired By (Action)	Hourly Potential (lbs per hr)	Unrestricted Potential (tons per yr)	Limited Potential (tons per yr)	Actual Emissions (tons per yr)
<b>EU 050</b>							
	PM < 10 micron	PER 010					
	Total Particulate Matter	PER 010					
	Volatile Organic Compounds	PER 010					



## FACILITY DESCRIPTION: Potential-to-emit (by item)

Show: Pending Records Only

AQD Facility ID: 09900002

Facility Name: Hormel Foods Corp/QPP - Austin

Item	Pollutant	Added By (Action)	Retired By (Action)	Hourly Potential (lbs per hr)	Unrestricted Potential (tons per yr)	Limited Potential (tons per yr)	Actual Emissions (tons per yr)
<b>EU 036</b>							
	PM < 10 micron	PER 010					
	Total Particulate Matter	PER 010					
	Volatile Organic Compounds	PER 010					

## FACILITY DESCRIPTION: Potential-to-emit (by item)

Show: Pending Records Only

AQD Facility ID: 09900002

Facility Name: Hormel Foods Corp/QPP - Austin

Item	Pollutant	Added By (Action)	Retired By (Action)	Hourly Potential (lbs per hr)	Unrestricted Potential (tons per yr)	Limited Potential (tons per yr)	Actual Emissions (tons per yr)
<b>EU 028</b>							
	PM < 10 micron	PER 010					
	Total Particulate Matter	PER 010					
	Volatile Organic Compounds	PER 010					

## FACILITY DESCRIPTION: Potential-to-emit (by item)

Show: Active and Pending Records

AQD Facility ID: 09900002

Facility Name: Hormel Foods Corp/QPP - Austin

Item	Pollutant	Added By (Action)	Retired By (Action)	Hourly Potential (lbs per hr)	Unrestricted Potential (tons per yr)	Limited Potential (tons per yr)	Actual Emissions (tons per yr)
<b>SV 058</b>							
	Carbon Dioxide Equivalent	PER 010		1.90E+03	7.44E+03		
	Carbon Monoxide	PER 010		3.30E-01	1.44E+00	1.44E+00	1.44E+00
	HAPs - Total	PER 010		7.40E-03	3.24E-02	3.24E-02	3.24E-02
	Nitrogen Oxides	PER 010		3.90E-01	1.72E+00	1.72E+00	1.72E+00
	PM < 2.5 micron	PER 010		6.37E+00	2.79E+01	2.79E+01	2.79E+01
	PM < 10 micron	PER 010		6.37E+00	2.79E+01	2.79E+01	2.79E+01
	Total Particulate Matter	PER 010		6.37E+00	2.79E+01	2.79E+01	2.79E+01
	Sulfur Dioxide	PER 010		2.40E-03	1.03E-02	1.03E-02	1.03E-02
	Volatile Organic Compounds	PER 010		6.37E+00	2.79E+01	2.79E+01	2.79E+01



# COMPLIANCE PLAN **CD-01**

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item: Total Facility**

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	TOTAL FACILITY CARBON DIOXIDE EQUIVALENT (CO2e) LIMIT
2.0		LIMIT	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000	Carbon Dioxide Equivalent: less than or equal to 94700 tons/year using 12-month Rolling Sum for all CO2e emitting sources at the facility.
3.0		CD	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000	Carbon Dioxide Equivalent Emissions Monitoring: By the 15th day of each month the Permittee shall calculate and record the following:  1. the type and amount of each fuel combusted at the facility in the previous calendar month;  2. the total facility CO2e emissions from the previous calendar month using Equations 1 and 2 in Appendix 4 of this permit;  3. the total facility CO2e emissions during the previous 12 calendar months by summing the monthly total CO2e emissions from the past 12 months.
4.0		CD	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000	The Permittee is prohibited from emitting any greenhouse gases as defined at title 40 CFR Section 98.6 other than carbon dioxide (CO2), nitrous oxide (N2O), and methane (CH4).
5.0		CD	hdr	OPERATIONAL REQUIREMENTS
6.0		CD	40 CFR part 50; Minn. Stat. Sec. 116.07, subds. 4a and 9; Minn. R. 7007.0100, subps. 7A, 7L and 7M; Minn. R. 7007.0800, subps. 1, 2, and 4; Minn. R. 7009.0010-7009.0080	Ambient Air Quality Standards: The Permittee shall comply with and upon written request demonstrate compliance with National Primary and Secondary Ambient Air Quality Standards in Title 40 CFR part 50, and the Minnesota Ambient Air Quality Standards at Minn. R. 7009.0010 to 7009.0080.
7.0		CD	Minn. R. 7011.0020	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.
8.0		CD	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)	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.
9.0		CD	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)	Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. 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.
10.0		CD	Minn. R. 7019.1000, subp. 4	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.
11.0		CD	Minn. R. 7011.0150	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.
12.0		CD	Minn. R. 7030.0010 - 7030.0080	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.
13.0		CD	Minn. R. 7007.0800, subp. 9(A)	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.



## COMPLIANCE PLAN **CD-01**

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

14.0		CD	Minn. R. 7007.0800, subp. 16	The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.
15.0		CD	hdr	PERFORMANCE TESTING
16.0		CD	Minn. R. ch. 7017	Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A and/or B.
17.0		CD	Minn. R. 7017.2030, subp. 1-4, Minn. R. 7017.2035, subp. 1-2, and Minn. R. 7017.2018	<p>Performance Test Notifications and Submittals:</p> <p>Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.</p> <p>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</p> <p>The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.</p>
18.0		CD	Minn. R. 7017.2025, subp. 3	Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change.
19.0		CD	hdr	MONITORING REQUIREMENTS
20.0		CD	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).
21.0		CD	Minn. R. 7007.0800, subp. 4(D)	Operation of Monitoring Equipment: Unless otherwise noted in Tables A and/or B, 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.
22.0		CD	hdr	RECORDKEEPING
23.0		CD	Minn. R. 7007.0800, subp. 5(C)	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).
24.0		CD	Minn. R. 7007.0800, subp. 5(B)	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.
25.0		CD	Minn. R. 7007.1200, subp. 4	If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. These records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format.
26.0		CD	hdr	REPORTING/SUBMITTALS
27.0		CD	Minn. R. 7019.1000, subp. 3	<p>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.</p> <p>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.</p>



## COMPLIANCE PLAN **CD-01**

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

28.0		CD	Minn. R. 7019.1000, subp. 2	<p>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.</p> <p>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.</p>
29.0		CD	Minn. R. 7019.1000, subp. 1	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.
30.0		CD	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.
31.0		S/A	Minn. R. 7007.0800, subp. 6(A)(2)	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.
32.0		CD	Minn. R. 7007.1150 through Minn. R. 7007.1500	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.
33.0		S/A	Minn. R. 7007.0400, subp. 2	Application for Permit Reissuance: due 180 days before expiration of Existing Permit
34.0		CD	Minn. R. 7007.1400, subp. 1(H)	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).
35.0		S/A	Minn. R. 7007.0800, subp. 6(C)	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.
36.0		CD	Minn. R. 7019.3000 through Minn. R. 7019.3010	Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. Submit the report on a form or alternative media approved by the Commissioner.
37.0		CD	Minn. R. 7002.0005 through Minn. R. 7002.0095	Emission Fees: due 60 days after receipt of an MPCA bill.



## COMPLIANCE PLAN **CD-01**

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

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

**Associated Items:**

- EU 006 Smoked Meat Oven #6 with recirculated natural wood smoke
- EU 007 Smoked Meat Oven #7 with recirculated natural wood smoke
- EU 008 Smoked Meat Oven #8 with recirculated natural wood smoke
- EU 009 Smoked Meat Oven #9 with recirculated natural wood smoke
- EU 010 Smoked Meat Oven #10 with recirculated natural wood smoke
- EU 011 Smoked Meat Oven #11 with recirculated natural wood smoke
- EU 031 Natural Smoke Generator
- EU 032 Natural Smoke Generator
- SV 003 Natural Smoke Meat Oven (EU 006)
- SV 005 Natural Smoke Meat Oven (EU 007)
- SV 007 Natural Smoke Meat Oven (EU 008)
- SV 009 Natural Smoke Meat Oven (EU 009)
- SV 011 Natural Smoke Meat Oven (EU 010)
- SV 012 Natural Smoke Meat Oven (EU 011)

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	EMISSION LIMITS
2.0		LIMIT	Minn. R. 7011.0715, subp. 1(A)	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.
3.0		LIMIT	Minn. R. 7011.0715, subp. 1(B)	Opacity: less than or equal to 20 percent . This limit applies individually to each stack/vent.
4.0		CD	hdr	PERFORMANCE TEST REQUIREMENTS
5.0		S/A	Minn. R. 7017.2020, subp. 1	Performance Test: due before end of each calendar 60 months starting 10/17/2006 to measure PM and opacity from one of the GP 003 emission units while using natural smoke from EU 031 or EU 032. The next PM and opacity tests are due 10/16/2011.



## COMPLIANCE PLAN **CD-01**

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item:** GP 010 Blood and Bone Meal Dryers

**Associated Items:** CE 018 Venturi Scrubber

CE 019 Packed-Gas Adsorption Column

CE 024 Packed-Gas Adsorption Column

CE 026 Thermal Oxidizer

EU 036 Existing Scott Bone Dryer

EU 050 New Duske Blood Dryer

EU 071 Room Air - Blood & Bone Drying

SV 033 Blood & Bone Dryers CE 018/CE 024 (venturi & packed tower E; bypasses packed tower F) (EU 036/EU 050)

SV 045 Blood & Bone Dryers CE 019 (packed tower F) (EU 036/EU 050)

SV 058 Regenerative Thermal Oxidizer (CE 026)

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	<p>Subject Item GP 010 contains requirements applicable either:</p> <ol style="list-style-type: none"> <li>1. prior to the startup of CE 026;</li> <li>2. after the startup of CE 026; or,</li> <li>3. both prior and after the startup of CE 026.</li> </ol> <p>Requirements under any header that states 'APPLY ONLY BEFORE CE 026 STARTUP' are no longer effective upon CE 026 startup.</p> <p>Prior to CE 026 startup, EU 036 and EU 050 emissions will vent to CE 018 (venturi scrubber) and then through CE 024 (Tower E) and then either to CE 019 (Tower F), and vent to the atmosphere through SV 045, or bypass CE 019 and vent emissions to the atmosphere from CE 024 through SV 033.</p> <p>After CE 026 startup, EU 036 and EU 050 emissions will be vented to CE 018 and then to CE 026 and then to the atmosphere through SV 058, and CE 024 will be shutdown.</p>
2.0		CD	hdr	<p>EMISSION LIMITS - APPLY BEFORE AND AFTER CE 026 STARTUP</p> <p>Refer to SV 058 for additional applicable limits and requirements that apply after CE 026 startup</p>
3.0		LIMIT	Minn. R. 7011.0610, subp. 1(A)(1)	<p>Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.</p> <p>After CE 026 startup, this limit applies at the outlet of CE 018 and does not apply to SV 058.</p>
4.0		LIMIT	Minn. R. 7011.0610, subp. 1(A)(2)	<p>Opacity: less than or equal to 20 percent except for one six-minute period per hour of not more than 60 percent opacity.</p> <p>After CE 026 startup, this limit applies at the outlet of CE 018 and does not apply to SV 058.</p>
5.0		CD	hdr	OPERATING REQUIREMENTS - APPLY AFTER CE 026 STARTUP
6.0		CD	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000	Vent emissions from both the blood and bone dryers through CE 018 (venturi scrubber) and CE 026 (RTO) and then through SV 058. After CE 026 startup, the Permittee shall not route GP 010 emissions through CE 019 and CE 024.
7.0		CD	hdr	CE 018 CONTROL EQUIPMENT REQUIREMENTS - APPLY AFTER CE 026 STARTUP
8.0		LIMIT	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000	The Permittee shall operate and maintain CE 018 to achieve a control efficiency for Total Particulate Matter: greater than or equal to 94 percent control efficiency
9.0		LIMIT	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000	The Permittee shall operate and maintain CE 018 to achieve a control efficiency for PM < 10 micron: greater than or equal to 84 percent control efficiency





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10.0		CD	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000	The Permittee shall operate and maintain CE 018 venturi scrubber at all times that any emission unit controlled by CE 018 is in operation. The Permittee shall document periods of non-operation of CE 018.
11.0		CD	Minn. R. 7007.0800, subp. 14	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.
12.0		CD	Minn. R. 7007.0800, subp. 4	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.
13.0		CD	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14	CE 018 Pressure Differential: greater than or equal to 5.0 inches w.c.
14.0		CD	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14	CE 018 Water Flow Rate: greater than or equal to 10 gallons per minute.
15.0		CD	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5	CE 018 Daily Monitoring and Recordkeeping: Once each day of EU 036 and/or EU 050 operation, the Permittee shall monitor and record the pressure differential and the water flow rate for CE 018.
16.0		CD	Minn. R. 7007.0800, subps. 4, 5, and 14	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.
17.0		CD	Minn. R. 7007.0800, subps. 4, 5, and 14	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:  - the CE 018 pressure drop is below the permitted minimum; - the CE 018 water flow rate is below the permitted minimum; or - CE 018 or any of its components are found during any inspection to need repair.  Corrective actions shall return the CE 018 pressure drop to at or above the minimum, the CE 018 water flow rate to at or above 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 CE 018 O & M Plan. The Permittee shall keep a record of the type and date of any corrective action taken.
18.0		CD	Minn. R. 7007.0800, subps. 4, 5, and 14	The Permittee shall calibrate or replace the CE 018 pressure differential and flow rate monitors at least annually and shall maintain a written record of any action resulting from the calibration or replacement.
19.0		CD	hdr	OPERATING REQUIREMENTS - APPLY ONLY BEFORE CE 026 STARTUP
20.0		CD	Minn. R. 7007.0800, subp. 2	Vent emissions from both the blood and bone dryers through CE 018 (venturi scrubber) and then through CE 024 (Tower E). After CE 024 the Permittee has the option of routing emissions to CE 019 (Tower F), and then through SV 045, or bypass CE 019 and vent emissions from CE 024 through SV 033.
21.0		CD	hdr	CE 018 (VENTURI SCRUBBER), CE 019 (TOWER F) AND CE 024 (TOWER E) CONTROL EQUIPMENT REQUIREMENTS - APPLY ONLY BEFORE CE 026 STARTUP
22.0		LIMIT	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain CE 019 and CE 024 so that each achieves a control efficiency for Total Particulate Matter: greater than or equal to 85 percent control efficiency
23.0		LIMIT	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain CE 019 and CE 024 so that each achieves a control efficiency for PM < 10 micron: greater than or equal to 85 percent control efficiency



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24.0		LIMIT	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain CE 018 so that the scrubber achieves a total control efficiency for Total Particulate Matter: greater than or equal to 94 percent control efficiency
25.0		LIMIT	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain CE 018 so that the scrubber achieves a total control efficiency for PM < 10 micron: greater than or equal to 84 percent control efficiency
26.0		CD	Minn. R. 7007.0800, subp. 14	The Permittee shall operate and maintain CE 018, CE 019, and CE 024 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.
27.0		CD	Minn. R. 7007.0800, subp. 4	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, CE 019, and CE 024, as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when CE 018, CE 019, and CE 024 are in operation.
28.0		CD	Minn. R. 7007.0800, subp. 14	CE 018 Pressure Differential: greater than or equal to 5 inches wc. CE 019 Pressure Differential: less than 7 inches wc. CE 024 Pressure Differential: less than 5 inches wc.
29.0		CD	Minn. R. 7007.0800, subp. 14	CE 018 Water Flow Rate: not less than 10 gallons per minute CE 019 Water Flow Rate: not less than 150 gallons per minute CE 024 Water Flow Rate: not less than 50 gallons per minute
30.0		CD	Minn. R. 7007.0800, subp. 4 and 5	CE 018, CE 019, and CE 024 Daily Monitoring: Once each day of operation, the Permittee shall monitor and record the pressure differential and the water flow rate for CE 018, CE 019, and CE 024.
31.0		CD	Minn. R. 7007.0800, subp. 4, 5, and 14	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer, the Permittee shall inspect the components of CE 018, CE 019, and CE 024. The Permittee shall maintain a written record of the results of each inspection.
32.0		CD	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 CE 018, CE 019, or CE 024 is below the required minimum; - the water flow rate of CE 018, CE 019, or CE 024 is below the permitted minimum; or - CE 018, CE 019, or CE 024 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 CE 018, CE 019, or CE 024. The Permittee shall keep a record of the type and date of any corrective action taken.



## COMPLIANCE PLAN **CD-01**

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item:** **SV 058 Regenerative Thermal Oxidizer (CE 026)**

**Associated Items:** EU 028 Rendering Machinery

EU 036 Existing Scott Bone Dryer

EU 050 New Duske Blood Dryer

EU 087 Regenerative Thermal Oxidizer (CE 026)

GP 010 Blood and Bone Meal Dryers

MR 001 CE 026/EU 087 Combustion Chamber Temperature

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	EMISSION LIMITS
2.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; meets requirements of Minn. R. 7011.0610, subp. 1(A)(1) and Minn. R. 7011.0715, subp. 1.A	Total Particulate Matter: less than or equal to 6.37 lbs/hour for SV 058.
3.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000	PM < 10 micron: less than or equal to 6.37 lbs/hour for SV 058.
4.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000	PM < 2.5 micron: less than or equal to 6.37 lbs/hour from SV 058.
5.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000	Volatile Organic Compounds: less than or equal to 6.37 lbs/hour for SV 058.
6.0		LIMIT	Minn. R. 7011.0715, subp. 1.B; meets requirements of Minn. R. 7011.0610, subp. 1(A)(2)	Opacity: less than or equal to 20 percent opacity for SV 058.
7.0		CD	hdr	OPERATING REQUIREMENTS
8.0		CD	Title I Condition: To avoid major source status under 40 CFR Section 52.21 and Minn. R. 7007.3000	Vent all CE 009 (EU 028) and CE 018 (EU 036 and EU 050) emissions through CE 026.
9.0		CD	hdr	CE 026 CONTROL EQUIPMENT REQUIREMENTS
10.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000	The Permittee shall operate and maintain CE 026 to achieve a total control efficiency for Total Particulate Matter: greater than or equal to 62 percent control efficiency
11.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000	The Permittee shall operate and maintain CE 026 to achieve a total control efficiency for PM < 10 micron: greater than or equal to 62 percent control efficiency
12.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000	The Permittee shall operate and maintain CE 026 to achieve a total control efficiency for PM < 2.5 micron: greater than or equal to 62 percent control efficiency
13.0		LIMIT	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000	The Permittee shall operate and maintain CE 026 to achieve a total control efficiency for Volatile Organic Compounds: greater than or equal to 97 percent control efficiency
14.0		CD	Minn. R. 7007.0800, subp. 14	The Permittee shall operate and maintain CE 026 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.



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15.0		CD	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	CE 026 Combustion Chamber Temperature: greater than or equal to 1350 F on a 3-hour rolling average, unless a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new minimum shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The minimum is final upon issuance of a permit amendment incorporating the change.
16.0		CD	hdr	MONITORING AND RECORDKEEPING
17.0		CD	40 CFR Section 64.7(b); Minn. R. 7017.0200	Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring CE 026 combustion chamber temperature, as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when CE 026 is in operation.
18.0		CD	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5; 40 CFR Section 64.3; Minn. R. 7017.0200	CE 026 Temperature Monitoring and Recordkeeping: The Permittee shall operate and maintain a continuous CE 026 combustion chamber temperature monitor and continuously record the combustion chamber temperature. The temperature monitoring device shall have a margin of error less than the greater of +/- 0.75 percent of the temperature being measured or +/- 2.5 degrees Celsius (4.5 degrees Fahrenheit).  The Permittee shall maintain a hard copy readout or computer disk file of the temperature readings for the RTO combustion chamber including the calculated 3-hour rolling average temperature values. The Permittee shall verify once each shift, not to exceed 12 hours, if all observed 3-hour rolling average temperature readings were at or above the minimum specified in this permit. Recorded values below the minimum specified in this permit are considered deviations as defined by Minn. R. 7007.0100, subp. 8a.
19.0		CD	40 CFR Section 64.3; Minn. R. 7017.0200	Periodic Inspections: Once per calendar quarter, or at a frequency prescribed by the manufacturer, the Permittee shall inspect the components of CE 026. The CE 026 burner may be inspected annually. The Permittee shall maintain a written record of the results of each inspection.
20.0		CD	40 CFR Section 64.7(d); Minn. R. 7017.0200	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:  - the 3-hour rolling average combustion chamber temperature is below the required minimum; - the RTO or any of its components are found during any inspection to need repair.  Corrective actions shall return the combustion chamber temperature to at or above 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 026. The Permittee shall keep a record of the type and date of any corrective action taken.
21.0		CD	40 CFR Section 64.3; Minn. R. 7017.0200	The Permittee shall calibrate or replace the CE 026 temperature gauge at least once every 12 months and shall maintain a written record of any action resulting from the calibration or replacement.
22.0		CD	40 CFR Section 64.7(e); Minn. R. 7017.0200	Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing required minimum CE 026 combustion chamber temperature, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring change.
23.0		CD	40 CFR Section 64.9(a)(2); Minn. R. 7017.0200	As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64:  1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and  2) Summary information on the number, duration, and cause for monitor downtime incidents.



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24.0		CD	40 CFR Section 64.9(b); Minn. R. 7017.0200	The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.
25.0		CD	hdr	PERFORMANCE TESTING
26.0		S/A	Minn. R. 7017.2020, subp. 1	Initial Performance Test: due 180 days after Initial Startup of CE 026/EU 087 (regenerative thermal oxidizer) to measure PM2.5 emissions.
27.0		S/A	Minn. R. 7017.2020, subp. 1	Initial Performance Test: due 180 days after Initial Startup of CE 026/EU 087 (regenerative thermal oxidizer) to measure PM emissions (including condensables).
28.0		S/A	Minn. R. 7007.0800, subp. 2	Notification of the Actual Date of Initial Startup: due 15 days after Initial Startup of CE 026/EU 087 or 15 days after permit issuance, whichever is later. The notification shall specify the date that fuel was first combusted by CE 026/EU 087.
29.0		S/A	Minn. R. 7017.2020, subp. 1	Testing Frequency Plan: due 60 days after Initial Performance Test for PM and PM2.5 emissions. The plan shall specify a testing frequency based on the initial performance test results for PM and PM2.5 and MPCA guidance. Future performance tests at 12-month, 36-month, or 60-month intervals, or as applicable, shall be required upon written approval of the test frequency plan.



## COMPLIANCE PLAN **CD-01**

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item:** EU 027 Rendering Room Air

**Associated Items:** CE 008 Packed-Gas Adsorption Column

SV 026 Rendering Room Air Packed Tower Scrubber Stack

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	EMISSION LIMITS
2.0		LIMIT	Title I Condition: To limit potential PM emissions to less than major source levels as defined by 40 CFR 52.21; Minn. R. 7007.3000; meets requirements of Minn. R. 7011.0715, subp. 1(A)	Total Particulate Matter: less than or equal to 8.38 lbs/hour
3.0		LIMIT	Title I Condition: To limit potential PM10 emissions to less than major source levels as defined by 40 CFR 52.21; Minn. R. 7007.3000	Particulate Matter < 10 micron: less than or equal to 8.38 lbs/hour
4.0		LIMIT	Minn. R. 7011.0715, subp. 1(B)	Opacity: less than or equal to 20 percent opacity
5.0		CD	hdr	OPERATING REQUIREMENTS
6.0		CD	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain the packed tower A (CE 008) at all times that the process equipment (EU 028 rendering machinery that emits EU 027 rendering room air emissions) controlled by CE 008 is in operation. The Permittee shall document periods of non-operation of the control equipment.  Vent all emissions from EU 027 through CE 008.
7.0		CD	hdr	CE 008 (TOWER A) CONTROL EQUIPMENT REQUIREMENTS
8.0		LIMIT	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain CE 008 so it achieves a control efficiency for Total Particulate Matter: greater than or equal to 85 percent control efficiency
9.0		LIMIT	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain CE 008 so it achieves a control efficiency for PM < 10 micron: greater than or equal to 85 percent control efficiency
10.0		CD	Minn. R. 7007.0800, subp. 14	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.
11.0		CD	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	CE 008 Pressure Differential: Greater than or equal to 5 inches w.c., unless a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new minimum shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The minimum is final upon issuance of a permit amendment incorporating the change.
12.0		CD	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	CE 008 Water Flow Rate: Greater than or equal to 100 gallons per minute, unless a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new minimum shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The minimum is final upon issuance of a permit amendment incorporating the change.
13.0		CD	hdr	MONITORING AND RECORDKEEPING
14.0		CD	40 CFR Section 64.7(b); Minn. R. 7017.0200	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.



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15.0		CD	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14; 40 CFR Section 64.3; Minn. R. 7017.0200	Daily Inspections: Once each calendar day when EU 027 is operating, the Permittee shall read and record the following:  1. the CE 008 pressure differential; 2. the CE 008 water flow rate.
16.0		CD	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5; 40 CFR Section 64.3; Minn. R. 7017.0200	Recordkeeping of Pressure Drop and Water Flow Rate: The Permittee shall record the time and date of each pressure drop reading and water flow rate reading, and whether or not the observed value was within the range specified in this permit. Recorded values outside the range specified in this permit are considered deviations as defined by Minn. R. 7007.0100, subp. 8a.
17.0		CD	40 CFR Section 64.3; Minn. R. 7017.0200	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.
18.0		CD	40 CFR Section 64.7(d); Minn. R. 7017.0200	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.
19.0		CD	40 CFR Section 64.3; Minn. R. 7017.0200	The Permittee shall calibrate or replace the CE 008 pressure differential and flow rate monitors at least annually and shall maintain a written record of any action resulting from the calibration or replacement.
20.0		CD	40 CFR Section 64.7(e); Minn. R. 7017.0200	Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing pressure drop range, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring change.
21.0		CD	40 CFR Section 64.9(a)(2); Minn. R. 7017.0200	As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64:  1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and  2) Summary information on the number, duration, and cause for monitor downtime incidents.
22.0		CD	40 CFR Section 64.9(b); Minn. R. 7017.0200	The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.



## COMPLIANCE PLAN **CD-01**

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item:** EU 028 Rendering Machinery

**Associated Items:** CE 008 Packed-Gas Adsorption Column

CE 009 Venturi Scrubber

CE 022 Packed-Gas Adsorption Column

CE 023 Packed-Gas Adsorption Column

CE 026 Thermal Oxidizer

SV 026 Rendering Room Air Packed Tower Scrubber Stack

SV 027 Rendering Cooker Stack

SV 058 Regenerative Thermal Oxidizer (CE 026)

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	<p>Subject Item EU 028 contains requirements applicable either:</p> <ol style="list-style-type: none"> <li>1. prior to the startup of CE 026;</li> <li>2. after the startup of CE 026; or,</li> <li>3. both prior and after the startup of CE 026.</li> </ol> <p>Requirements under any header that states 'APPLY ONLY BEFORE CE 026 STARTUP' are no longer effective upon CE 026 startup.</p> <p>Prior to CE 026 startup, EU 028 emissions will vent to CE 009, CE 022, and CE 023 and then either vented to the atmosphere through SV 027, or routed to CE 008 and then vented to the atmosphere through SV 026.</p> <p>After CE 026 startup, EU 028 emissions will be vented to CE 009 and then to CE 026 and then to the atmosphere through SV 058, and CE 022 and CE 023 will be shutdown.</p>
2.0		CD	hdr	<p>EMISSION LIMITS - APPLY BEFORE AND AFTER CE 026 STARTUP</p> <p>Refer to SV 058 for additional applicable limits and requirements that apply after CE 026 startup</p>
3.0		LIMIT	Minn. R. 7011.0715, subp. 1(A)	<p>Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.</p> <p>After CE 026 startup, this limit applies at the outlet of CE 009 and does not apply to SV 058.</p>
4.0		LIMIT	Minn. R. 7011.0715, subp. 1(B)	<p>Opacity: less than or equal to 20 percent opacity .</p> <p>After CE 026 startup, this limit applies at the outlet of CE 009 and does not apply to SV 058.</p>
5.0		CD	hdr	OPERATING REQUIREMENTS - APPLY AFTER CE 026 STARTUP
6.0		CD	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	<p>The Permittee shall operate and maintain the venturi scrubber (CE 009) at all times that the process equipment (EU 028 rendering machinery) controlled by CE 009 is in operation. The Permittee shall document periods of non-operation of the control equipment.</p> <p>Vent all emissions from Rendering Machinery through CE 009, CE 026 (RTO), and then through SV 058. After CE 026 startup, the Permittee shall not route EU 028 emissions through CE 022 and CE 023.</p>
7.0		CD	hdr	<p>CONTROL EQUIPMENT REQUIREMENTS - APPLY AFTER CE 026 STARTUP</p> <p>Refer to SV 058 for CE 026 applicable requirements</p>
8.0		LIMIT	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	<p>The Permittee shall operate and maintain CE 009 to achieve a total control efficiency for Total Particulate Matter: greater than or equal to 94 percent control efficiency</p>





## COMPLIANCE PLAN **CD-01**

Facility Name: Hormel Foods Corp/QPP - Austin

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9.0		LIMIT	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain CE 009 to achieve a total control efficiency for PM < 10 micron: greater than or equal to 84 percent control efficiency
10.0		CD	Minn. R. 7007.0800, subps. 2 and 14	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.
11.0		CD	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	CE 009 Pressure Differential: Greater than or equal to 5 inches w.c.
12.0		CD	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	CE 009 Water Flow Rate: Greater than or equal to 50 gallons per minute.
13.0		CD	hdr	MONITORING AND RECORDKEEPING - APPLY AFTER CE 026 STARTUP
14.0		CD	40 CFR Section 64.7(b); Minn. R. 7017.0200	Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop and water flow rate for CE 009, as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when CE 009 is in operation.
15.0		CD	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14; 40 CFR Section 64.3; Minn. R. 7017.0200	Daily Inspections: Once each calendar day when EU 028 is operating, the Permittee shall read and record the following:  1. the CE 009 pressure differential; 2. the CE 009 water flow rate.
16.0		CD	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5; 40 CFR Section 64.3; Minn. R. 7017.0200	Recordkeeping of CE 009 Pressure Drop and Water Flow Rate: The Permittee shall record the time and date of each pressure drop reading and water flow rate reading, and whether or not the observed value was within the range specified in this permit. Recorded values outside the range specified in this permit are considered deviations as defined by Minn. R. 7007.0100, subp. 8a.
17.0		CD	40 CFR Section 64.3; Minn. R. 7017.0200	Periodic Inspections: Once per calendar quarter, or at a frequency prescribed 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.
18.0		CD	40 CFR Section 64.7(d); Minn. R. 7017.0200	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:  - the CE 009 pressure drop is below the required minimum; - the CE 009 water flow rate is below the permitted minimum; or - CE 009 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 009. The Permittee shall keep a record of the type and date of any corrective action taken.
19.0		CD	40 CFR Section 64.3; Minn. R. 7017.0200	The Permittee shall calibrate or replace the CE 009 pressure differential and flow rate monitors at least annually and shall maintain a written record of any action resulting from the calibration or replacement.
20.0		CD	40 CFR Section 64.7(e); Minn. R. 7017.0200	Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing pressure drop range, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring change.



## COMPLIANCE PLAN **CD-01**

Facility Name: Hormel Foods Corp/QPP - Austin

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21.0		CD	40 CFR Section 64.9(a)(2); Minn. R. 7017.0200	As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64:  1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and  2) Summary information on the number, duration, and cause for monitor downtime incidents.
22.0		CD	40 CFR Section 64.9(b); Minn. R. 7017.0200	The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.
23.0		CD	hdr	EMISSION LIMITS - APPLY ONLY BEFORE CE 026 STARTUP
24.0		LIMIT	Title I Condition: To limit potential PM emissions to less than major source levels as defined by 40 CFR 52.21; Minn. R. 7007.3000; meets requirements of Minn. R. 7011.0715, subp. 1(A)	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 (venturi scrubber), CE 022 (Tower B), and CE 023 (Tower C) 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 (Tower A) and vented through SV 026 (main stack).
25.0		LIMIT	Title I Condition: To limit potential PM emissions to less than major source levels as defined by 40 CFR 52.21; Minn. R. 7007.3000	PM < 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 (venturi scrubber), CE 022 (Tower B), and CE 023 (Tower C) 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 (Tower A) and vented through SV 026 (main stack).
26.0		CD	hdr	OPERATING REQUIREMENTS - APPLY ONLY BEFORE CE 026 STARTUP
27.0		CD	Minn. R. 7007.0800, subp. 2	Vent all emissions from Rendering Machinery through CE 009 (venturi scrubber), and then CE 022 (Tower B) and CE 023 (Tower C). After CE 023 the Permittee has the option of routing emissions to CE 008 (Tower A) and then through SV 026, or bypass CE 008 and vent from CE 023 through SV 027.
28.0		CD	hdr	CE 009 (VENTURI SCRUBBER), CE 022 (TOWER B), AND CE 023 (TOWER C) CONTROL EQUIPMENT REQUIREMENTS - APPLY BEFORE CE 026 STARTUP
29.0		LIMIT	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain CE 022 and CE 023 so that each achieves a control efficiency for Total Particulate Matter: greater than or equal to 85 percent control efficiency
30.0		LIMIT	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain CE 022 and CE 023 so that each achieves a control efficiency for PM < 10 micron: greater than or equal to 85 percent control efficiency
31.0		LIMIT	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain CE 009 so that the scrubber achieves a total control efficiency for Total Particulate Matter: greater than or equal to 94 percent control efficiency
32.0		LIMIT	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14	The Permittee shall operate and maintain CE 009 so that the scrubber achieves a total control efficiency for PM < 10 micron: greater than or equal to 84 percent control efficiency
33.0		CD	Minn. R. 7007.0800, subp. 14	The Permittee shall operate and maintain CE 009, CE 022, and CE 023 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.



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Facility Name: Hormel Foods Corp/QPP - Austin

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34.0		CD	Minn. R. 7007.0800, subp. 4	Monitoring Equipment: The Permittee shall 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, CE 022, and CE 023 are in operation.
35.0		CD	Minn. R. 7007.0800, subp. 14	CE 009, CE 022, and CE 023 Pressure Differential: Less than 5 inches wc for CE 022, less than 5 inches wc for CE 023, and not less than 5 inches wc for CE 009.
36.0		CD	Minn. R. 7007.0800, subp. 14	CE 009, CE 022, and CE 023 Water Flow Rate: Not less than 20 gallons per minute for CE 022, not less than 30 gallons per minute for CE 023, and not less than 50 gallons per minute for CE 009.
37.0		CD	Minn. R. 7007.0800, subp. 4 and 5	CE 009, CE 022, and CE 023 Daily Monitoring: Once each day of operation, the Permittee shall monitor and record the pressure differential and water flow rate for CE 009, CE 022, and CE 023.
38.0		CD	Minn. R. 7007.0800, subp. 4, 5, and 14	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, CE 022, and CE 023. The Permittee shall maintain a written record of the results of each inspection.
39.0		CD	Minn. R. 7007.0800, subp. 4, 5, and 14	<p>Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:</p> <ul style="list-style-type: none"><li>- the pressure drop of CE 009, CE 022, or CE 023 is below the required minimum;</li><li>- the water flow rate of CE 009, CE 022, or CE 023 is below the permitted minimum; or</li><li>- CE 009, CE 022, or CE 023 or any of their components are found during any inspection to need repair.</li></ul> <p>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 &amp; M Plan for CE 009, CE 022, or CE 023. The Permittee shall keep a record of the type and date of any corrective action taken.</p>



## COMPLIANCE PLAN **CD-01**

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item:** EU 051 Emergency RICE(s)

**Associated Items:** GP 001 SO2 and NOx Limits

SV 044 Emergency RICE(s) (EU 051)

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	LIMITS AND OPERATING REQUIREMENTS
2.0		LIMIT	Minn. R. 7007.0800, subp. 2 and September 6, 1995, U.S. EPA memorandum entitled "Calculating Potential to Emit for Emergency Generators"	Operating Hours: less than or equal to 500 hours/year using 12-month Rolling Sum as a total for all emergency RICE.
3.0		LIMIT	Minn. R. 7011.2300, subp. 2	Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input
4.0		LIMIT	Minn. R. 7011.2300, subp. 1	Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained.
5.0		CD	Minn. R. 7007.0800, subp. 2	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.
6.0		CD	Minn. R. 7007.0800, subp. 2	Permitted Fuels: gasoline, diesel fuel, natural gas, kerosene/naphtha, butane, liquified petroleum gases (LPG), or propane.
7.0		CD	Minn. R. 7007.0800, subp. 2	<p>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.</p> <p>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.</p>
8.0		CD	hdr	RECORDKEEPING
9.0		CD	Minn. R. 7007.0800, subp. 4 and 5	<p>Recordkeeping: For each emergency RICE that is operated at the facility, the Permittee shall record the arrival and departure date of the engine.</p> <p>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.</p> <p>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.</p>
10.0		CD	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.
11.0		CD	Title I Condition: To limit potential NOx emissions to less than major source levels defined by 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 and 5	<p>Recordkeeping - Fuel Usage: Once each day calculate and record the EU 051 usage of gasoline (gallons), diesel fuel (gallons), natural gas (cubic feet), kerosene/naphtha (gallons), butane (gallons), liquified petroleum gases (LPG) (gallons), or propane (gallons) during the previous calendar day.</p> <p>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/naphtha (gallons), butane (gallons), liquified petroleum gases (LPG) (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.</p>



## COMPLIANCE PLAN **CD-01**

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

12.0		CD	Minn. R. 7007.0800, subp. 4 and 5	<p>Nitrogen Oxides Emissions Monitoring: By the 15th day of each month the Permittee shall:</p> <p>1) Calculate and record EU 051 NOx emissions during the previous calendar month using the following equation:</p> $\text{NOx} = (\text{Fa} * \text{Ha}) + (\text{Fb} * \text{Hb}) + (\text{Fc} * \text{Hc}) + (\text{Fd} * \text{Hd}) + (\text{Fe} * \text{He}) + (\text{Ff} * \text{Hf})$ <p>(continued)</p>
13.0		CD	Minn. R. 7007.0800, subp. 4 and 5	<p>where:</p> <p>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/liquified petroleum gases (LPG) emission factor Hd = propane/liquified petroleum gases (LPG) heat input Fe = kerosene/naphtha emission factor He = kerosene/naphtha heat input Ff = butane emission factor Hf = butane heat input</p> <p>All heat inputs 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 than the appendix.</p>



## COMPLIANCE PLAN **CD-01**

Facility Name: Hormel Foods Corp/QPP - Austin

Permit Number: 09900002 - 010

**Subject Item:** EU 087 Regenerative Thermal Oxidizer (CE 026)

**Associated Items:** SV 058 Regenerative Thermal Oxidizer (CE 026)

	NC/ CA	Type	Citation	Requirement
1.0		LIMIT	Minn. R. 7011.0610, subp. 1(A)(1)	Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.
2.0		LIMIT	Minn. R. 7011.0610, subp. 1(A)(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.
3.0		CD	Minn. R. 7007.0800, subp. 2	Permitted fuel: natural gas only. Combustion of only natural gas ensures compliance with Minn. R. 7011.0715, subp. 1.A.

## Points Calculator

1) AQ Facility ID No.:	09900002
2) Facility Name:	Hormel Foods Corp/QPP - Austin
3) Small business? y/n?	N
4) DQ Numbers (including all rolled) :	3410
5) Date of each Application Received:	3/4/2011
6) Final Permit No.	09900002-010
7) Permit Staff	M Cole
8) "Work completed" in which .xls file (i.e. unit 2b, unit 1a, biofuels)?	NA

Total Points	10
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<u>Application Type</u>	<u>DQ No.</u>	<u>Qty.</u>	<u>Points</u>	<u>Total Points</u>	<u>Details</u>
Administrative Amendment			1	0	
Minor Amendment			4	0	
Applicability Request			10	0	
Moderate Amendment			15	0	
Major Amendment	3286		25	0	
Individual State Permit (not reissuance)			50	0	
Individual Part 70 Permit (not reissuance)			75	0	

### Additional Points

Modeling Review			15	0	
BACT Review			15	0	
LAER Review			15	0	
CAIR/Part 75 CEM analysis			10	0	
NSPS Review			10	0	
NESHAP Review			10	0	
Case-by-case MACT Review			20	0	
Netting			10	0	
Limits to remain below threshold	3286	1	10	10	PSD
Plantwide Applicability Limit (PAL)			20	0	
AERA review			15	0	
Variance request under 7000.7000			35	0	
Confidentiality request under 7000.1300			2	0	

### EAW review

Part 4410.4300, subparts 18, item A; and 29			15	0	
Part 4410.4300, subparts 8, items A & B; 10, items A to C; 16, items A & D; 17, items A to C & E to G; and 18, items B & C			35	0	
Part 4410.4300, subparts 4; 5 items A & B; 13; 15; 16, items B & C; and 17 item D			70	0	
			<b>Add'l Points</b>	<b>10</b>	

### NOTES:

Application points paid with application

**CAM Submittal**  
**Hormel Foods Corporation**  
April 13, 2011

I. Background

A. Emission Unit

Description:	Rendering Room Air
Identification:	EU027
APCD ID:	CE008, Packed-Gas Adsorption Column
Facility:	Austin, Minnesota

B. Applicable Regulation, Emissions Limit, and Monitoring Requirements

Regulation:	Title I Condition: To limit potential PM emissions to less than major source levels as defined by 40 CFR 52.21; Minn. R. 7007.3000; meets requirements of Minn. R. 7011.0715, subp. 1(A)
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Emissions Limits:

Particulate Matter (PM):	8.38 lb/hr (based on state process equipment rule)
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PM <sub>10</sub> :	8.38 lb/hr (based on state process equipment rule)
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Monitoring Requirements:	Pressure differential, water flow rates and quarterly inspections.
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C. Control Technology:

Packed-Gas Adsorption Column



## II. Monitoring Approach:

The key elements of the monitoring approach are presented in the table below:

	Indicator No. 1	Indicator No. 2	Indicator No. 3
I. Indicator Measurement Approach	Pressure Differential	Water Flow Rate	Work practice
II. Indicator Range	A deviation is defined as pressure differential less than 5 inches wc. Deviations trigger an inspection, corrective action, and a reporting requirement.	A deviation is defined as a water flow rate less than 100 gal/min. Deviations trigger an inspection, corrective action, and a reporting requirement.	A deviation is defined as failure to perform inspection quarterly or at the frequency prescribed by the manufacturer.
Performance Criteria			
a. Data Representativeness	Not applicable	Not applicable	Not applicable
b. Verification of Operational Status	The monitoring equipment must be in use and properly maintained when CE 008 is in operation	The monitoring equipment must be in use and properly maintained when CE 008 is in operation	Not applicable
c. QA/QC Practices and Criteria	Not applicable	Not applicable	Not applicable
d. Monitoring Frequency	Instantaneous. The pressure differential is recorded once each day when in operation.	Instantaneous. The water flow rate is recorded once each day when in operation.	Inspection of the control equipment components quarterly or at the frequency prescribed by the manufacturer.
Data Collection Procedures	The operator records the pressure drop and whether or not the reading was within the range specified once per day when in operation.	The operator records the water flow rate and whether or not the reading was within the range specified once per day when in operation.	Record results quarterly or at the frequency prescribed by the manufacturer.
Averaging Period	No average is taken.	No average is taken	Not applicable

### III. Basis and Implementation

The proposed monitoring approach is based on the currently applicable requirements.

The data listed in the monitoring approach is already addressed in the current permit and the facility air pollution control equipment maintenance plan.

### IV. Rationale for Selection of Indicator Ranges

Indicator ranges for the pressure differential and water flow rate have been developed based on the manufacturer's design operating guidelines.

**CAM Submittal**  
**Hormel Foods Corporation**  
May 10, 2011

I. Background

A. Emission Unit

Description:	Regenerative Thermal Oxidizer
Identification:	EU028, 036, 050
APCD ID:	CE026
Facility:	Austin, Minnesota

B. Applicable Regulation, Emissions Limit, and Monitoring Requirements

Regulation:	Title I Condition: To limit potential PM emissions to less than major source levels as defined by 40 CFR 52.21; Minn. R. 7007.3000; meets requirements of Minn. R. 7011.0715, subp. 1(A)
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Emissions Limits:

Particulate Matter (PM):	6.37 lb/hr (based on state process equipment rule)
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PM <sub>10</sub> :	6.37 lb/hr (based on state process equipment rule)
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Monitoring Requirements:	Regenerative thermal oxidizer combustion chamber temperature and annual inspections.
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C. Control Technology:

Regenerative thermal oxidizer.

## II. Monitoring Approach:

The key elements of the monitoring approach are presented in the table below:

	Indicator No. 1	Indicator No. 2
I. Indicator Measurement Approach	Combustion chamber temperature	Work practice
	The combustion chamber temperature is monitored with a thermocouple.	Inspection and maintenance of the burner.
II. Indicator Range	An excursion is defined as temperature readings less than 1350 deg F. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as failure to perform annual inspection
Performance Criteria a. Data Representativeness	The sensor is located in the incinerator chamber as in integral part of the design. The minimum tolerance of the thermocouple is $\pm 10.0$ deg F or $\pm 0.75\%$ .	Not applicable
b. Verification of Operational Status	Not applicable	Not applicable
c. QA/QC Practices and Criteria	Accuracy of the thermocouple will be verified by a second or redundant thermocouple probe inserted into the incinerator chamber with a hand held meter. The validation check will be conducted at least annually.	Not applicable
d. Monitoring Frequency	Measured continuously	Annual inspection of the burner
Data Collection Procedures	Recorded continuously on a chart recorder.	Record results of annual inspection.
Averaging Period	No average is taken.	Not applicable

## III. Basis and Implementation

The proposed monitoring approach is based on the currently applicable requirements.

The data listed in the monitoring approach is already addressed in the enclosed permit application.

#### IV. Rationale for Selection of Indicator Ranges

The incinerator chamber temperature was selected because it is indicative of a thermal incinerator operation. If the chamber decreases significantly, complete combustion may not occur.

The work practice comprised of an annual inspection and tuning of the incinerator burner was selected because an inspection verifies equipment integrity and periodic tuning will maintain proper burner operation and efficiency.

Indicator ranges for the combustion chamber temperature has been developed based on the manufacturer's design operating guidelines.