

AIR EMISSION PERMIT NO. 02700022- 001

IS ISSUED TO

BUSCH AGRICULTURAL RESOURCES, INC. - MOORHEAD

2101 26th Street South
Moorhead, Clay County, MN 56560

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

Permit Type	Application Date
Total Facility Operating Permit	January 18, 1995
Major Amendment	March 5, 2001 (issued June 19, 2001)

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

Permit Type: Federal; Part 70/Major for NSR

Issue Date: October 8, 2002

Expiration: October 8, 2007

All Title I Conditions do not expire.

Ann M. Foss, Manager
Majors Air and Construction Section
Majors and Remediation Division

for Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

TABLE OF CONTENTS

Notice to the Permittee

Permit Shield

Facility Description

Table A: Limits and Other Requirements

Table B: Submittals

Table C: *not used in this permit*

Appendix A: *not used in this permit*

Appendix B: Insignificant Activities Required to be Listed

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:

Busch Agricultural Resources, Inc. (BARI) operates a barley malting plant in Moorhead, Minnesota. The barley is received, cleaned, graded, and stored in the silos. As needed, the barley is removed from the silos, conveyed to the steep house and loaded into the steep tanks. After 48 hours, the barley is transferred from the steep tanks into the germination compartments where it germinates for four days. The sprouted barley (green malt) is then transferred to the upper deck of a double deck kiln, dried for 12 to 24 hours, then dropped into the lower deck and dried for an additional 12 to 24 hours. The kiln is steam heated. Sulfur is used to introduce sulfur dioxide (SO₂) during the low heat phase of the kilning. The dried malt is cleaned and stored for a minimum of 28 days for aging. The malt is cleaned a second time just before loading into rail cars for shipping.

Emissions at the facility consist of particulate matter from grain handling and malt processing, SO₂ emissions from the kilns, and combustion products from the boilers and diesel generators. All grain and malt handling, with the exception of the kilns, is controlled with fabric filter baghouses.

The facility is a major source under federal Prevention of Significant Deterioration (PSD, 40 CFR 52.21) and the Title V permit program (40 CFR 70.2).

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead
 Permit Number: 02700022 - 001

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

Subject Item:	Total Facility
What to do	Why to do it
FACILITY-SPECIFIC REQUIREMENTS	hdr
The Permittee shall clean up commodities spilled on the driveway and other facility property as required to minimize fugitive emissions to a level consistent with RACT (reasonably available control technology).	Minn. R. 7011.1005, subp. 1(A)
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. 7011.1015; Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
No owner or operator of a dry bulk agricultural commodity facility may operate or maintain a facility that creates a public nuisance. If the commissioner of the MPCA determines that operation or maintenance of the commodity facility creates a public nuisance, the owner or operator may be required to take measures necessary to eliminate the nuisance.	Minn. R. 7011.1010
REQUIREMENTS APPLICABLE TO ALL FACILITIES	hdr
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Operation 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 enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

<p>Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).</p>	<p>Minn. R. 7007.0800, subp. 5(C)</p>
<p>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.</p>	<p>Minn. R. 7007.0800, subp. 5(B)</p>
<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>	<p>Minn. R. 7019.1000, subp. 3</p>
<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>	<p>Minn. R. 7019.1000, subp. 2</p>
<p>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.</p>	<p>Minn. R. 7019.1000, subp. 1</p>
<p>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:</p> <ol style="list-style-type: none"> 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. 	<p>Minn. R. 7019.1000, subp. 1</p>
<p>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.</p>	<p>Minn. R. 7007.1150 through Minn. R. 7007.1500</p>
<p>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).</p>	<p>Minn. R. 7007.1400, subp. 1(H)</p>
<p>Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner.</p>	<p>Minn. R. 7019.3000 through Minn. R. 7019.3010</p>
<p>Emission Fees: due 60 days after receipt of an MPCA bill.</p>	<p>Minn. R. 7002.0005 through Minn. R. 7002.0095</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

Subject Item: GP 001 DC-400 Equipment

- Associated Items:** CE 009 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 EU 011 Debearder Garner 21-326-2/Feed Barley 1 (FB1)
 EU 012 Feed Barley Screw Conveyor 21-330
 EU 013 Grade A/B/C Bin 21-326-3
 EU 014 Grade A/B/C Bin 21-326-1
 EU 025 Feed Barley Bin 20-306
 EU 026 Seed and Screenings Bin 20-304
 EU 074 Conveyor 21-336
 EU 076 Conveyor 21-330A
 EU 078 Grain Cleaner 503 21-329-1
 EU 079 Grain Cleaner 504 21-329-2
 EU 080 Separator 505 21-324-1ABC
 EU 081 Separator 506 21-324-1DEF
 EU 082 Separator 507 21-324-2ABC
 EU 083 Separator 508 21-324-2DEF
 EU 084 Grader 509
 EU 085 Grader 510
 EU 086 Conveyor 21-337
 SV 004 DC-400 (CE009) Exhaust

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.01 grains/dry standard cubic foot . This limit applies to each individual unit listed in GP001. The limit is equivalent to approximately 3.23 lb/hour at maximum exhaust capacity. Assuming 99% control, calculated potential emissions are approximately 0.51 lb/hour.	40 CFR Section 60.302(b)(1); Minn. R. 7011.1005, subp. 2
Opacity: less than or equal to 0 percent opacity from the control device (CE009)	40 CFR Section 60.302(b)(2); Minn. R. 7011.1005, subp. 2
Opacity: less than or equal to 0 percent opacity - fugitive emissions	40 CFR Section 60.302(c)(2); Minn. R. 7011.1005, subp. 2
OPERATING REQUIREMENTS	hdr
Process Throughput: less than or equal to 200000 tons/year using 12-month Rolling Sum (total cleaned and graded barley) to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. All emission units or stacks added to GP001 as allowed in this permit shall be included in this calculation.	Title I Condition: To avoid classification of previous modification as major under 40 CFR Section 52.21 and Minn. R. 7007.3000
Process Throughput: less than or equal to 27315 tons/year using 12-month Rolling Sum (cleaned and graded barley shipped as "export barley") to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. All emission units or stacks added to GP001 as allowed in this permit shall be included in this calculation.	Title I Condition: To avoid classification of previous modification as major under 40 CFR Section 52.21 and Minn. R. 7007.3000
Total Particulate Matter: greater than or equal to 99 percent collection efficiency	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 and 14 (data used to calculate PTE)
Particulate Matter < 10 micron: greater than or equal to 99 percent collection efficiency	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 and 14 (data used to calculate PTE)
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 10 inches of water column , unless a new range 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 Permittee shall record the pressure drop once every 24 hours when in operation.	Minn. R. 7007.0800, subp. 2 and 14
RECORDKEEPING REQUIREMENTS	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

<p>Monthly Recordkeeping - Total Cleaned and Graded Barley: By the 15th day of each month, the Permittee shall calculate and record the following:</p> <ol style="list-style-type: none"> 1. The total cleaned and graded barley processed for the previous calendar month. This shall be based on grain receipt records and processing logs. 2. The 12-month rolling sum of the total cleaned and graded barley for the previous 12 month period by summing the monthly total cleaned and graded barley for the previous 12 months. 	Minn. R. 7007.0800, subp. 4 and 5
<p>Monthly Recordkeeping - Cleaned and Graded Barley Shipped as "Export Barley": By the 15th day of each month, the Permittee shall calculate and record the following:</p> <ol style="list-style-type: none"> 1. The quantity of cleaned and graded barley shipped as "export barley" for the previous calendar month. This shall be based on grain receipt records, processing logs, and export grain shipment records. 2. The 12-month rolling sum of the cleaned and graded barley shipped as "export barley" for the previous 12 month period by summing the monthly cleaned and graded barley shipped as "export barley" for the previous 12 months. 	Minn. R. 7007.0800, subp. 4 and 5
<p>Recordkeeping of Pressure Drop. The Permittee shall record the time and date of each pressure drop reading, and whether or not the observed pressure drop was within the range specified in this permit</p>	Minn. R. 7007.0800, subp. 4 and 5; Minn. R. 7011.0080
<p>Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.</p>	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"> - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. <p>Corrective actions shall return the pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.</p>	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

Subject Item: GP 002 DC-100 Equipment

Associated Items: CE 001 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 001 Barley Unloading

EU 067 By-Product Loadout

SV 001 DC-100 (CE001) Exhaust

What to do	Why to do it
EMISSION LIMITS	hdr
Opacity: less than or equal to 10 percent opacity from control device (CE001)	Minn. R. 7011.1005, subp. 3(D)
Opacity: less than or equal to 5 percent opacity (fugitive) from a truck or railcar unloading station or a railcar loading station.	Minn. R. 7011.1005, subp. 3(A)
Opacity: less than or equal to 10 percent opacity (fugitive) from a truck loading station	Minn. R. 7011.1005, subp. 3(B)
OPERATING REQUIREMENTS	hdr
Total Particulate Matter: greater than or equal to 80 percent collection efficiency by weight (fabric filter is typically 99% efficient)	Minn. R. 7011.1005, subp. 3(E)
Particulate Matter < 10 micron: greater than or equal to 80 percent collection efficiency by weight (fabric filter is typically 99% efficient)	Minn. R. 7011.1005, subp. 3(E)
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 10 inches of water column , unless a new range 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 Permittee shall record the pressure drop once every 24 hours when in operation.	Minn. R. 7007.0800, subp. 2 and 14
RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping of Pressure Drop. The Permittee shall record the time and date of each pressure drop reading, and whether or not the observed pressure drop was within the range specified in this permit	Minn. R. 7007.0800, subp. 4 and 5; Minn. R. 7011.0080
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	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 recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

Subject Item: GP 003 DC-200 Equipment

Associated Items: CE 002 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

- EU 002 Drag Conveyor 19-205
- EU 003 Elevator 19-208
- EU 015 Screw Conveyor 25-402-2
- EU 018 Belt Conveyor 25-401-1
- EU 019 Belt Conveyor 25-401-2
- EU 020 Belt Conveyor 25-401-3
- EU 021 Drag Conveyor 25-406-1
- EU 022 Drag Conveyor 25-406-2
- EU 023 Drag Conveyor 25-406-3
- EU 027 Screw Conveyor 20-308
- EU 042 Conveyor 24-702-1
- EU 043 Conveyor 24-702-2
- EU 044 Conveyor 24-702-3
- EU 045 Conveyor 24-702-4
- EU 046 Drag Conveyor 24-703
- EU 047 Drag Conveyor 24-704
- EU 048 Screw Conveyor 24-705
- EU 049 Screw Conveyor 25-402-1
- EU 055 Weigh Scale 26-815
- EU 059 Malt Bin 27-906-1
- EU 060 Malt Loadout Drag Conveyor 27-904
- EU 061 Malt Loadout Drag Conveyor 27-902
- EU 062 Sprouts Bin 27-906-2
- EU 063 Screw Conveyor 27-903
- EU 075 Conveyor 21-335
- EU 077 Conveyor 26-816
- SV 002 DC-200 (CE002) Exhaust

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.01 grains/dry standard cubic foot . This limit applies to each individual unit listed in GP003. The limit is equivalent to approximately 3.23 lb/hour at maximum exhaust capacity. Assuming 99% control, <u>calculated potential emissions are approximately 0.41 lb/hour.</u>	40 CFR Section 60.302(b)(1); Minn. R. 7011.1005, subp. 2
Opacity: less than or equal to 0 percent opacity from the control device (CE002)	40 CFR Section 60.302(b)(2); Minn. R. 7011.1005, subp. 2
Opacity: less than or equal to 0 percent opacity - fugitive emissions	40 CFR Section 60.302(c)(2); Minn. R. 7011.1005, subp. 2
OPERATING REQUIREMENTS	hdr
Total Particulate Matter: greater than or equal to 99 percent collection efficiency	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 and 14 (data used to calculate PTE)
Particulate Matter < 10 micron: greater than or equal to 99 percent collection efficiency	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 and 14 (data used to calculate PTE)
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 10 inches of water column , unless a new range 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 Permittee shall record the pressure drop once every 24 hours when in operation.	Minn. R. 7007.0800, subp. 2 and 14
RECORDKEEPING REQUIREMENTS	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

Recordkeeping of Pressure Drop. The Permittee shall record the time and date of each pressure drop reading, and whether or not the observed pressure drop was within the range specified in this permit	Minn. R. 7007.0800, subp. 4 and 5; Minn. R. 7011.0080
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	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 recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

Subject Item: GP 004 DC-300A Equipment

Associated Items: CE 003 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 004 Raw Barley Garner 21-302

EU 016 Elevator 21-304

EU 017 Barley Storage Silos (48)

EU 024 Weigh Belt 22-558

EU 028 Steep Garner 22-549-1

EU 029 Steep Garner 22-549-2

EU 030 Steep Garner 22-549-3

EU 031 Steep Garner 22-549-4

SV 003 DC-300A (CE003) Exhaust

What to do	Why to do it
EMISSION LIMITS	hdr
Opacity: less than or equal to 10 percent opacity from control device (CE003)	Minn. R. 7011.1005, subp. 3(D)
Opacity: less than or equal to 5 percent opacity (fugitive) from a commodity handling operation.	Minn. R. 7011.1005, subp. 3(A)
OPERATING REQUIREMENTS	hdr
Total Particulate Matter: greater than or equal to 80 percent collection efficiency by weight (fabric filter is typically 99% efficient)	Minn. R. 7011.1005, subp. 3(E)
Particulate Matter < 10 micron: greater than or equal to 80 percent collection efficiency by weight (fabric filter is typically 99% efficient)	Minn. R. 7011.1005, subp. 3(E)
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 10 inches of water column , unless a new range 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 Permittee shall record the pressure drop once every 24 hours when in operation.	Minn. R. 7007.0800, subp. 2 and 14
RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping of Pressure Drop. The Permittee shall record the time and date of each pressure drop reading, and whether or not observed pressure drop was within the range specified in this permit	Minn. R. 7007.0800, subp. 4 and 5; Minn. R. 7011.0080
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	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 recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

Subject Item: GP 005 DC-300B Equipment

Associated Items: CE 004 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 050 Elevator 26-817

EU 051 Elevator 26-813

EU 052 Kiln Malt Hopper 26-818

EU 057 Malt Storage Silos (40)

EU 058 Shipping Malt Hopper 26-819

SV 005 DC-300B (CE004) Exhaust

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.01 grains/dry standard cubic foot . This limit applies to each individual unit listed in GP005. The limit is equivalent to approximately 1.61 lb/hour at maximum exhaust capacity. Assuming 99% control, calculated potential emissions are approximately 0.15 lb/hour.	40 CFR Section 60.302(b)(1); Minn. R. 7011.1005, subp. 2
Opacity: less than or equal to 0 percent opacity from the control device (CE004)	40 CFR Section 60.302(b)(2); Minn. R. 7011.1005, subp. 2
Opacity: less than or equal to 0 percent opacity - fugitive emissions	40 CFR Section 60.302(c)(2); Minn. R. 7011.1005, subp. 2
OPERATING REQUIREMENTS	hdr
Total Particulate Matter: greater than or equal to 99 percent collection efficiency	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 and 14 (data used to calculate PTE)
Particulate Matter < 10 micron: greater than or equal to 99 percent collection efficiency	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 and 14 (data used to calculate PTE)
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 10 inches of water column , unless a new range 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 Permittee shall record the pressure drop once every 24 hours when in operation.	Minn. R. 7007.0800, subp. 2 and 14
RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping of Pressure Drop. The Permittee shall record the time and date of each pressure drop reading, and whether or not the observed pressure drop was within the range specified in this permit	Minn. R. 7007.0800, subp. 4 and 5; Minn. R. 7011.0080
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	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 recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

Subject Item: GP 006 DC-500 Equipment

Associated Items: CE 006 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 032 Aspirator 22-503-1

EU 033 Aspirator 22-503-2

EU 034 Aspirator 22-503-3

EU 035 Aspirator 22-503-4

EU 036 Screw Conveyor 22-517

EU 037 Screw Conveyor 22-518

SV 006 DC-500 (CE006) Exhaust

What to do	Why to do it
EMISSION LIMITS	hdr
Opacity: less than or equal to 10 percent opacity from control device (CE006)	Minn. R. 7011.1005, subp. 3(D)
Opacity: less than or equal to 5 percent opacity (fugitive) from a commodity handling operation.	Minn. R. 7011.1005, subp. 3(A)
OPERATING REQUIREMENTS	hdr
Total Particulate Matter: greater than or equal to 80 percent collection efficiency by weight (fabric filter is typically 99% efficient)	Minn. R. 7011.1005, subp. 3(E)
Particulate Matter < 10 micron: greater than or equal to 80 percent collection efficiency by weight (fabric filter is typically 99% efficient)	Minn. R. 7011.1005, subp. 3(E)
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 10 inches of water column , unless a new range 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 Permittee shall record the pressure drop once every 24 hours when in operation.	Minn. R. 7007.0800, subp. 2 and 14
RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping of Pressure Drop. The Permittee shall record the time and date of each pressure drop reading, and whether or not the observed pressure drop was within the range specified in this permit	Minn. R. 7007.0800, subp. 4 and 5; Minn. R. 7011.0080
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	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 recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

Subject Item: GP 007 DC-600 Equipment

Associated Items: CE 007 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 053 Malt Cleaner 26-804-1

EU 054 Malt Cleaner 26-804-2

SV 007 DC-600 (CE007) Exhaust

What to do	Why to do it
EMISSION LIMITS	hdr
Opacity: less than or equal to 10 percent opacity from control device (CE007)	Minn. R. 7011.1005, subp. 3(D)
Opacity: less than or equal to 5 percent opacity (fugitive) from a commodity handling operation.	Minn. R. 7011.1005, subp. 3(A)
OPERATING REQUIREMENTS	hdr
Total Particulate Matter: greater than or equal to 80 percent collection efficiency by weight (fabric filter is typically 99% efficient)	Minn. R. 7011.1005, subp. 3(E)
Particulate Matter < 10 micron: greater than or equal to 80 percent collection efficiency by weight (fabric filter is typically 99% efficient)	Minn. R. 7011.1005, subp. 3(E)
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 10 inches of water column , unless a new range 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 Permittee shall record the pressure drop once every 24 hours when in operation.	Minn. R. 7007.0800, subp. 2 and 14
RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping of Pressure Drop. The Permittee shall record the time and date of each pressure drop reading, and whether or not the observed pressure drop was within the range specified in this permit	Minn. R. 7007.0800, subp. 4 and 5; Minn. R. 7011.0080
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	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 recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

Subject Item: GP 008 Kilns

- Associated Items:** EU 038 Kiln Upper Deck 24-707-1
 EU 039 Kiln Upper Deck 24-707-2
 EU 040 Kiln Lower Deck 24-708-1
 EU 041 Kiln Lower Deck 24-708-2
 SV 010 Kiln 1
 SV 011 Kiln 2

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
OPERATING REQUIREMENTS	hdr
Sulfur Usage: Less than or equal to 155 pounds per day, in each of Kiln 1 and Kiln 2 (310 pounds per day total)	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 and 14 (data used in PTE calculations)
RECORDKEEPING REQUIREMENTS	hdr
Daily Recordkeeping - Sulfur Usage: Each day, the Permittee shall record the total quantity of sulfur used in each kiln during the previous calendar day	Minn. R. 7007.0800, subp. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

Subject Item: SV 008 DC-700 (CE008) Exhaust

Associated Items: EU 069 Central Dust Collection System□□

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
OPERATING REQUIREMENTS	hdr
Total Particulate Matter: greater than or equal to 99 percent collection efficiency	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 and 14
Particulate Matter < 10 micron: greater than or equal to 99 percent collection efficiency	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 and 14
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 10 inches of water column , unless a new range 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 Permittee shall record the pressure drop once every 24 hours when in operation.	Minn. R. 7007.0800, subp. 2 and 14
RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping of Pressure Drop. The Permittee shall record the time and date of each pressure drop reading, and whether or not the observed pressure drop was within the range specified in this permit	Minn. R. 7007.0800, subp. 4 and 5; Minn. R. 7011.0080
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	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 recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

Subject Item: EU 070 Boiler 1

Associated Items: SV 009 Boilers

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0515, subp. 2
OPERATING REQUIREMENTS	hdr
Fuel use: Limited to natural gas and no. 6 fuel oil, by design.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 and 14 (data used to calculate PTE)
Sulfur Content of Fuel: less than or equal to 2.5 percent by weight	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 and 14 (data used to calculate PTE)
Performance Test: due 365 days after Permit Issuance to measure PM and opacity emissions while combusting no. 6 fuel oil.	Minn. R. 7017.2020, subp. 1
<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 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>	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2
RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping: Record and maintain records of the amounts of each fuel combusted on a monthly basis. These records may consist of purchase records or receipts, but must include the sulfur content of fuel oil purchased.	Minn. R. 7007.0800, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

Subject Item: EU 071 Boiler 2

Associated Items: SV 009 Boilers

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0515, subp. 2
OPERATING REQUIREMENTS	hdr
Steam Flow: less than or equal to 102000 lbs/hour using 8-hour Block Average . Divide total steam by total operating time in an eight hour block. Down time of 15 or more minutes is not to be included as operating time.	Minn. R. 7017.2025 (notice of compliance letter dated February 27, 1995)
Fuel use: Limited to natural gas and no. 6 fuel oil, by design.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 and 14 (data used to calculate PTE)
Sulfur Content of Fuel: less than or equal to 2.5 percent by weight	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2 and 14 (data used to calculate PTE)
Performance Test: due 365 days after Permit Issuance to measure PM and opacity emissions while combusting no. 6 fuel oil.	Minn. R. 7017.2020, subp. 1
<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 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>	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2
RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping: Record and maintain records of the amounts of each fuel combusted on a monthly basis. These records may consist of purchase records or receipts, but must include the sulfur content of fuel oil purchased.	Minn. R. 7007.0800, subp. 4
Recordkeeping - Steam Production: Once each operating day, calculate and record the steam production from EU071, as described above.	Minn. R. 7007.0800, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

Subject Item: EU 072 Diesel Generator**Associated Items:** SV 012 Generator

What to do	Why to do it
EMISSION LIMITS	hdr
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

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

Subject Item: EU 073 Fire Pump**Associated Items:** SV 013 Fire Pump

What to do	Why to do it
EMISSION LIMITS	hdr
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

TABLE B: SUBMITTALS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead
Permit Number: 02700022 - 001

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

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

Send any application for a permit or permit amendment to:

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

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

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

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

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

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

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

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Computer Dispersion Modeling Protocol	due 1,096 days after Permit Issuance for SO ₂ , NO _X , and PM ₁₀ . This protocol will describe the proposed modeling methodology and input data, in accordance with MPCA modeling guidance for Title V air dispersion modeling analyses. This is a state-only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Total Facility
Computer Dispersion Modeling Results	due 1,462 days after Permit Issuance for SO ₂ , NO _X , and PM ₁₀ . To be submitted after the MPCA has reviewed and approved the modeling protocol. The submittal should adhere to MPCA modeling guidance for Title V air dispersion modeling analyses. This is a state-only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Total Facility
Testing Frequency Plan	due 60 days after Performance Test for PM and opacity emissions. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on one-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	EU070
Testing Frequency Plan	due 60 days after Performance Test for PM and opacity emissions. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on one-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	EU071

TABLE B: RECURRENT SUBMITTALS

10/08/02

Facility Name: Busch Agricultural Resources - Moorhead

Permit Number: 02700022 - 001

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX B**Facility Name:** Busch Agricultural Resources - Moorhead**Permit Number:** 02700022-001**Insignificant Activities Required to be Listed**

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Applicable Requirement
3(G)	Emissions from a laboratory, as defined in the subpart. <ul style="list-style-type: none">• Barley and malt analysis lab	Minn. R. 7011.0710/0715
3(H)	Miscellaneous:	
	1. total usage of less than 200 gallons of VOC (including hazardous air pollutant-containing VOC) combined in any consecutive 12 months period at a stationary source; <ul style="list-style-type: none">• Parts washer in maintenance shop	Minn. R. 7011.0710/0715 <i>OR</i>
	4. brazing, soldering or welding equipment; <ul style="list-style-type: none">• Welding tools in maintenance shop	7011.0710/0715

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 02700022-001

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

1. General Information

1.1. Applicant and Stationary Source Location:

Owner Address	Facility Address
Busch Agricultural Resources, Inc. 10733 Sunset Office Drive Suite 400 St. Louis, MO 63127	2101 26th Street South Moorhead, Clay County, 56560 (SIC Code: 2083)
Facility Contact: Kirby Kraft Director, Malt Administration and Environmental Engineering (314) 909-3935 (Owner Address)	

1.2. Description of the facility

Busch Agricultural Resources, Inc. (BARI) operates a barley malting plant in Moorhead, Minnesota. The barley is received, cleaned, graded, and stored in the silos. As needed, the barley is removed from the silos, conveyed to the steep house and loaded into the steep tanks. After 48 hours, the barley is transferred from the steep tanks into the germination compartments where it germinates for four days. The sprouted barley (green malt) is then transferred to the upper deck of a double deck kiln, dried for 12 to 24 hours, then dropped into the lower deck and dried for an additional 12 to 24 hours. The kiln is steam heated. Sulfur is used to introduce sulfur dioxide (SO₂) during the low heat phase of the kilning. The dried malt is cleaned and stored for a minimum of 28 days for aging. The malt is cleaned a second time just before loading into rail cars for shipping.

Emissions at the facility consist of particulate matter from grain handling and malt processing, SO₂ emissions from the kilns, and combustion products from the boilers and diesel generators. All grain and malt handling, with the exception of the kilns, is controlled with fabric filter baghouses.

The facility is a major source under federal Prevention of Significant Deterioration (PSD, 40 CFR 52.21) and the Title V permit program (40 CFR 70.2).

1.3 Description of any changes allowed with this permit issuance

None

1.4 Description of all amendments issued since the issuance of the last total facility permit and to be included in the Part 70 Permit

Permit Number and Issuance Date	Action Authorized
02700022-013, August 13, 1997	Changed the pressure drop ranges for the fabric filter baghouses
1258A-01-I/O-01, June 19, 2001	Replacement of barley cleaning line

1.5. Changes to Permit following Public Notice

- Following discussion with staff from U.S. EPA on July 29 and August 5, 2002, the periodic monitoring required for all baghouses has been changed. The original draft permit as placed on public notice required the Permittee to either record the pressure drop or to check for visible emissions, on a daily basis, as prescribed in Minn. R. 7011.0080. EPA commented that in accordance with White Paper #2, the most stringent form of periodic monitoring should be used. That was at first considered to be performance testing, but after further consideration, it was determined that daily readings of pressure drop across the baghouses should be required, with the requirement to take corrective action when the pressure drop varies from the prescribed range, ensures ongoing compliance. Stack testing probably would not result in useful information, since it is assumed that the Permittee is fixing potential problems along the way. Thus, in order to make the most stringent monitoring the primary monitoring, the permit has been changed to require the Permittee to do daily pressure drop readings. See Section 3.3 of this document for discussion of why pressure drop was chosen over visible emission observations.
- The Permittee requested additional time to test the boilers. The permit was placed on public notice with the requirement to test emissions from the boilers within 180 days of permit issuance. The Permittee, upon realizing that would mean testing possibly during the winter months, requested that the time frame be changed to within 365 days of permit issuance, so that testing could be done during the late spring or summer months. Since we are allowed to extend deadlines by up to 365 days under an administrative amendment, this change does not require public notice, and was made as requested.
- Periodic testing was added to the permit for units subject to NSPS. Initial testing has been completed. All test results show eligibility for the 5-year retest schedule under MPCA testing frequency guidance. The most recent test will require retesting by February 2007 under the guidance, so all retests are required on that same schedule.

Permit Action Number: 02700022-001

Page 2 of 7

Date: 1/7/2004

- An error was discovered in the calculation for GP001. Since the corrected calculation results in potential emissions less than what was public noticed, this change does not require the permit to be re-noticed.
- An error in the emission factors for PM and PM₁₀ for residual fuel oil was discovered. The potential emissions were recalculated, and the correct numbers are reflected in the totals below. No changes to the permit were required. Although the correct numbers are higher than what appeared in the public notice, they do not reflect a modification, and the increases do not trigger the need to renounce the permit under any state or federal thresholds.

1.6. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary:

	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x Tpy	CO tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions	224.2	165.8	2805	446.7	80.1	5.5	1.7 (hexane)	2.5
Total Facility Actual Emissions (1999)	39.6	13.1	319.3	67.6	9.4	0.6	NR	NR

NR = Not reported (HAPs not reported on annual emission inventory)

Table 2. Facility and Permit Classification

Classification	Major/Affected Source	*Synthetic Minor	*Minor
PSD	NO _x , SO ₂	PM, PM ₁₀	All others
Part 70 Permit Program	NO _x , SO ₂ , PM ₁₀		All others

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

2. Regulatory and/or Statutory Basis

New Source Review

The facility is an existing major source under New Source Review. There are no modifications being made at this time. A modification was made in 2001, for which federally enforceable conditions were accepted such that the modification was not major under New Source Review. Those conditions are included in this permit (GP001).

Part 70 Permit Program

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

New Source Performance Standards (NSPS)

Portions of the facility that have been modified since August 3, 1978 are subject to 40 CFR Section 60, Subpart DD, Standards of Performance For Grain Elevators. The barley cleaning lines, which were replaced during 2001, are subject to Subpart DD. The items in GP003 and

GP005 became subject to the NSPS in 1990 when the air pollution control systems were upgraded. Testing required under NSPS has been completed.

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

The facility is a non-major source of HAPs.

Minnesota State Rules

Portions of the facility are subject to the following Minnesota Standards of Performance:

- Minn. R. 7011.0600 – 7011.0610: Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment (DHE rule)
- Minn. R. 7011.0700 – 7011.0735: Standards of Performance for Post-1969 Industrial Process Equipment (IPER rule)
- Minn. R. 7011.1000 – 7011.1015: Standards of Performance for Dry Bulk Agricultural Commodity Facilities (DBAC rule)
- Minn. R. 7011.2300: Standards of Performance for Stationary Internal Combustion Engines

Table 3. Regulatory Overview of Facility

EU, GP, or SV	Applicable Regulations	Comments:
GP001 GP003 GP005	40 CFR 60 Subpart DD	Standards of Performance for Grain Elevators
GP002 GP004 GP006 GP007	Minn. R 7011.1000 – 7011.1015	Standards of Performance for Dry Bulk Agricultural Commodity Facilities
GP008 SV008	Minn. R. 7011.0700 – 7011.0735	Standards of Performance for Post-1969 Industrial Process Equipment
EU070 EU071	Minn. R. 7011.0600 – 7011.0610	Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment
EU072 EU073	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines
GP001	Title I Conditions	Limits set in previous permit to avoid major source classification for modification

3. Technical Information

3.1 Calculations

All calculations are done using emission factors from AP-42. Hourly emissions are calculated using the hourly capacity of the equipment, line, or system. Annual emissions are calculated assuming operation for 8760 hours per year, with the exception of the new cleaning lines, where

the annual emissions are calculated using the production limits set as Title I conditions. See Attachment 1 for documentation of all calculations.

3.2 Periodic Monitoring

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements.

In evaluating the monitoring included in the permit, the MPCA considered the following:

- The likelihood of violating an applicable requirement;
- Whether add-on controls are necessary to meet the emission limit;
- The variability of emissions over time;
- The type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- The technical and economic feasibility of possible periodic monitoring methods; and
- The kind of monitoring found on similar units.

Table 4 summarizes the periodic monitoring requirements for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate.

Table 4. Periodic Monitoring

EU/GP/CE	Emission Limit (basis)	Additional Monitoring	Discussion
GP001	PM, opacity (NSPS)	Operation and maintenance of the baghouse, daily pressure drop readings	At maximum hourly capacity, controlled emissions calculated using AP-42 are approximately 15% of the applicable limit. NSPS initial compliance testing has been completed, and tested emissions were approximately 12% of the limit.
	Production limits (Title I)	Recordkeeping	
GP002 GP004 GP006 GP007	Opacity, control efficiency (DBAC rule)	Operation and maintenance of the baghouse, daily pressure drop readings	Properly maintained baghouses typically achieve 99% efficiency, which is 24% greater than what the rule requires.
GP003 GP005	PM, opacity (NSPS)	Operation and maintenance of the baghouse, daily	At maximum hourly capacity, controlled emissions calculated using AP-42 are approximately 13%

EU/GP/CE	Emission Limit (basis)	Additional Monitoring	Discussion
		pressure drop readings.	and 9% of the applicable limits for GP003 and GP005, respectively. NSPS initial testing was completed in 1991, and tested emissions were 13% and 15% of the applicable limits for GP003 and GP005, respectively.
SV008	PM, opacity (IPER rule)	Operation and maintenance of the baghouse, daily pressure drop readings	Properly maintained baghouses typically achieve an efficiency of 99% or greater, and grain loadings on the order of 0.02 gr/dscf. Noncompliance with the IPER rule is unlikely when a baghouse is in use on a “dry” operation such as this.
GP008	PM, opacity (IPER rule)	None	Minimal particulate emissions are expected from this operation
EU070 EU071	PM, opacity (DHE rule)	Recordkeeping of fuel use, periodic performance testing while burning fuel oil	Noncompliance is unlikely while burning natural gas. Both boilers were tested in 1993, and EU071 was tested in 1994. Testing as periodic monitoring is required within 1 year of permit issuance.
EU072 EU073	SO ₂ , opacity (ICE rule)	None	Generators are for emergency use only.

3.3 Baghouse Monitoring Requirements

Typically, visible emission readings are considered the more stringent monitoring method for low temperature baghouses. In this case, it was determined that daily reading of the pressure drop is the “stricter” form of periodic monitoring. Since the facility produces a product ultimately destined for human consumption, it is subject to rigorous standards of cleanliness, health, and safety under state and federal regulations. In addition, any dust that escapes from any openings in a process or operation or control device represents a loss of product and thus a loss of revenue. That being the case, there are no “leaks” and process and control equipment are monitored closely anyway as a form of preventive maintenance so that product is not lost and state and federal health and cleanliness rules are not violated. Because of these rules and actions, monitoring for visible emissions at the stack is unlikely to uncover any additional information on malfunctions beyond what would already be caught. Therefore, daily pressure drop readings provide an additional means of monitoring for proper baghouse operation, and represents the more rigorous periodic monitoring.

3.4 Delta Organization

Permit Action Number: 02700022-001

Page 6 of 7

Date: 1/7/2004

The barley and malt handling operations are organized by groups in Delta. This is because most of the applicable requirements apply on a per-unit basis, but multiple emission units exhaust to each baghouse and stack. Thus, rather than dedicate a page of the permit to each of 70+ emission units, they were grouped by baghouse/stack. Since none of the requirements need to be tracked by unit, this does not hinder the function of Delta.

4. Conclusion

Based on the information provided by Busch Agricultural Resources, Inc., the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 02700022-001 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Toni Volkmeier, Cary Hernandez, John Chikkala (peer review)

Attachments: A. Calculations/PTE Summary
B. Facility Description and CD-01 Forms