

**AIR EMISSION PERMIT NO. 06700023- 002**  
**Total Facility Operating Permit - Reissuance**

**IS ISSUED TO**

Minnesota Valley Alfalfa Producers-MnVAP

**MINNESOTA VALLEY ALFALFA PRODUCERS-MNVAP**  
7410 Highway 23 Southwest  
Raymond, Kandiyohi County, MN 56282

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

This permit reissuance supersedes Air Emission Permit No. 06700023-001 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 are enforceable by U.S. Environmental Protection Agency Administrator or citizens under the Clean Air Act.

**Permit Type:** Federal; Pt 70/Limits to Avoid NSR;

**Operating Permit Issue Date:** December 18, 2009

**Expiration Date:** December 18, 2014

All Title I Conditions do not expire.

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

for Paul Eger  
Commissioner  
Minnesota Pollution Control Agency

**Permit Applications Table**

<b>Permit Type</b>	<b>Application Date</b>	<b>Permit Action</b>
Total Facility Operating Permit - Reissuance	1/18/09	002
Major Amendment	6/21/09	002

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**NOTICE TO THE PERMITTEE:**

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	651-296-6300
Outside Metro Area	1-800-657-3864
TTY	651-282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

**PERMIT SHIELD:**

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

## **FACILITY DESCRIPTION: Permit Action 002**

The Minnesota Valley Alfalfa Producers (MnVap) operate an alfalfa processing plant, located on Highway 23 in Priam, Minnesota. The facility receives bales of alfalfa via truck from local farmers. The bales are unloaded from the trucks using a front end loader. The bales are stored in piles on site. The processing begins when the bales are loaded into the shredder by the front end loader. The alfalfa is shredded, ground, and dried. The dried alfalfa is then extruded into pellets. A portion of the pellets are reground and pelletized to produce pellets of varying density. Pellets are stored in bins on site. The pellets are loaded into either trucks or railcars for shipment. All particulate matter sources are controlled by baghouses or cyclones at all times. Fugitive emissions are minimized by best management practices.

This is a reissuance of the title V operating permit that incorporates a major amendment including installation of new emissions units, control equipment, and modification of existing facility design. The permit contains restrictions and limits to allow the facility to avoid major source levels as defined by 40 CFR § 52.21. The main pollutant of concern is particulate matter.

This permit action authorizes construction of a new pellet line. Installation of new Emission units authorized by this permit action; EU028 and EU030 are live bottom hoppers, EU032 is the KDS Device, which is a device that is designed to grind and dehydrate product simultaneously, EU034 and EU035 are the receiving and transfer legs used to move the product within the facility. Installation of new control equipment authorized by this permit action: CE007, CE008, and CE009 are high efficiency cyclones used to control particulate emissions of new and existing emissions units.

This permit action also authorizes significant modification of the existing pellet line and of the existing facility. The modification of the existing equipment is actually a redesign of the existing equipment by the permittee to increase efficiency and reliability. This redesign does not modify any given emission unit but does change what control equipment and/or stack vent that it is routed to. EU001 now runs through CE007 to SV002; EU003 now runs through CE007 to SV002; EU005 now runs through CE008 to SV002; EU008, EU009, EU010, EU011, and EU012 now runs through CE003 to SV003; EU014, EU015, EU016, EU022, and EU023 now runs through CE004 to SV004; EU026 now runs through CE005 to SV006.

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-1**

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

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

**Subject Item:****Total Facility**

<b>What to do</b>	<b>Why to do it</b>
<b>SOURCE SPECIFIC REQUIREMENTS</b>	hdr
Process Throughput: less than or equal to 122,640 tons/year using 12-month Rolling Sum	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Daily Recordkeeping. On each day of operation, the Permittee shall record and maintain the total quantity and type of biomass used at the facility. This shall be based on written usage logs and delivery records.	Minn. R. 7007.0800 subp. 5
Recordkeeping: By the 15th day of each month, calculate and record the quantity of product throughput during the previous month and during the previous 12 months (12-month rolling sum).	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Permittee shall follow the new product testing protocol in appendix B of this permit for each new biomass that the facility processes.	Minn. R. 7007.0800 subp. 5
Permittee shall maintain records of all tests done in accordance with appendix B of this permit.	Minn. R. 7007.0800 subp. 5
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.  Specifically, no operations in the processing area of the Facility are allowed if the following equipment is not fully operational, or if the following equipment is not fully operational and cannot be repaired in one hour: -Shredder/Hammermill Cyclone (CE007) -Dryer Cyclone (CE008) -West Baghouse Baghouse (CE003) -East Baghouse Baghouse (CE004) -Wind Monitoring Equipment	Minn. R. 7007.0800, subp. 2 and subp. 16(J); Consent Order, Court File No. CX-01-1653
Continued from above.  No operations are allowed in the loadout area of the Facility if the following equipment is not fully operational and cannot be repaired in one hour: -Loadout Doors -Wind Monitoring Equipment.	Minn. R. 7007.0800, subp. 2, Consent Order Court File No. CX-01-1653
<b>FACILITY FUGITIVE EMISSIONS CONTROL</b>	hdr
Fugitive Emissions: Do not cause or permit the transporting of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Do not cause or permit a road or a driveway to be constructed, used repaired, or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming airborne.	Minn. R. 7011.0150; Minn. R. 7007.0800, subp. 2; Consent Order, Court File No. CS-01-1653
Clean up commodities spilled on the driveway and other facility property, including buildings, as required to minimize fugitive emissions.  All buildings and equipment shall be kept free of alfalfa dust. At no time shall the dust layer on any building, or any equipment be greater than 1/4 inch in depth.  Each day, all loose hay and hay dust shall be cleaned up. This cleanup shall be repeated more often than daily, if necessary to control dust emissions.	Minn. R. 7011.1005, subp. 1(A), Minn. R. 7007.0800, subp. 2; Consent Order, Court File No. CS-01-1653
Fugitive Emissions Control Plan: The Permittee shall submit to the Commissioner and implement a fugitive emissions control plan within 60 days of the date of permit issuance. The plan shall identify all fugitive emission sources, primary and contingent control measures, and record keeping. The Permittee shall follow the actions and record keeping specified in the control plan. If the Commissioner determines the Permittee is out of compliance with Minn. R. 7011.0150 or the fugitive emission control plan, then the Permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
<b>OTHER REQUIREMENTS</b>	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-2**

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

Retain a full time environmental compliance employee whose primary responsibility shall be to assist MnVAP in complying with the air emission permit and MnVAP's environmental compliance plan.  The environmental compliance employee shall report only to MnVAP's Board of Directors and shall have the authority to direct MnVAP to take any action he or she deems necessary and appropriate to assist MnVAP in complying with the air emission permit, environmental compliance plan, and all applicable environmental laws, rules, and regulations, including directing MnVAP to shut down all or part of the facility, if necessary.	Minn. R. 7007.0800, subp. 2, Consent Order, Court File No. CX-01-1653
Excess wind: Do not operate the Facility when the wind is blowing in excess of an average of twenty miles per hour for two consecutive hours from the following direction:  -Two hundred ninety-two degrees to three hundred thirty seven degrees which equates to winds from the west northwest, northwest, and north northwest.	Minn. R. 7007.0800, subp. 2; Consent Order, Court File No. CX-01-1653
Wind Monitoring: Maintain and operate a twenty-four hour, seven day per week wind monitoring device that is capable of notifying plant employees when the wind speed, direction and duration require that the facility cease operations.  In the event the wind monitoring device is not functional for a period of more than one hour, wind speed, direction and duration data from the Willmar/Rice Municipal Airport AWOS System may be used as an alternative source of wind monitoring. However, use of such data shall occur only on an emergency basis and shall not be regularly relied upon by the facility.	Minn. R. 7007.0800, subp. 2; Consent Order, Court File No. CX-01-1653
Compliance plan: Follow the procedures and operating practices set forth in the Minnesota Valley Alfalfa Producers Environmental Compliance Plan which was submitted to the MPCA dated April 2003 and amended with a submittal dated June 2003. The Compliance Plan may be amended upon submittal to and approval by the Agency. Approval shall be granted by letter.  If the proposed change involves increasing diligence, the change may be made immediately. If the proposed change involves a relaxation of any of the Compliance Plan provisions, the change may be made after receipt of approval from the Agency.  If any Compliance Plan conditions conflict with permit conditions, the permit conditions take precedence.	Minn. R. 7007.0800, subp. 2; Consent Order, Court File No. CX-01-1653
Permit Appendices: This permit contains 2 appendices as listed in the permit Table of Contents. The Permittee shall comply with all requirements contained in the appendices.	Minn. R. 7007.0800, subp. 2
Comply with Fugitive Emission Control Plan: The Permittee shall follow the actions and recordkeeping specified in the control plan. The plan may be amended by the Permittee with the Commissioner's approval. If the Commissioner determines the Permittee is out of compliance with Minn. R. 7011.0150 or the fugitive control plan, then the Permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors as requested by the Commissioner.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0100; Minn. R. 7007.0800, subp. 2; Minn. R. 7011.0150; Minn. R. 7009.0020
<b>OPERATIONAL REQUIREMENTS</b>	hdr
The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 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.	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 control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices 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 practices, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subps. 14 and 16(J)

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

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

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
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	hdr
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
Performance Test Notifications and Submittals:  Performance Tests are due as outlined in Table A 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. 7017.2018; Minn. R. 7017.2030, subps. 1-4, Minn. R. 7017.2035, subps. 1-2
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
MONITORING REQUIREMENTS	hdr
Monitoring Equipment Calibration: The Permittee shall calibrate all required monitoring equipment at least once every 12 months (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)
RECORDKEEPING	hdr
Recordkeeping: Retain all records at the stationary source, unless otherwise specified within this permit, 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



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-4**

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

REPORTING/SUBMITTALS	hdr
<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>	Minn. R. 7019.1000, subp. 3
<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>	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
<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"> <li>1. the cause of the deviation;</li> <li>2. the exact dates of the period of the deviation, if the deviation has been corrected;</li> <li>3. whether or not the deviation has been corrected;</li> <li>4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and</li> <li>5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.</li> </ol>	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 - 7007.1500
Application for Permit Reissuance: due 180 days before expiration of existing permit.	Minn. R. 7007.0400, subp. 2
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, to be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 - 7019.3100
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 - 7002.0095

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

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

**Subject Item:** GP 001 Bale Buster and Dryer**Associated Items:** CE 007 Centrifugal Collector - High Efficiency

CE 008 Centrifugal Collector - High Efficiency

EU 001 Hay Shredder

EU 003 Hammermill #1

EU 005 Hay Dryer and cyclone

EU 028 Hammermill #1 Live Bottom Hopper

EU 029 Cyclone Bank

EU 030 Dryer Live Bottom Hopper

EU 031 Dryer High Efficiency Cyclone Bank

SV 002 Dryer Cyclone

What to do	Why to do it
Vent all emissions from each emission unit through a cyclone that meets the requirements of CE 007 or CE008 at any time the units are in operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21and Minn. R. 7007.3000
Operate and maintain a windscreen or shrouding at the alfalfa shredder to shelter the shredder from severe wind conditions.	Minn. R. 7007.0800, subp. 2; Consent Order, Court File CS-01-1653

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP  
Permit Number: 06700023 - 002

Subject Item: GP 002 Line 1 - Hammermill #2, Pellet Mill and Pellet Coolers

- Associated Items:
- CE 003 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
  - EU 008 Hammermill #2
  - EU 009 Fan & collection cyclone to surge bin #1
  - EU 010 Surge bin #1
  - EU 011 Pellet cooler #1
  - EU 012 Pellet Mill #1 (CPM 7900)
  - SV 003 Baghouse fan #1 (west)

What to do	Why to do it
Vent all emissions from each emission unit through a baghouse that meets the requirements of CE 003 at any time the units are in operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21and Minn. R. 7007.3000

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-7**

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

**Subject Item: GP 003 Pellet Mill, Pellet Cooler, Regrind Mill, Grain Leg, Storage Bins****Associated Items:** CE 004 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 013 Bucket elevator

EU 014 Surge bin #2

EU 015 Pellet Mill #2 (CPM 7300)

EU 016 Pellet cooler #2

EU 017 Regrinder

EU 018 Storage bin #1

EU 019 Overhead storage

EU 020 Storage bin #2

EU 022 Truck loadout (6 individual spouts)

EU 023 Railcar loadout (1 spout)

EU 034 Receiving Leg

EU 035 Transfer Leg

SV 004 Baghouse fan #2 (east)

What to do	Why to do it
Vent all emissions from each emission unit through a baghouse the meets the requirements of CE 004 at any time the units are in operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Operate and maintain dust capture hoods on the truck and railcar loadout to capture and collect dust generated from the delivery of product to transport. The exhaust from the loadout spout shall be vented to a baghouse at all times during product loadout.	Minn. R. 7007.0800, subp. 2 and Minn. R. 7009.0020
All product loadout and bagging shall be performed within an enclosure, and the doors shall be closed. The doors shall remain closed and the ventilation system shall continue to operate for 10 minutes after the completion of product loadout.	Minn. R. 7007.0800, supp. 2 and Minn. R. 7009.0020
Dust on the floors shall be removed daily and dust on elevated surfaces within the loadout building shall be removed at a minimum of once per week.	Minn. R. 7007, subp. 2 and Minn. R. 7009

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP  
Permit Number: 06700023 - 002

Subject Item: GP 004 KDS Machine

Associated Items: CE 009 Centrifugal Collector - High Efficiency  
EU 032 KDS Device  
EU 033 KDS Device High Efficiency Cyclone  
SV 009 KDS Device Stack

What to do	Why to do it
Vent all emissions from each emission unit through a cyclone that meets the requirements of CE 009 at any time the units are in operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21and Minn. R. 7007.3000

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-9**

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

**Subject Item: SV 002 Dryer Cyclone****Associated Items:** EU 001 Hay Shredder

EU 003 Hammermill #1

EU 005 Hay Dryer and cyclone

EU 028 Hammermill #1 Live Bottom Hopper

EU 029 Cyclone Bank

EU 030 Dryer Live Bottom Hopper

EU 031 Dryer High Efficiency Cyclone Bank

GP 001 Bale Buster and Dryer

What to do	Why to do it
Total Particulate Matter: less than or equal to 2.50 lbs/ton of process throughput. This stack limit is based on manufacturers guaranteed emission rate for the Shredder EU001 and Dryer EU005.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
PM < 10 micron: less than or equal to 2.40 lbs/ton of throughput. This stack limit is based on manufacturers guarantee emission rate for the Shredder EU001 and Dryer EU005.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
PM < 2.5 micron: less than or equal to 2.40 lbs/ton of throughput. This stack limit is based on manufacturers guaranteed emission rate for the Shredder EU001 and Dryer EU005.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
Initial Performance Test: due 180 days after Equipment Installation to measure PM, PM10, and PM2.5 emissions. Initial test shall be completed using alfalfa as the product. Alfalfa is assumed to have to highest possible emissions out of all potential biomass.	Minn. R. 7017.2020 Subp. 1
Opacity: less than or equal to 20 percent	Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-10**

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

**Subject Item:** EU 005 Hay Dryer and cyclone**Associated Items:** CE 008 Centrifugal Collector - High Efficiency

GP 001 Bale Buster and Dryer

SV 002 Dryer Cyclone

What to do	Why to do it
Fuel Usage: Limited to propane or natural gas only	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
Total Particulate Matter: less than or equal to .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 except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0610, subp. 1(A)(2)

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

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

**Subject Item:** EU 021 Boiler**Associated Items:** SV 005 Boiler exhaust

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0515, subp. 2
Fuel Use: Limited to natural gas and propane only.	Minn. R. 7007.0800, subp. 2



TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP  
Permit Number: 06700023 - 002

Subject Item: EU 027 Storage Shed

Associated Items: SV 008 Storage shed venting

What to do	Why to do it
The doors to the shed shall be closed during all transfer operations.	Minn. R. 7007.0800, subp. 2, Minn. R. 7009.0020

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

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

**Subject Item:** EU 032 KDS Device**Associated Items:** CE 009 Centrifugal Collector - High Efficiency

GP 004 KDS Machine

SV 009 KDS Device Stack

What to do	Why to do it
Total Particulate Matter: less than or equal to 2.50 lbs/ton of process throughput.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
PM < 10 micron: less than or equal to 2.25 lbs/ton of throughput.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
PM < 2.5 micron: less than or equal to 2.25 lbs/ton of throughput.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
Initial Performance Test: due 180 days after Permit Issuance to test PM, PM10, and PM2.5.  Initial test shall be completed using alfalfa as the product. Alfalfa is assumed to have to highest possible emissions out of all potential biomass.	Minn. R. 7017.2020 Subp. 1
Vent all emissions from each emission unit through a cyclone that meets the requirements of CE009 at any time the units are in operation.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000

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

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

**Subject Item: CE 003 Fabric Filter - Low Temperature, i.e., T<180 Degrees F****Associated Items:** EU 008 Hammermill #2

EU 009 Fan &amp; collection cyclone to surge bin #1

EU 010 Surge bin #1

EU 011 Pellet cooler #1

EU 012 Pellet Mill #1 (CPM 7900)

EU 036 Cooling Cyclone

GP 002 Line 1 - Hammermill #2, Pellet Mill and Pellet Coolers

What to do	Why to do it
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for PM < 10 micron: greater than or equal to 93.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for PM < 2.5 micron: greater than or equal to 93.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Pressure Drop: greater than or equal to 1.0 inches of water column and less than or equal to 10.0 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 new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours when in operation.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
Visible Emissions: The Permittee shall check the fabric filter stack (SV 003) for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall read and record the pressure drop across the fabric filter, once each day of operation.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
Recordkeeping of Visible Emissions and Pressure Drop. The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, and whether or not any visible emissions were observed, and whether or not the observed pressure drop was within the range specified in this permit.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The control equipment is considered listed control equipment under Minn. R. 7011.0060 to 7011.0080. The Permittee shall operate and maintain the fabric filter at all times that any process equipment controlled by the fabric filter is operating. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7011.0075, subp. 1
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - 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, eliminate visible emissions, 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, subps. 4, 5, and 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7011.0075, subp. 3
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, subps. 4, 5 and 14

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

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

**Subject Item: CE 004 Fabric Filter - Low Temperature, i.e., T<180 Degrees F****Associated Items:** EU 013 Bucket elevator

EU 014 Surge bin #2

EU 015 Pellet Mill #2 (CPM 7300)

EU 016 Pellet cooler #2

EU 017 Regrinder

EU 018 Storage bin #1

EU 019 Overhead storage

EU 020 Storage bin #2

EU 022 Truck loadout (6 individual spouts)

EU 023 Railcar loadout (1 spout)

EU 034 Receiving Leg

EU 035 Transfer Leg

GP 003 Pellet Mill, Pellet Cooler, Regrind Mill, Grain Leg, Storage Bins

What to do	Why to do it
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for PM < 10 micron: greater than or equal to 93.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for PM < 2.5 micron: greater than or equal to 93.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Pressure Drop: greater than or equal to 1.0 inches of water column and less than or equal to 10.0 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 new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours when in operation.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
Visible Emissions: The Permittee shall check the fabric filter stack (SV 003) for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall read and record the pressure drop across the fabric filter, once each day of operation.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
Recordkeeping of Visible Emissions and Pressure Drop. The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, and whether or not any visible emissions were observed, and whether or not the observed pressure drop was within the range specified in this permit.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The control equipment is considered listed control equipment under Minn. R. 7011.0060 to 7011.0080. The Permittee shall operate and maintain the fabric filter at all times that any process equipment controlled by the fabric filter is operating. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7011.0075, subp. 1
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - 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, eliminate visible emissions, 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, subs. 4, 5, and 14

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

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7011.0075, subp. 3
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, subps. 4, 5 and 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-17**

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

**Subject Item:** CE 007 Centrifugal Collector - High Efficiency**Associated Items:** EU 001 Hay Shredder

EU 003 Hammermill #1

EU 028 Hammermill #1 Live Bottom Hopper

EU 029 Cyclone Bank

GP 001 Bale Buster and Dryer

What to do	Why to do it
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 80.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for PM < 10 micron: greater than or equal to 60.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for PM < 2.5 micron: greater than or equal to 60.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Pressure Drop: greater than or equal to .5 inches of water column and less than or equal to 2.0 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 new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours when in operation.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
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.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The control equipment is considered listed control equipment under Minn. R. 7011.0060 to 7011.0080. The Permittee shall operate and maintain the fabric filter at all times that any process equipment controlled by the cyclone is operating. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7011.0075, subp. 1
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored cyclone is in operation.	Minn. R. 7011.0075, subp. 3
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. 7017.0200
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 cyclone 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 cyclone. 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-18**

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

**Subject Item:** CE 008 Centrifugal Collector - High Efficiency**Associated Items:** EU 005 Hay Dryer and cyclone

EU 030 Dryer Live Bottom Hopper

EU 031 Dryer High Efficiency Cyclone Bank

GP 001 Bale Buster and Dryer

What to do	Why to do it
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 80.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for PM < 10 micron: greater than or equal to 60.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for PM < 2.5 micron: greater than or equal to 60.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Pressure Drop: greater than or equal to .5 inches of water column and less than or equal to 2.0 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 new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours when in operation.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
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.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The control equipment is considered listed control equipment under Minn. R. 7011.0060 to 7011.0080. The Permittee shall operate and maintain the fabric filter at all times that any process equipment controlled by the cyclone is operating. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7011.0075, subp. 1
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7011.0075, subp. 3
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. 7017.0200
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 cyclone 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 cyclone. 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-19**

12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

**Subject Item:** CE 009 Centrifugal Collector - High Efficiency**Associated Items:** EU 032 KDS Device

EU 033 KDS Device High Efficiency Cyclone

GP 004 KDS Machine

What to do	Why to do it
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 80.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for PM < 10 micron: greater than or equal to 60.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for PM < 2.5 micron: greater than or equal to 60.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Pressure Drop: greater than or equal to .5 inches of water column and less than or equal to 2.0 inches of water column, unless a new range is set pursuant to Minn. R. 7017.0205, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours when in operation.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
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.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1(A)
The control equipment is considered listed control equipment under Minn. R. 7011.0060 to 7011.0080. The Permittee shall operate and maintain the fabric filter at all times that any process equipment controlled by the cyclone is operating. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source under 40 CFR Section 70.2 and Minn. R. 7007.0200; Minn. R. 7011.0075, subp. 1
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7011.0075, subp. 3
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. 7017.0200
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 cyclone 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 cyclone. 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 B: SUBMITTALS****B-1** 12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP  
Permit Number: 06700023 - 002

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.

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

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.

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 Technical Advisor  
Industrial Division  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

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** 12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

<b>What to send</b>	<b>When to send</b>	<b>Portion of Facility Affected</b>
Notification of the Actual Date of Initial Startup	due 15 days after Equipment Installation of new pellet processing line authorized in this permit action.	Total Facility
Testing Frequency Plan	due 60 days after Initial Performance Test.  All subsequent stack tests shall be run with the primary biomass mixture that has been utilized for the six months leading up to the stack test. Permittee shall provide throughput records and specific mix of biomass.	SV002
Testing Frequency Plan	due 60 days after Initial Performance Test.  All subsequent stack tests shall be run with the primary biomass mixture that has been utilized for the six months leading up to the stack test. Permittee shall provide throughput records and specific mix of biomass in test report.	EU032

**TABLE B: RECURRENT SUBMITTALS****B-3** 12/18/09

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023 - 002

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). The Permittee shall submit this 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 A: Insignificant Activities

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023-002

<b>Minn. R.</b>	<b>Insignificant Activity</b>	<b>General Applicable Emission limit</b>
7007.1300 subp. 3(A)	Fuel use: space heaters fueled by, kerosene, natural gas, or propane. 7 space heater with total capacity of 120,000 Btu.	PM $\leq$ 0.6 or 0.4 lb/MMBtu, depending on year constructed Opacity $\leq$ 20% with exceptions (Minn. R. 7011.0510/515)
7007.1300 subp. 3(G)	Emissions from a laboratory, as defined in Minn. R. 7007.1300, subp. 3(G)	PM, variable depending on airflow Opacity $\leq$ 20% (Minn. R. 7011.0710/715)
7007.1300 subp. 3(H)(1)	Equipment used exclusively for packaging lubricants or greases;	PM, variable depending on airflow Opacity $\leq$ 20% (Minn. R. 7011.0710/715)
7007.1300 subp. 3(H)(3)	Brazing, soldering or welding equipment	PM, variable depending on airflow Opacity $\leq$ 20% (Minn. R. 7011.0710/715)
7007.1300 subp. 3(H)(4)	Blueprint copiers and photographic processes	Opacity $\leq$ 20% (Minn. R. 7011.0105 or 7011.0110))
7007.1300 subp. 2(K)	Fugitive Emissions from unpaved roads and parking lots	Requirement to take reasonable measures to prevent PM from becoming airborne (Minn. R. 7011.0150)

APPENDIX B: New Product Testing

Facility Name: Minnesota Valley Alfalfa Producers-MnVAP

Permit Number: 06700023-002

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**AIR EMISSION PERMIT NO. 06700023-002**

This technical support document 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 permit.

**1. General Information**

**1.1. Applicant and Stationary Source Location:**

Applicant/Address	Stationary Source/Address (SIC Code: 2048)
Minnesota Valley Alfalfa Producers P.O. Box 1680 Willmar, MN 56201	7410 Highway 23 SW Raymond Kandiyohi County
Contact: <b>Keith Poier</b> Phone: 320-841-1757	

**1.2. Description of the Permit Action**

The Minnesota Valley Alfalfa Producers (MnVap) operate an alfalfa processing plant, located on Highway 23 in Raymond, Minnesota. The facility receives bales of alfalfa via truck from local farmers. The bales are unloaded from the trucks using a front end loader. The bales are stored in piles on site. The processing begins when the bales are loaded into the shredder by the front end loader. The product is shredded, ground, and dried. The dried product is then extruded into pellets. A portion of the pellets are reground and pelletized to produce pellets of varying density. Pellets are stored in bins on site. The pellets are loaded into either trucks or railcars for shipment. Particulate matter emissions units are controlled by baghouses or cyclones. Fugitive particulate emissions are minimized by best management practices.

This is a reissuance of the title V operating permit that incorporates a major amendment including installation of new emissions units, control equipment, and modification of existing facility design. The permit contains restrictions and limits to allow the facility to avoid major source levels as defined by 40 CFR § 52.21. The main pollutant of concern is particulate matter.

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

This permit action authorizes construction of a new pellet line. Installation of new Emission units authorized by this permit action; EU028 and EU030 are live bottom hoppers, EU032 is the KDS Device, which is a device that is designed to grind and dehydrate product simultaneously, EU034 and EU035 are the receiving and transfer legs used to move the product within the facility. Installation of new control equipment authorized by this permit action: CE007, CE008, and CE009 are high efficiency cyclones used to control particulate emissions of new and existing emissions units.

This permit action also authorizes significant modification of the existing pellet line and of the existing facility. The modification of the existing equipment is actually a redesign of the existing equipment by the permittee to increase efficiency and reliability. This redesign does not modify any given emission unit but does change what control equipment and/or stack vent that it is routed to. EU001 now runs through CE007 to SV002; EU003 now runs through CE007 to SV002; EU005 now runs through CE008 to SV002; EU008, EU009, EU010, EU011, and EU012 now runs through CE003 to SV003; EU014, EU015, EU016, EU022, and EU023 now runs through CE004 to SV004; EU026 now runs through CE005 to SV006.

#### 1.4. Facility Emissions:

**Table 3. Total Facility Potential to Emit Summary**

	PM tpy	PM <sub>10</sub> tpy	PM <sub>2.5</sub> tpy	SO <sub>2</sub> tpy	NO <sub>x</sub> tpy	CO tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions before modification	234	232	232	.23	43.0	7.14	1.16	<1	<1
Total Facility Limited Potential Emissions after modification	213	200	200	0.26	48.8	8.11	1.32	<1	<1
Total Facility Actual Emissions (2008)	101	80.3	NA	0.0	0.82	0.69	0.04	HAPs not reported in emission inventory	

**Table 4. Facility Classification**

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD		PM, PM <sub>10</sub> , PM <sub>2.5</sub>	SO <sub>2</sub> , NO <sub>x</sub> , CO, VOC

Part 70 Permit Program	PM, PM <sub>10</sub> , PM <sub>2.5</sub>		SO <sub>2</sub> , NO <sub>x</sub> , VOC, CO, HAPs
Part 63 NESHAP			X

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

### New Source Review

The facility has taken limits on Total Particulate Matter, PM<sub>10</sub> and PM<sub>2.5</sub> to avoid being considered a major source under New Source Review regulations. This permit action contains process throughput and lb/ton emission limits to keep the facility's Potential to emit below NSR thresholds. The emissions limit will be confirmed with recurring stack tests.

### Part 70 Permit Program

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

### New Source Performance Standards (NSPS)

There are no New Source Performance Standards applicable to the operations at this facility.

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

The facility is a non-major source of HAPs under 40 CFR pt. 63. Thus, no major source NESHAPs apply. At this time, no area source NESHAPs apply to the facility.

### Consent Order

In response to monitored violations of particulate and PM<sub>10</sub> ambient standards near the facility, on February 12, 2002, a consent order was issued to MnVap. The consent order required MnVap to make certain changes to its facility, to monitor the ambient air for particulate matter, among other requirements. Some of the requirements of that consent order have been included in this air emissions permit.

### Compliance Assurance Monitoring (CAM)

The facility has no emission unit with the Potential to Emit (PTE) greater than 100 tons per year. The facility has three emission units (EU001, EU005, and EU032) with PTE close to the threshold of 100 tons per year that use manufacturers guaranteed emissions factors. These emissions units have stack tests to confirm that the facility is not subject to NSR. If the stack tests show that the manufacturer's emissions factors are inaccurate these units may become subject to CAM requirements and should be reevaluated.

### Environmental Review & AERA

The facility has accepted limits on production such that it is not subject to environmental review, i.e. an Environmental Assessment Worksheet (EAW), or an Air Emissions Risk Analysis (AERA).

### Minnesota State Rules

Portions of 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. 7011.2300 Standards of Performance for Stationary Internal Combustion Engines

**Table 5. Regulatory Overview of Facility.**

EU, GRP, or SV #	Applicable Regulations	Comments:
FC	Minn. R. Chapter. 7009 Ambient Air Quality Standards	Fugitive emissions control and operation of an ambient air monitoring system to ensure compliance with ambient standards are required.
	40 CFR Section 52.21	Total facility process throughput limits to restrict potential emissions to less than major source levels.
	Minn. R. 7007.0800, subp. 5(C)	Record Keeping: Maintain records for a minimum of five years
	Minn. R. 7011.0150	Preventing Particulate Matter from Becoming Airborne
	Minn. R. 7011.1005	Minnesota Performance Standards for Dry Bulk Agricultural Facilities
GP001	40 CFR Section 52.21	PSD limits taken to avoid major source classification under 40 CFR Section 52.21 for PM, PM10, PM2.5. Vent all emissions units to a cyclone
	Minn. R. 7007.0800 subp. 2; Consent Order	Operating conditions to minimize dust emissions. Operate and maintain windscreen on shredder.
GP002	40 CFR Section 52.21	PSD limits taken to avoid major source classification under 40 CFR Section 52.21 for PM, PM10, PM2.5. Vent all emissions units to a baghouse.
GP003 Product Loadout, Product Storage	40 CFR Section 52.21	PSD limits taken to avoid major source classification under 40 CFR Section 52.21 for PM, PM10, PM2.5. Vent all emissions units to a baghouse.
	Minn. R. 7007.0800 subp. 2; Minn. R. 7009.0020	Operating conditions to minimize dust emissions.
GP004	40 CFR Section 52.21	PSD limits taken to avoid major source classification

		under 40 CFR Section 52.21 for PM, PM10, PM2.5. Vent all emissions units to a cyclone.
SV002 Dryer and Shredder	40 CFR Section 52.21	PSD limits taken to avoid major source classification under 40 CFR Section 52.21 for PM, PM10, PM2.5.  Stack test to ensure compliance.
EU005 Hay dryer and cyclone	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800. subp. 2  Minn. R. 7011.0610, Subp 1(A)(1)	Fuel usage limited to natural gas and propane.  Minnesota Performance Standards for direct Heating Equipment
EU021 Boiler	Minn. R. 7011.0515	Minnesota Performance Standards for Indirect Heating Equipment
EU027 Storage Shed	Minn. R. 7007.0800 subp. 2; Minn. R. 7009.0020	Operating conditions to minimize dust emissions.
EU032 KDS Machine	40 CFR Section 52.21  Minn. R. 7009	PSD limits taken to avoid major source classification under 40 CFR Section 52.21 for PM, PM10, PM2.5.  Operating conditions to minimize dust emissions
CE003, CE004 Fabric Filter	40 CFR Section 52.21	Maintain and operated control equipment to avoid major source classification under 40 CFR Section 52.21
CE007, CE008, CE009 Cyclones	40 CFR Section 52.21	Maintain and operated control equipment to avoid major source classification under 40 CFR Section 52.21

### 3. Technical Information

#### 3.1 Biomass Evaluation

Appendix B of the permit outlines the process to be followed in a lab to test new types of biomass to ensure that it will not result in an increase in emissions. The lab test simulates the

process of grinding and drying and measures the production of particulate matter from the new type of biomass. For the purposes of this permit alfalfa is assumed to be the worst case product in terms of emissions. This lab test will allow a lab analysis comparing of new biomass with the known emissions and characteristics of alfalfa. This will provide reasonable assurance that the emissions produced by that biomass in the process will not increase emissions.

### **3.2 Calculations of Potential to Emit and Emissions Increase Analysis**

Attachment 1 contains detailed spreadsheets and supporting information prepared by the MPCA and the Permittee. Emission factors are taken from AP-42 whenever available. When AP-42 is not available emission factors published by Nebraska are used. The facility also has emission units that are not easily characterized, in these cases the emissions factor are based on manufacturers guarantee. The units that have emissions factors based on the manufacturers guarantee are required to have stack tests to confirm. For the purposes of this permit all PM10 is assumed to be PM2.5. Because of the nature of the product the capture efficiency for PM2.5 is assumed to be similar to that of PM10.

### **3.3 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 considers the following:

- The likelihood of violating the applicable requirements;
- Whether add-on controls are necessary to meet the emission limits;
- 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 elsewhere.

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 6. Periodic Monitoring**

<b>Emission Unit or Group</b>	<b>Requirement (basis)</b>	<b>Additional Monitoring</b>	<b>Discussion</b>
Facility	Ton product throughput (limit to avoid	Recordkeeping: Daily records, Monthly	Daily record keeping is required to ensure compliance with limit.

<b>Emission Unit or Group</b>	<b>Requirement (basis)</b>	<b>Additional Monitoring</b>	<b>Discussion</b>
	NSR)  Product testing	calculations  Lab tests	Each biomass tested before use at the facility to ensure that emissions are well understood and do not increase due to change in biomass used in product.
SV002	PM < 2.4, PM10 < 2.4, PM2.5 < 2.4, lb/ton product (limit to avoid NSR)	Recordkeeping: Daily records visible emissions and pressure drop.  Stack tests.  Test frequency plan	Stack test required to confirm limit to avoid NSR. Recurring stack tests required due to future use of specific biomass to be dried is subject to change over time. Daily record keeping is required to ensure that control equipment is operating properly.
Shredder: EU032 CE009	PM < 1.0, PM10 < 0.9, PM2.5 < 0.9, lb/ton product throughput (limit to avoid NSR)	Recordkeeping: Daily records visible emissions and pressure drop.  Stack tests.  Test frequency plan	Stack test required to confirm limit to avoid NSR. Recurring stack tests required due to future use of specific biomass to be dried is subject to change over time. Daily record keeping is required to ensure that control equipment is operating properly.

### **3.4 Insignificant Activities**

Minnesota Valley Alfalfa Producers has several operations which are classified as insignificant activities. Insignificant activities listed in appendix 1 of the permit have been evaluated and do not add a significant level of emissions to the facility that would make it subject to any other standards not listed in appendix 1.

**Table 5. Insignificant Activities**

<b>Insignificant Activity</b>	<b>General Applicable Emission limit</b>	<b>Discussion</b>
Fuel use: space heaters fueled by, kerosene, natural gas, or propane Minn. R. 7007.1300	PM $\leq$ 0.6 or 0.4 lb/MMBtu, depending on year constructed	For this unit, based on the fuels used and EPA published emissions factors, it is highly unlikely that it could violate the applicable requirement. In addition, these

<b>Insignificant Activity</b>	<b>General Applicable Emission limit</b>	<b>Discussion</b>
subp. 3(A)	Opacity $\leq$ 20% with exceptions (Minn. R. 7011.0510/515)	types of units are typically operated and vented inside a building, so testing for PM or opacity is not feasible.
Emissions from a laboratory, as defined in Minn. R. 7007.1300, subp. 3(G)	PM, variable depending on airflow Opacity $\leq$ 20% (Minn. R. 7011.0710/715)	These are very small, intermittent, bench-top operations that typically do not even have any emissions. It is highly unlikely that they could violate the applicable requirement.
Equipment used exclusively for packaging lubricants or greases; Minn. R. 7007.1300 subp. 3(H)(1)	PM, variable depending on airflow Opacity $\leq$ 20% (Minn. R. 7011.0710/715)	While no known emissions estimation method exists for these units, based on general knowledge of how they operate, it is highly unlikely that they could generate particulate matter. In addition, these units would be operated and vented directly into a building, so testing is not feasible.
Brazing, soldering or welding equipment Minn. R. 7007.1300 subp. 3(H)(3)	PM, variable depending on airflow Opacity $\leq$ 20% (Minn. R. 7011.0710/715)	For these units, based on EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, these units are typically operated and vented inside a building, so testing for PM or opacity is not feasible.
Blueprint copiers and photographic processes Minn. R. 7007.1300 subp. 3(H)(4)	Opacity $\leq$ 20% (Minn. R. 7011.0105 or 7011.0110))	While no known emissions estimation method exists for these units, based on general knowledge of how they operate, it is highly unlikely that they could generate visible emissions. In addition, these units would be operated and vented directly into an office area, so monitoring or testing is not feasible.
Fugitive Emissions from unpaved roads and parking lots Minn. R. 7007.1300 subp. 2(K)	Requirement to take reasonable measures to prevent PM from becoming airborne (Minn. R. 7011.0150)	The Facility is not located in the Metro area and has all paved parking lots and few private roads. Nearly all surfaces are currently paved. The draft/proposed permit does contain a general requirement that this standard must be met. The Permittee has stated that no additional unpaved surfaces

<b>Insignificant Activity</b>	<b>General Applicable Emission limit</b>	<b>Discussion</b>
		will be added in the future.

### **3.5 Permit Organization**

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements. One area where this permit deviates slightly from Delta guidance is in the use of appendices. While appendices are fully enforceable parts of the permit, in general, any requirement that the MPCA thinks should be tracked (e.g., limits, submittals, etc.), should be in Table A or B. The main reason is that the appendices are word processing sections and are not part of the tracking system. Violation of the appendices can be enforced, but the computer system will not automatically generate the necessary enforcement notices or documents. Staff must generate these.

### **3.6 Comments Received**

Public Notice Period: October 30, 2009 - November 30, 2009

EPA 45-day Review Period: October 30, 2009 - December 15, 2009

Comments were not received from the public during the public notice period.

Comments were not received from EPA during their review period.

## **4. Conclusion**

Based on the information provided by Minnesota Valley Alfalfa Producers, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 06700023-002 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Benjamin Klismith (permit writer/engineer)

Sarah Peters (enforcement)

Marc Severin (stack testing)

Sarah Sevcik (peer reviewer)

AQ File No. 1682;

Attachments: 1. PTE Summary and Emissions Increase Calculation Spreadsheets

2. Facility Description and CD-01 Forms

