

AIR EMISSION PERMIT NO. 10500053- 006

IS ISSUED TO

Minnesota Soybean Processors

MINNESOTA SOYBEAN PROCESSORS - BREWSTER

121 Zeh Avenue

Brewster, Nobles County, MN 56119

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

Permit Type	Application Date	Permit Issuance	Action Number
Total Facility Operating Permit Reissuance	6/19/2007	See Below	006

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; Pt 70/NSR Authorization

Issue Date: December 10, 2008

Expiration: December 10, 2013

All Title I Conditions do not expire.

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

for Paul Eger
Deputy Commissioner
Minnesota Pollution Control Agency

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NOTICE TO THE PERMITTEE:

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

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

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

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

PERMIT SHIELD:

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

FACILITY DESCRIPTION:

From the initial Permit (-001), Minnesota Soybean Processors (MnSP) was authorized to construct and operate a 3,000 ton per day soybean processing plant in the city of Brewster, Nobles County, Minnesota.

The overall facility can be divided into three main processes. The first process is the soybean extraction. This process converts the soybeans into “crude” oil. The second process is the “crude” oil refining. The third process is the bio-diesel manufacturing process.

First of all, the soybean extraction process is as follows. The facility at Brewster receives raw soybeans and process them, extracting crude soybean oil from the beans. By-products of the oil processing are soy meal and hulls, which are sold for animal feed.

The second process is the refining process. The refining process removes impurities contained in the crude oil. The refinery process, generally, consists of the following stages: refining, water wash, vacuum drying, bleaching, and deodorization. For example, the bleaching process removes trace amounts of undesirable compounds, which affect the stability of the oil. After the refining process, one additional step is needed before the refined oil can be used as a food product. This facility does not perform that step. If the refined oil is to be used as a food product, the facility purchasing the refined oil will complete the last step. The refined oil can either be sold as nearly processed vegetable oil (for human consumption) or sent through the bio-diesel manufacturing process.

The third process is the bio-diesel manufacturing. This process converts the “refined” oil into a bio-diesel product. The “crude” oil must be “refined” before it can begin the bio-diesel process. Bio-diesel is produced from the reaction of the fatty acids in the “refined” oil with methanol in the presence of a catalyst. The reaction produces mono-alkyl esters (bio-diesels) and glycerol. The air application (-003) was for the construction of bio-diesel manufacturing process.

Delta projects that are being rolled into this reissuance

DQ No. 1203 – Major amendment to incorporate 40 CFR Subpart FFFF, received August 26, 2006

DQ No. 1232 – Reopening to incorporate 40 CFR Subpart FFFF.

DQ No. 1642 – Test deadline extension request.

DQ No. 1704 – Notice of Violation October 1, 2007

DQ No. 1877 - Notice of Compliance January 8, 2008.

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

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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
NESHAP REQUIREMENTS	hdr
The Permittee shall comply with the Maximum Achievable Control Technology (MACT) Standard for Solvent Extraction for Vegetable Oil Production.	40 CFR pt 63 subp. GGGG
The Permittee shall comply with the Maximum Achievable Control Technology (MACT) Standard for Miscellaneous Organic Chemical Manufacturing.	40 CFR pt 63 subp. FFFF
The Permittee shall not "construct" or "reconstruct" a major source of hazardous air pollutants as defined in 40 CFR section 63.2, without first obtaining a preconstruction permit.	40 CFR Sections 63.40 to 63.44; Minn. R. 7007.3010
SOURCE-SPECIFIC REQUIREMENTS	hdr
Comply with Fugitive Emission Control Plan: The Permittee shall follow the actions and record keeping 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
DETERMINING IF A PROJECT/MODIFICATION IS SUBJECT TO NEW SOURCE REVIEW	hdr
These requirements apply where there is a reasonable possibility (as defined in 40 CFR Section 52.21(r)(6)(vi)) that a proposed project, analyzed using the actual-to-projected-actual (ATPA) test (either by itself or as part of the hybrid test described in Section 52.21(a)(2)(iv)(f)) and found to not be part of a major modification, may result in a significant emissions increase. If the ATPA test is not used for a particular project, or if there is not a reasonable possibility that the proposed project could result in a significant emissions increase, then these requirements do not apply to that project.	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2
Even though a particular modification is not subject to New Source Review, or where there isn't a reasonable possibility that a proposed project could result in a significant emissions increase, a permit amendment, recordkeeping, or notification may still be required under Minn. R. 7007.1150 - 7007.1500.	
Preconstruction Documentation -- Before beginning actual construction on a project, the Permittee shall document the following: 1. Project description 2. Identification of any emission unit (EU) whose emissions of an NSR pollutant could be affected 3. Pre-change potential emissions of any affected existing EU, and the projected post-change potential emissions of any affected existing or new EU. 4. A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded due to increases not associated with the modification and that the EU could have accommodated during the baseline period, an explanation of why the amounts were excluded, and any creditable contemporaneous increases and decreases that were considered in the determination. The Permittee shall maintain records of this documentation.	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.1200, subp. 4; Minn. R. 7007.0800, subps. 4 & 5
The Permittee shall monitor the actual emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using the ATPA test, and the potential emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using potential emissions in the hybrid test. The Permittee shall calculate and maintain a record of the sum of the actual and potential (if the hybrid test was used in the analysis) emissions of the regulated pollutant, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity of or potential to emit of any unit associated with the project.	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

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<p>The Permittee must submit a report to the Agency if the annual summed (actual, plus potential if used in hybrid test) emissions differ from the preconstruction projection and exceed the baseline actual emissions by a significant amount as listed at 40 CFR Section 52.21(b)(23). Such report shall be submitted to the Agency within 60 days after the end of the year in which the exceedances occur. The report shall contain:</p> <p>a. The name and ID number of the facility, and the name and telephone number of the facility contact person</p> <p>b. The annual emissions (actual, plus potential if any part of the project was analyzed using the hybrid test) for each pollutant for which the preconstruction projection and significant emissions increase are exceeded.</p> <p>c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection.</p>	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5
OPERATIONAL REQUIREMENTS	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, subps. 7A, 7L & 7M; 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, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and 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)
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	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
<p>Performance Test Notifications and Submittals:</p> <p>Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.</p> <p>Performance Test Notification (written): due 30 days before each Performance Test</p> <p>Performance Test Plan: due 30 days before each Performance Test</p> <p>Performance Test Pre-test Meeting: due 7 days before each Performance Test</p> <p>Performance Test Report: due 45 days after each Performance Test</p> <p>Performance Test Report - Microfiche Copy: due 105 days after each Performance Test</p> <p>The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.</p>	Minn. Rs. 7017.2030, subp. 1-4, 7017.2018 and Minn. R. 7017.2035, subp. 1-2

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

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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: 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)
RECORDKEEPING	hdr
Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)
When 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. For expiring permits, 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. For nonexpiring permits, these records shall be kept for a period of five years from the date that the change was made. 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
REPORTING/SUBMITTALS	hdr
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
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
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. The Permittee shall submit this on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3100
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
MODELING	hdr
Parameters Used in Modeling: The stack heights, emission rates, and other parameters used in the modeling are listed in Appendix D of this permit. The Permittee must submit to the Commissioner for approval any revisions of these parameters and must wait for a written approval before making such changes. The information submitted must include, at a minimum, the locations, heights and diameters of the stacks, locations and dimensions of nearby buildings, the velocity and temperatures of the gases emitted, and the emission rates. The plume dispersion characteristics due to the revisions of the information must be equivalent to or better than the dispersion characteristics modeled. The Permittee shall demonstrate this equivalency in the proposal. If the information does not demonstrate equivalent or better dispersion characteristics, or if a conclusion cannot readily be made about the dispersion, the Permittee must remodel	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
For changes that do not involve an increase in an emission rate and that do not require a permit amendment, this proposal must be submitted as soon as practicable, but no less than 60 days before beginning actual construction of the stack or associated emission unit. For changes involving increases in emission rates and that require a minor permit amendment, the proposal must be submitted as soon as practicable, but no less than 60 days before beginning actual construction of the stack or associated emission unit. For changes involving increases in emission rates and that require a permit amendment other than a minor amendment, the proposal must be submitted with the permit application.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: GP 001 Equipment Subject to 40 CFR pt. 63, subp. GGGG**Associated Items:** FS 001 Extraction Process Equipment Leaks

TK 001 Commercial Hexane 1

TK 002 Commercial Hexane 2

TK 003 Commercial Hexane 3

TK 004 Commercial Hexane 4

What to do	Why to do it
NESHAP for Source Categories (pt 63)	hdr
The Permittee shall comply with the applicable provisions below based on 40 CFR Section 63, subpart GGGG, Solvent Extraction for Vegetable Oil Production.	40 CFR Part 63, Subpart GGGG: Solvent Extraction for Vegetable Oil Production
EMISSION LIMITS	hdr
Compliance Ratio: less than or equal to 1.00. The Compliance Ratio = (fhap * actual solvent loss)/(0.64* allowable solvent loss) where, fhap = the weighted average HAP content of solvent purchased during the previous 12 operating months (volume fraction); 0.64 = average volume fraction of HAP in solvent (dimensionless); Actual solvent loss = quantity of actual solvent loss during previous 12 operating months (gallons); Allowable solvent loss = quantity of soybeans processed during the previous 12 operating months (tons) multiplied by 0.2 (gallons/ton)	40 CFR Section 63.2840; Minn. R. 7011.7840
GENERAL REQUIREMENTS	hdr
An operating month is any calendar month with at least one normal operating period. It does not include the initial startup period or malfunction period. A normal operating period is defined in the proposed 40 CFR 63.2872.	40 CFR Section 63.2840; Minn. R. 7011.7840
By the end of each calendar month following an operating month, calculate the actual extraction solvent loss during the previous operating month. The monthly actual extraction solvent loss is to be determined as follows: Actual Solvent Loss = SOLVb - SOLVe + SOLVr +/- SOLVa where, SOLVb = gallons of solvent in the inventory at the beginning of the normal operating month. SOLVe = gallons of solvent in the inventory at the end of the normal operating month. SOLVr = gallons of solvent received between the beginning and ending inventory dates of the normal operating month. This includes purchased hexane and hexane recovered from imported oil that is added to the extraction plant inventory. SOLVa = gallons of solvent added or removed from the extraction solvent inventory during the normal operating month. For SSM Solvent loss events, the excluded solvent loss must be documented for the event and an estimated associated solvent loss must be provided.	40 CFR Section 63.2853; Minn. R. 7011.7840
Calculations - 12-month Rolling Sum: Calculate the 12-month rolling sum actual solvent loss by summing the 12 most recent actual monthly solvent losses.	40 CFR Section 63.2853; Minn. R. 7011.7840
Calculations - Monthly Weighted Average HAP Content: By the end of each calendar month following an operating month, calculate weighted average HAP content (volume fraction). The monthly weighted average HAP content is to be determined using the following equation: $\text{Monthly Weighted Average HAP Content of Extraction Solvent (volume fraction)} = \frac{\sum_{i=1}^n (\text{Received}_i * \text{Content}_i)}{\text{Total Received}}$ where, Received _i = gallons of extraction solvent received in delivery i; Content _i = volume fraction of HAP in extraction solvent delivery i; n = number of extraction solvent deliveries since the end of the previous operating month. Total received = total gallons of extraction solvent received since the end of the previous operating month.	40 CFR Section 63.2854; Minn. R. 7011.7840

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

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<p>Calculations - 12-Month rolling sum Calculation: Weighted Average of HAP Content of Solvent Received using the following equation:</p> <p>12-Month Weighted Average of HAP Content in Solvent Received (Volume fraction) = Summation from i = 1 to 12 (Received_i * Content_i)/Total Received</p> <p>Received_i = Gallons of extraction solvent received in operating month "i" as determined in 40 CFR Section 63.2853(a)(4).</p> <p>Content_i = Average volume fraction of HAP in extraction solvent received in operating month "i" as determined in 40 CFR Section 63.2854 (b)(1)</p> <p>Total Received = Total gallons of extraction solvent received during the previous 12 operating months.</p>	40 CFR Section 63.2854; Minn. R. 7011.7840
<p>Calculations - Oilseed Quantity Processed: By the end of each calendar month following an operating month, calculate the monthly quantity of each oilseed processed by using the following equation:</p> <p>Monthly Quantity of Oilseed Processed = The sum of (SEED_b - SEED_e + SEED_r +/- SEED_a)</p> <p>where, SEED_b = tons of soybeans in the inventory at the beginning of the normal operating month; SEED_e = tons of soybeans in the inventory at the end of the normal operating month; SEED_r = tons of soybeans received during the normal operating month; SEED_a = tons of soybeans added or removed from the oilseed inventory during the normal operating month.</p>	40 CFR Section 63.2855; Minn. R. 7011.7840
<p>Calculations - 12-month Rolling Sum: Calculate the 12-month rolling sum of the oilseed quantity processed by summing the monthly oilseed quantity processed for the previous 12 operating months.</p>	40 CFR Section 63.2855; Minn. R. 7011.7840
RECORDKEEPING REQUIREMENTS	hdr
<p>Plan for Demonstrating Compliance: The Permittee shall develop and implement a written Plan for Demonstrating Compliance. The Plan must include the following :</p> <p>(1) The name and address of the owner or operator;</p> <p>(2) The physical address of the vegetable oil production process;</p> <p>(3) A detailed description of all methods of measurement your source will use to determine your solvent losses, HAP content of solvent, and the tons of each type of oilseed processed;</p> <p>(4) When each measurement will be made;</p> <p>(5) Examples of each calculation you will use to determine your compliance status. Include examples of how you will convert data measured with one parameter to other terms for use in compliance determination;</p> <p>(6) Example logs of how data will be recorded;</p> <p>(7) A plan to ensure that the data continue to meet compliance demonstration needs.</p>	40 CFR Section 63.2851; Minn. R. 7011.7840
<p>Start-up, Shutdown and Malfunction (SSM) Plan: The owner or operator shall develop and implement a written SSM plan. The SSM plan must provide detailed procedures for operating and maintaining your source to minimize emissions during a qualifying SSM event for which the source chooses the 40 CFR Section 63.2850(e)(2) malfunction period. The SSM plan must specify a program of corrective action for malfunctioning process and air pollution control equipment and reflect the best practices now in use by the industry to minimize emissions. Some or all of the procedures may come from plans you developed for other purposes such as a Standard Operating Procedure manual or an Occupational Safety and Health Administration Process Safety Management plan. To qualify as a SSM plan, other such plans must meet all the applicable requirements of these NESHAP.</p>	40 CFR Section 63.2852; 40 CFR Section 63.2862(b); Minn. R. 7011.7840
<p>Recordkeeping of Compliance Plans: The Permittee shall maintain a plan for demonstrating compliance and a SSM on-site and readily available as long as the source is operational.</p>	40 CFR Section 63.2862(b); Minn. R. 7011.7840

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Plan Revisions for Demonstrating Compliance: The agency may require you to revise your Plan for demonstrating compliance. The Agency may require reasonable revisions if the procedures lack detail, are inconsistent or do not accurately determine solvent loss, HAP content of the solvent, or the tons of oilseed processed.	40 CFR Section 63.2862 (b); Minn. R. 7011.7840
By the end of each calendar month following an operating month, record the compliance ratio for each 12 month operating period.	40 CFR Section 63.2862(d); Minn. R. 7011.7840
Upon delivery, record the volume fraction of each HAP comprising more than 1 percent by volume of the solvent in each delivery of solvent, including solvent recovered from off-site oil. For purchased solvent, a Certificate of Analysis provided by the solvent may be used to determine the average HAP content of solvent received. For recovered solvent from vegetable oil purchased from off-site locations, reasonable and sound methods for determining the HAP content shall be used.	40 CFR Section 63.2862(c); Minn. R. 7011.7840
Recording- Solvent Inventory: By the end of each calendar month following an operating month, record the following information for the previous operating month. At a minimum, these records must include: 1. Dates that define each operating status period during a calendar month; 2. The operating status of your source such as normal operation, nonoperating, malfunction period, or exempt operation for each recorded time interval; 3. The gallons of extraction solvent in the inventory on the beginning and ending dates of each normal operating period;	40 CFR Section 63.2862 (c)(1); Minn. R. 7011.7840
4. The gallons for all extraction solvent received, purchased, and recovered during each calendar month; 5. All extraction solvent inventory adjustments, additions, or subtractions. You must document the reason for the adjustment and justify the quantity of the adjustment; 6. The total solvent loss for each calendar month, regardless of the source operating status, and 7. The actual solvent loss in gallons for each operating month.	CONTINUED: 40 CFR Section 63.2862 (c)(1); Minn. R. 7011.7840
Recording - Average HAP Content: By the end of each calendar month following an operating month, record the following information for the average HAP content in the extraction solvent, for the previous operating month: 1. The gallons of extraction solvent received in each delivery; 2. The volume fraction of each HAP exceeding 1 percent by volume in each delivery of extraction solvent, and 3. The weighted average volume fraction of HAP in extraction solvent received since the end of the last operating month as determined in 40 CFR 63.2854 (b)(2)	40 CFR Section 63.2862 (c)(2); Minn. R. 7011.7840
Recording - Soybean Processed Weight: By the end of each calendar month following an operating months, at a minimum record the following: 1. The dates that define each operating status period. These dates must be the same as the dates entered for the extraction solvent inventory; 2. The operating status of your source such as normal operation, nonoperating, malfunction period, or exempt operating for each recorded time interval. On the log for each type of listed oilseed that is not being processed during a normal operating period, you must record which type of listed oilseed is being processed in addition to the source operating status; 3. The oilseed inventory for the type of listed oilseed that is being processed during a normal operating period, you must record which type of listed oilseed is being processed in addition to the source operating status;	40 CFR Section 63.2862 (c)(3); Minn. R. 7011.7840
4. The tons of each type of listed oilseed received at the affected source each normal operating period; 5. All listed oilseed inventory adjustments, additions, or subtractions for normal operating periods. You must document the reason for the adjustment and justify the quantity of the adjustment; and 6. The tons of each type of listed oilseed processed during each operating month.	CONTINUED: 40 CFR Section 63.2862 (c)(3); Minn. R. 7011.7840
Record any process modifications resulting in changes to the solvent working capacity.	40 CFR Section 63.2853(a); Minn. R. 7011.7840

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

After your source has processed listed oilseed for 12 operating months and you are not operating during an initial start-up as described in 40 CFR Section 63.2850 (c)(2) or (d)(2), or a malfunction period as described in 40 CFR Section 63.2850(e)(2), you must record the following:	40 CFR Section 63.2862 (d); Minn. R. 7011.7840
1. Recordkeeping of actual solvent: by the end of the calendar month following each operating month, you must record the 12 operating months rolling sum of the actual solvent loss in gallons	40 CFR Section 63.2862 (d)(1); Minn. R. 7011.7840
2. Recordkeeping of fraction of HAP: by the end of the calendar month following each operating month, you must record weighted average volume fraction of HAP in extraction solvent received for the previous 12 operating months.	40 CFR Section 63.2862 (d)(2); Minn. R. 7011.7840
3. Recordkeeping of oilseed processed: by the end of the calendar month following each operating month, you must record the 12 operating months rolling sum of each type of listed oilseed processed in tons.	40 CFR Section 63.2862 (d)(3); Minn. R. 7011.7840
4. Recordkeeping for compliance ratio: By the end of each calendar month following an operating month, you must record the compliance ratio for each 12 month operating period.	40 CFR Section 63.2862(d)(4); Minn. R. 7011.7840
Recordkeeping of each SSM event: For each SSM event subject to a malfunction period, you must record the following by the end of the calendar month following each month in which a malfunction period occurred: 1. A description and date of the SSM event, its duration, and reason it qualifies as a malfunction; 2. An estimate of the solvent loss in gallons for the duration of the malfunction period with supporting document; and 3. A checklist or other mechanism to indicate whether the SSM plan was followed during the malfunction period.	40 CFR Section 63.2862 (e); Minn. R. 7011.7840
5. Recordkeeping of compliance status: By the end of each calendar month following an operating month, you must record a statement of whether the source is in compliance with all of the requirements of subpart GGGG. This includes a determination of whether you have met all of the applicable requirements in 40 CFR Section 63.2850.	40 CFR Section 63.2862(d)(5); Minn. R. 7011.7840
REPORTING REQUIREMENTS	hdr
Content of Annual compliance certification: The Certification shall include the following: (1) The name and address of the owner or operator; (2) The physical address of the vegetable oil production process; (3) Each listed oilseed type processed during the 12 calendar months period covered by the report. (4) Each HAP identified under 40 CFR Section 63.2854(a) as being present in concentrations greater than 1 percent by volume in each delivery of solvent received during the 12 calendar months period covered by the report.	40 CFR Section 63.2861(a); Minn. R. 7011.7840
Content of Annual compliance certification, continued: (5) A statement designating the source as a major source of HAP or a demonstration that the source qualifies as an area source. An area source is a source that is not a major source and is not collocated within a plant site with other sources that are individually or collectively a major source; and (6) A compliance certification to indicate whether the source was in compliance for each compliance determination made during the 12 calendar months period covered by the report. For each such compliance determination, you must include a certification of the following: (i) You are following the procedures described in the plan for demonstrating compliance. (ii) The compliance ratio is less than or equal to 1.00.	40 CFR Section 63.2861(a); Minn. R. 7011.7840

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

<p>Notification of Deviation Report: The deviation notification report must be submitted for each operating month, in which the compliance ratio exceeds 1.00. The report must be submitted by the end of the month following the calendar month in which the deviation occurred. This report must include the compliance ration comprising the deviation.</p> <p>(1) The name and address of the owner or operator;</p> <p>(2) The physical address of the vegetable oil production process;</p> <p>(3) Each listed oilseed type processed during the 12 operating months period for which you determined the deviation; and</p> <p>(4) The compliance ratio comprising the deviation. You may reduce the frequency of submittal of the deviation notification report if the agency responsible for these NESHAP does not object as provided in 40 CFR Section 63.10(e)(3)(iii).</p>	40 CFR Section 63.2861(b); Minn. R. 7011.7840
<p>Periodic SSM Report: By the end of the calendar month, submit a periodic startup, shutdown or malfunction (SSM) report for the previous month during which the source has been operated under an initial startup period or a malfunction period. The SSM report must include the following:</p> <p>1. The name, title, and signature of the source's responsible official who is certifying that the report accurately states that all actions taken during the initial startup or malfunction period were consistent with the SSM plan;</p> <p>2. A description of events occurring during the time period, the date and duration of the events, and reason the time interval qualifies as an initial startup or malfunction period;</p> <p>3. An estimate of the solvent loss during the initial startup or malfunction period with supporting documentation.</p>	40 CFR Section 63.2861(c); Minn. R. 7011.7840
<p>Immediate SSM Reports: If permittee handles a SSM during an initial startup period subject to 63.2850(c)(2) or 63.2850(d)(2) or a malfunction peroid subject to 63.2850(e)(2) differently from procedures in the SSM plan and relevant emission requirements in 63.2840 are exceeded, then an immediate SSM report must be submitted Within 2 working days after commencing actions inconsistent with the SSM plan, submit an immediate SSM report consisting of a telephone call or facsimile transmission followed by a letter within 7 working days of the event. The SSM report must include the following:</p> <p>1. The name, title, and signature of the source's responsible official who is certifying the accuracy of the report, an explanation of the event, and the reasons for not following the SSM Plan;</p> <p>2. A description and date of the SSM event, its duration, and reason it qualifies as a SSM; and</p> <p>3. An estimate of the solvent loss for the duration of the SSM event with supporting documentation.</p>	40 CFR Section 63.2861(d); Minn. R. 7011.7840
<p>Recordkeeping on site:</p> <p>(a) Your records must be in a form suitable and readily available for review in accordance with 40 CFR Section 63.10(b)(1).</p> <p>(b) As specified in 40 CFR Section 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.</p> <p>(c) You must keep each record on-site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, in accordance with 40 CFR Section 3.10(b)(1). You can keep the records off-site for the remaining 3 years.</p>	40 CFR Section 63.2863; Minn. R. 7011.7840

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: GP 002 Fabric Filter Equipment**Associated Items:** EU 001 Receiving

EU 002 Grain Elevator Transfer

EU 003 Bean Cleaning

EU 009 Hull Grinding

EU 010 Ground Hull Bins

EU 014 Pellet Storage Bin

EU 015 Blending

EU 020 Meal Grinding

EU 021 Meal Bin

EU 024 Load-Out Truck 1

EU 025 Load-Out Truck 2/Rail

What to do	Why to do it
LIMITS (see CE 001, 002, 004, 010, 011, 015, 016, 021, 022, 023, 024, 025)	hdr
OPERATING REQUIREMENTS (All requirements apply to each control equipment unit list in this group separately.)	hdr
The Permittee shall operate and maintain the control equipment any time that the process equipment that it controls is in operation.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Visible Emissions/Pressure Drop Monitoring: Once each day of operation of any GP 002 fabric filter, the Permittee shall check the outlet of each operating fabric filter during daylight hours for any visible emissions (VEs). If inclement weather prohibits a VE check, the Permittee shall observe and record the pressure drop across each operating fabric filter.	Title I Condition: CFR Section 52.21(j); Minn. R. 7007.3000; 40 CFR Section 64.3; Minn. R. 7007.0800, subp. 4
The Permittee shall take corrective actions, as soon as possible, as based on the operation and maintenance plan to eliminate any visible emissions and/or any pressure drops outside the permitted range specified under this subject item, from any fabric filters.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2
The Permittee shall operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	40 CFR Section 64.7(b); Minn. R. 7017.0200
Inspect each of the fabric filters quarterly, or as required by manufacturing specifications, all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods. Maintain a written record of the inspection and any action resulting from the inspection.	40 CFR Section 64.3; Minn. R. 7017.0200
Inspect each of the fabric filters quarterly, or as required by manufacturing specifications, all components that are subject to wear or plugging. Maintain a written record of the inspection and any action resulting from the inspection.	40 CFR Section 64.3; Minn. R. 7017.0200
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.	40 CFR Section 64.7(b); Minn. R. 7017.0200
The Permittee shall calibrate the pressure gauge at least once every calendar year and shall maintain a written record of any action resulting from the calibration.	40 CFR Section 64.3; Minn. R. 7017.0200
Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing pressure drop range, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring change.	40 CFR Section 64.7(e); Minn. R. 7017.0200
As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64: 1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and 2) Summary information on the number, duration, and cause for monitor downtime incidents.	40 CFR Section 64.9(a)(2); Minn. R. 7017.0200

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.	40 CFR Section 64.9(b); Minn. R. 7017.0200
Recordkeeping of daily monitoring: the Permittee shall keep a daily record, that contains, at a minimum, the following information for each fabric filter unit: 1) Printed name of observer; 2) Signature of observer; 3) Date and time of observation; 4) Are there any visible emissions observed from the fabric filters? ("yes" or "no") 5) Stack/Vent ID number for each "yes"; 6) Description of investigation and corrective actions completed for each "yes"; 7) Weather conditions (temperature, cloud cover, wind, precipitation). or 1) Pressure drop.	40 CFR Section 64.3; Minn. R. 7007.0800, subp. 5
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; or - 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.	40 CFR Section 64.7(d); Minn. R. 7017.0200

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: GP 003 VOC Losses**Associated Items:** FS 001 Extraction Process Equipment Leaks

TK 001 Commercial Hexane 1

TK 002 Commercial Hexane 2

TK 003 Commercial Hexane 3

TK 004 Commercial Hexane 4

What to do	Why to do it
OPERATING REQUIREMENTS (All requirements apply to the sum of all emission units listed in this group.)	hdr
Volatile Organic Compounds: less than or equal to 619 tons/year using 12-month Rolling Sum for VOC solvent loss.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
RECORDKEEPING	hdr
By the end of each calendar month following an operating month, calculate the quantity of actual VOC solvent loss for the previous 12 months by using the monthly and 12 month solvent loss methods in GP 001.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000, Minn. R. 7007.0800, subps. 4 & 5

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: GP 005 Cyclone Units**Associated Items:** SV 032 DT/DC Decks

What to do	Why to do it
Limits (see SV 004, 007, 011, 032)	hdr
PERFORMANCE TESTS (see SV 004, 007, 011, 032)	hdr
OPERATING REQUIREMENTS	hdr
Cyclones for each individual stack shall be operated at all times whenever the emission unit vented to that stack is in operation.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Install and maintain a monitoring device in each cyclone that will continuously monitor for plugging of the cyclone. The monitoring devices will be connected to audible and visible alarms to indicate plugging or failure of the probe.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000, Minn. R. 7007.0800, subp. 14
The monitoring devices and alarm system shall be operated whenever the corresponding cyclone is operating.	Minn. R. 7007.0800, subps. 4 & 5
Inspect each cyclone quarterly, or as required by manufacturing specifications, all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subps. 2, 5, and 14
Inspect each cyclone quarterly, or as required by manufacturing specifications, all components that are subject to wear or plugging. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subps. 2, 5, and 14

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: GP 007 Combined Boiler Fuel Usage Limit

What to do	Why to do it
FUEL USAGE LIMIT	hdr
Fuel Usage: less than or equal to 6080000 gallons/year using 12-month Rolling Sum of distillate fuel oil to be consumed by both Boilers #1 (EU 026) and #2 (EU 027), based on a calculated 12-month rolling sum. This is to be calculated by the end of each calendar month for the previous month.	Title I Condition: 40 CFR Section 52.21(j) (for NOx); Title I Condition: Limit to avoid classification as major under 40 CFR Section 52.21 (for SO2)
Except during start-up and shutdown, operate CE 027 at all times that EU 026 is operating and operate CE 028 at all times that EU 027 is operating.	Title I Condition: 40 CFR Section 52.21(j)
MONITORING REQUIREMENTS	hdr
The Permittee shall obtain the supplier certifications for each delivery of distillate oil which specify the sulfur content in percent by weight.	Minn. R. 7007.0800, subp. 4
Record the quantity of distillate fuel oil consumed for Boilers #1 and #2 (in gallons) on a monthly basis. Keep records on site.	Title I Condition: 40 CFR Section 52.21(j) (for NOx); Title I Condition: Limit to avoid classification as major under 40 CFR Section 52.21 (for SO2)
SUBMITTAL AND REPORTS	hdr
Fuel supplier certifications shall include: i) the name of the oil supplier; and, ii) a statement from the oil supplier that the oil sulfur content is less than or equal to 0.05 percent by weight for distillate oil.	Title I Condition: 40 CFR Section 52.21; also meets the requirements of 40 CFR Section 60.48c(f)
Record and maintain records of the amounts of each fuel combusted during each month.	40 CFR Section 60.48c(g); Feb. 20, 1992 EPA Memo

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: GP 008 Loadout Units

What to do	Why to do it
EMISSION LIMITS	hdr
(All limits apply to each emission unit.)	
Total Particulate Matter: less than or equal to 0.0030 grains/dry standard cubic foot using 1-Hour Average for any process emissions from each stack vent in GP 008.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; also meets the requirements of 7011.1005, subp. 3(D)
Particulate Matter < 10 micron: less than or equal to 0.0030 grains/dry standard cubic foot using 3-hour Average for any process emissions from each stack vent in GP 008.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Opacity: less than or equal to 10 percent	Minn. R. 7011.1005, subp. 3(D)
OPERATING REQUIREMENTS	hdr
Fabric filters for each individual stack shall be operated at all times when the emission unit is in operation. See GP 002 for Fabric Filter requirements.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Clean up commodities spilled on facility property, as required, to minimize emissions to a level required with RACT.	Minn. R. 7011.1005, subp. 3(D)
Maintain air pollution control equipment in proper operating condition and utilize the air pollution control systems as designed.	Minn. R. 7011.1005, subp. 3(D)

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: GP 009 Methanol Storage Tanks #1 & #2; Sodium Methylate Tank**Associated Items:** TK 007 Methanol Storage Tank #1

TK 008 Methanol Storage Tank #2

TK 009 Sodium Methylate

What to do	Why to do it
VAPOR BALANCE ALTERNATIVE (Subpart GGG)	hdr
<p>The permittee shall implement vapor balancing in accordance with 63.1253(f), except as specified in paragraphs (e)(1) through (3) of 40 CFR pt 63, subp. FFFF.</p> <p>(1) When 63.1253(f)(6)(i) refers to a 90 percent reduction, 95 percent applies for the purposes of 40 CFR pt 63, subp. FFFF.</p> <p>(2) To comply with 63.1253(f)(6)(i), the owner or operator of an offsite cleaning or reloading facility must comply with 63.2445 through 63.2550 instead of complying with 63.1253(f)(7)(ii), except as specified in paragraph (e)(2)(i) or (ii) of 40 CFR pt 63, subp. FFFF.</p> <p>(i) The reporting requirements in 63.2520 do not apply to the owner or operator of the offsite cleaning or reloading facility.</p> <p>(ii) As an alternative to complying with the monitoring, recordkeeping, and reporting provisions in 63.2445 through 63.2550, the owner or operator of an offsite cleaning or reloading facility may comply as specified in 63.2535(a)</p>	40 CFR Section 63.2470(e); Minn. R. 7011.8050
<p>(1) The vapor balancing system must be designed and operated to route organic HAP vapors displaced from loading of the storage tank to the railcar or tank truck from which the storage tank is filled.</p> <p>(2) Tank trucks and railcars must have a current certification in accordance with the U.S. Department of Transportation (DOT) pressure test requirements of 49 CFR part 180 for tank trucks and 49 CFR 173.31 for railcars.</p> <p>(3) Hazardous air pollutants must only be unloaded from tank trucks or railcars when vapor collection systems are connected to the storage tank's vapor collection system.</p> <p>(4) No pressure relief device on the storage tank, or on the railcar, or tank truck shall open during loading or as a result of diurnal temperature changes (breathing losses).</p>	40 CFR Section 63.2470(e) and 63.1253(f); Minn. R. 7011.8050
<p>continued</p> <p>(5) Pressure relief devices on affected storage tanks must be set to no less than 2.5 psig at all times to prevent breathing losses. The owner or operator shall record the setting as specified in 63.1259(b)(12) and comply with the requirements for each pressure relief valve in paragraphs (f)(5)(i) through (iii) of 40 CFR Section 63.1253(f):</p> <p>(i) The pressure relief valve shall be monitored quarterly using the method described in 63.180(b).</p> <p>(ii) An instrument reading of 500 ppmv or greater defines a leak.</p> <p>(iii) When a leak is detected, it shall be repaired as soon as practicable, but no later than 5 days after it is detected, and the owner or operator shall comply with the recordkeeping requirements of 63.1255(g)(4)(i) through (iv).</p>	40 CFR Section 63.2470(e) and 63.1253(f); Minn. R. 7011.8050
<p>continued</p> <p>(6) Railcars or tank trucks that deliver HAP to an affected storage tank must be reloaded or cleaned at a facility that utilizes one of the control techniques in paragraph (f)(6)(i) through (ii) of 40 CFR Section 63.1253(f):</p> <p>(i) The railcar or tank truck must be connected to a closed-vent system with a control device that reduces inlet emissions of HAP by 90 percent by weight or greater; or</p> <p>(ii) A vapor balancing system designed and operated to collect organic HAP vapor displaced from the tank truck or railcar during reloading must be used to route the collected HAP vapor to the storage tank from which the liquid being transferred originated.</p>	40 CFR Section 63.2470(e) and 63.1253(f); Minn. R. 7011.8050

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

continued	40 CFR Section 63.2470(e) and 63.1253(f); Minn. R. 7011.8050
<p>(7) The owner or operator of the facility where the railcar or tank truck is reloaded or cleaned must comply with the requirements in paragraph (f)(7)(i) through (iii) of 40 CFR Section 63.1253(f):</p> <p>(i) Submit to the owner or operator of the affected storage tank and to the Administrator a written certification that the reloading or cleaning facility will meet the requirements of this section. The certifying entity may revoke the written certification by sending a written statement to the owner or operator of the affected storage tank giving at least 90 days notice that the certifying entity is rescinding acceptance of responsibility for compliance with the requirements of this paragraph (b)(7).</p> <p>(ii) If complying with paragraph (f)(6)(i) of this section, demonstrate initial compliance in accordance with 63.1257(c), demonstrate continuous compliance in accordance with 63.1258, keep records as specified in 63.1259, and prepare reports as specified in 63.1260.</p>	
continued	40 CFR Section 63.2470(e) and 63.1253(f); Minn. R. 7011.8050
<p>(iii) If complying with paragraph (f)(6)(ii) of 40 CFR Section 63.1253(f), keep records of:</p> <p>(A) The equipment to be used and the procedures to be followed when reloading the railcar or tank truck and displacing vapors to the storage tank from which the liquid originates, and</p> <p>(B) Each time the vapor balancing system is used to comply with paragraph (f)(6)(ii) of 40 CFR Section 63.1253(f).</p>	
PRESSURE RELIEF VALVE (Subpart H)	hdr
<p>(1) Monitoring shall comply with Method 21 of 40 CFR part 60, appendix A.</p> <p>(2)(i) Except as provided for in paragraph (b)(2)(ii) of 40 CFR 63.180, the detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, water, air, or other inerts which are not organic HAP's or VOC's, the average stream response factor may be calculated on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted.</p>	40 CFR Section 63.2470(e), 63.1253(f) and 63.180(b); Minn. R. 7011.8050
continued	40 CFR Section 63.2470(e), 63.1253(f) and 63.180(b); Minn. R. 7011.8050
<p>(ii) If no instrument is available at the plant site that will meet the performance criteria specified in paragraph (b)(2)(i) of 40 CFR 63.180, the instrument readings may be adjusted by multiplying by the average response factor of the process fluid, calculated on an inert-free basis as described in paragraph (b)(2)(i) of 40 CFR 63.180.</p> <p>(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.</p>	
continued	40 CFR Section 63.2470(e), 63.1253(f) and 63.180(b); Minn. R. 7011.8050
<p>(4) Calibration gases shall be:</p> <p>(i) Zero air (less than 10 parts per million of hydrocarbon in air); and</p> <p>(ii) Mixtures of methane in air at the concentrations specified in paragraphs (b)(4)(ii)(A) through (b)(4)(ii)(C) of 40 CFR 63.180. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in paragraph (b)(2)(i) of 40 CFR 63.180. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.</p>	

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

continued (A) For Phase I, a mixture of methane or other compounds, as applicable, in air at a concentration of approximately, but less than, 10,000 parts per million. (B) For Phase II, a mixture of methane or other compounds, as applicable, and air at a concentration of approximately, but less than, 10,000 parts per million for agitators, 5,000 parts per million for pumps, and 500 parts per million for all other equipment, except as provided in paragraph (b)(4)(iii) of 40 CFR 63.180. (C) For Phase III, a mixture of methane or other compounds, as applicable, and air at a concentration of approximately, but less than, 10,000 parts per million methane for agitators; 2,000 parts per million for pumps in food/medical service; 5,000 parts per million for pumps in polymerizing monomer service; 1,000 parts per million for all other pumps; and 500 parts per million for all other equipment, except as provided in paragraph (b)(4)(iii) of 40 CFR 63.180.	40 CFR Section 63.2470(e), 63.1253(f) and 63.180(b); Minn. R. 7011.8050
continued (iii) The instrument may be calibrated at a higher methane concentration than the concentration specified for that piece of equipment. The concentration of the calibration gas may exceed the concentration specified as a leak by no more than 2,000 parts per million. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 parts per million above the concentration specified as a leak and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 parts per million. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.	40 CFR Section 63.2470(e), 63.1253(f) and 63.180(b); Minn. R. 7011.8050
continued (5) Monitoring shall be performed when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor.	40 CFR Section 63.2470(e), 63.1253(f) and 63.180(b); Minn. R. 7011.8050
The Permittee must keep records of the DOT certification required by 63.1253(f)(2) and the pressure relief vent setting and the leak detection records specified in 63.1253(f)(5).	40 CFR Section 63.2470(e), 63.1253(f) and 63.1259(b)(12); Minn. R. 7011.8050
When each leak is detected as specified in 63.1253(f)(5)(i) the following information shall be recorded and kept for 5 years (at least 2 years onsite, with the remaining 3 years either onsite or offsite): (i) The instrument and the equipment identification number and the operator name, initials, or identification number. (ii) The date the leak was detected and the date of the first attempt to repair the leak. (iii) The date of successful repair of the leak. (iv) The maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A, after the leak is successfully repaired or determined to be nonrepairable.	40 CFR Section 63.2470(e), 63.1253(f) and 63.1255(g)(4)(i); Minn. R. 7011.8050

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-19**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: GP 010 Bio-diesel Production - Equipment Subject to 40 CFR pt. 63, subp. FFFF

Associated Items: EU 033 Biodiesel Process Vent / Water Absorber

EU 035 Bio-diesel Reactor #1

EU 036 Bio-diesel Reactor #2

FS 006 Biodiesel Production Valves

FS 007 Biodiesel Production Relief Valves

FS 008 Biodiesel Production Pump Seals

FS 009 Biodiesel Production Agitator Seals

FS 010 Biodiesel Production Flanges/Connectors

FS 011 Biodiesel Production Sampling Connection Systems

FS 012 Biodiesel Production Open-ended Valves or Lines

FS 013 Biodiesel Production Pumps

FS 014 Biodiesel Production Heat Exchangers

SV 036 Biodiesel Process Vent

TK 007 Methanol Storage Tank #1

TK 008 Methanol Storage Tank #2

TK 009 Sodium Methylate

What to do	Why to do it
GENERAL REQUIREMENTS	hdr
<p>The Permittee shall comply with the applicable provisions of 40 CFR pt. 63, subp. FFFF, Miscellaneous Organic Chemical Manufacturing upon startup of any unit in GP 010.</p> <p>Miscellaneous organic chemical manufacturing process units (MCPU) includes equipment necessary to operate a miscellaneous organic chemical manufacturing process, as defined in 40 CFR Section 63.2550, that satisfies all of the conditions specified in 40 CFR Section 63.2550(b)(1) through (3). An MCPU also includes any assigned storage tanks and transfer racks; equipment in open systems that is used to convey or store water having the same concentration and flow characteristics as wastewater; and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are used to manufacture any material or family of materials described in 40 CFR Section 63.2550(b)(1)(i) through (v).</p>	40 CFR pt. 63, subp. FFFF; 40 CFR Section 63.2435; Minn. R. 7011.8050
In addition to GP 010, requirements from 40 CFR pt. 63, subp. FFFF are listed in this permit at EU 033, GP 009, GP 013, GP 014, FS 006, FS007, FS 008, FS009, FS 010, FS011, FS 012, FS013, FS 014.	40 CFR pt. 63, subp. FFFF; 40 CFR Section 63.2435; Minn. R. 7011.8050
The Permittee shall comply with the emission limits and work practice standards in Tables 1 through 7 of 40 CFR pt. 63, subp. FFFF at all times, except during periods of startup, shutdown, and malfunction (SSM), and meet the requirements specified in 40 CFR Section 63.2455-63.2490, except as specified in 40 CFR Section 63.2450(b)-(s).	40 CFR Section 63.2450(a); 40 CFR Section 63.6(f)(1); Minn. R. 7011.8050
Operation and Maintenance Requirements: At all times, including periods of SSM, the Permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the Permittee reduce emissions from the affected source to the greatest extent, which is consistent with safety and good air pollution control practices.	40 CFR Section 63.2540; 40 CFR Section 63.6(e)(1)(i); Minn. R. 7011.8050

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

<p>CONTINUED:</p> <p>The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the Permittee to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the Permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the SSM plan), review of operation and maintenance records, and inspection of the source.</p>	<p>CONTINUED: 40 CFR Section 63.2540; 40 CFR Section 63.6(e)(1)(i); Minn. R. 7011.8050</p>
<p>Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the SSM plan. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, the Permittee must comply by minimizing emissions during such a SSM event consistent with safety and good air pollution control practices.</p>	<p>40 CFR Section 63.2540; 40 CFR Section 63.6(e)(1)(ii); Minn. R. 7011.8050</p>
<p>Startup, Shutdown, and Malfunction (SSM) Plan: Permittee shall develop and implement a written SSM plan that describes, in detail, procedures for operating and maintaining the source during periods of SSM, and a program of corrective action for malfunctioning process and air pollution control and monitoring equipment used to comply with the relevant standard. The SSM plan shall address the requirements of 40 CFR Section 63.6(e)(3)(i).</p> <p>The SSM plan is not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSM plan requirement is limited to control devices and is optional for other equipment.</p>	<p>40 CFR Sections 63.2540, 63.2525(j), and 63.6(e)(3)(i); Minn. R. 7011.8050</p>
<p>Permittee may satisfy the requirements of a SSM plan, by using the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of 40 CFR Section 63.6(e) and are made available for inspection or submitted when requested by the Administrator.</p>	<p>40 CFR Sections 63.2540, 63.2525(j), and 63.6(e)(3)(vi); Minn. R. 7011.8050</p>
<p>Maintenance and Revisions of Startup, Shutdown, and Malfunction (SSM) Plan: Permittee shall maintain at the affected source a current SSM plan, must make the plan available upon request for inspection and copying by the Administrator, or submit a copy upon written request of the Administrator as required by 40 CFR Section 63.6(e)(3)(v).</p>	<p>40 CFR Section 63.2540; 40 CFR Section 63.6(e)(3)(v); Minn. R. 7011.8050</p>
<p>Based on the results of a determination made under 40 CFR Section 63.6(e)(1)(i), the Administrator may require that the Permittee of an affected source make changes to the SSM plan for that source for the reasons listed in 40 CFR Section 63.6(e)(3)(vii)(A) through (D).</p>	<p>40 CFR Section 63.2540; 40 CFR Section 63.6(e)(3)(vii); Minn. R. 7011.8050</p>
<p>The Permittee may periodically revise the SSM plan for the affected source as necessary to satisfy the requirements of this part or to reflect changes in equipment or procedures at the affected source. The Permittee may make such revisions to the SSM plan without prior approval by the Administrator or the permitting authority. However, each such revision to a SSM plan must be reported in the semiannual report required by 40 CFR Section 63.10(d)(5). If the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSM plan at the time the Permittee developed the plan, the Permittee must revise the SSM plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment.</p>	<p>40 CFR Section 63.2540; 40 CFR Section 63.6(e)(3)(viii); Minn. R. 7011.8050</p>
<p>CONTINUED:</p> <p>In the event that the Permittee makes any revision to the SSM plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the Permittee has provided a written notice describing the revision to the MPCA.</p>	<p>CONTINUED: 40 CFR Section 63.2540; 40 CFR Section 63.6(e)(3)(viii); Minn. R. 7011.8050</p>
SUBMITTALS	hdr

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

<p>Content of Semiannual Compliance Report: The Permittee shall submit semiannual compliance reports that contain the following information:</p> <p>1) Company name and address.</p> <p>2) Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.</p> <p>3) Date of report and beginning and ending dates of the reporting period.</p> <p>4) For each SSM during which excess emissions occur, the compliance report must include records that the procedures specified in your startup, shutdown, and malfunction plan (SSMP) were followed or documentation of actions taken that are not consistent with the SSMP, and include a brief description of each malfunction.</p> <p>5) The compliance report must contain the information on deviations, as defined in 40 CFR Section 63.2550, according to 40 CFR Section 63.2520(e)(5)(i)-(iii).</p>	40 CFR Section 63.2520(e); Minn. R. 7011.8050
<p>CONTINUED:</p> <p>6) Include each new operating scenario which has been operated since the time period covered by the last compliance report and has not been submitted in the notification of compliance status report or a previous compliance report. For each new operating scenario, provide verification that the operating conditions for any associated control or treatment device have not been exceeded and that any required calculations and engineering analyses have been performed. A revised operating scenario for an existing process is considered to be a new operating scenario.</p> <p>7) Applicable records and information for periodic reports as specified in referenced 40 CFR pt. 63, subps. F, G, SS, TT, UU, WW, and GGG.</p>	CONTINUED: 40 CFR Section 63.2520(e); Minn. R. 7011.8050
<p>CONTINUED:</p> <p>8) Notification of process change. Except as specified below, whenever Permittee makes a process change, or change any of the information submitted in the notification of compliance status report, that is not within the scope of an existing operating scenario, the Permittee must document the change in compliance report. A process change does not include moving within a range of conditions identified in the standard batch. The notification must include all of the information in 40 CFR Section 63.2520(e)(10)(i)(A)-(C).</p> <p>The Permittee must submit a report 60 days before the scheduled implementation date of any of the changes identified 40 CFR Section 63.2520(e)(10)(ii)(A), (B), or (C).</p>	CONTINUED: 40 CFR Section 63.2520(e); Minn. R. 7011.8050
RECORDKEEPING REQUIREMENTS	hdr
<p>Permittee must keep each applicable record required by 40 CFR pt. 63, subp. A and in referenced 40 CFR pt. 63, subps. F, G, SS, TT, UU, WW, and GGG.</p>	40 CFR Section 63.2525(a); Minn. R. 7011.8050
<p>The Permittee shall keep records of each operating scenario as follows:</p> <p>1) A description of the process and the type of process equipment used.</p> <p>2) An identification of related process vents, including their associated emissions episodes if not complying with the alternative standard in 40 CFR Section 63.2505; wastewater point of determination (POD); storage tanks; and transfer racks.</p> <p>3) The applicable control requirements of this subpart, including the level of required control, and for vents, the level of control for each vent.</p> <p>4) The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device.</p> <p>5) The process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(s).</p>	40 CFR Section 63.2525(b); Minn. R. 7011.8050
<p>CONTINUED:</p> <p>6) The applicable monitoring requirements of this subpart and any parametric level that assures compliance for all emissions routed to the control device or treatment process.</p> <p>7) Calculations and engineering analyses required to demonstrate compliance.</p> <p>8) For reporting purposes, a change to any of these elements not previously reported, except for 40 CFR Section 63.2525(b)(5), constitutes a new operating scenario.</p>	CONTINUED: 40 CFR Section 63.2525(b); Minn. R. 7011.8050

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-22**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

MAINTENANCE WASTEWATER REQUIREMENTS	hdr
The Permittee must meet each requirement in Table 7 of 40 CFR pt. 63, subp. FFFF that applies to the wastewater streams and liquid streams in open systems within an MCPU, except as specified in 40 CFR Section 63.2485(b) through (o).	40 CFR Section 63.2485(a); Minn. R. 7011.8050
<p>Maintenance Wastewater Procedures Plan: The Permittee shall prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance-turnaround) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall:</p> <p>(1) Specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities.</p> <p>(2) Specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and</p> <p>(3) Specify the procedures to be followed when clearing materials from process equipment.</p>	Table 7 of 40 CFR pt. 63, subp. FFFF; 40 CFR Section 63.105(b); Minn. R. 7011.8050
<p>The Permittee shall modify and update the information required by 40 CFR Section 63.105(b) as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure.</p> <p>The Permittee shall implement the procedures described in, and maintain a record of the information required by, 40 CFR Section 63.105(b) and (c) as part of the SSM plan required under 40 CFR Section 63.6(e)(3).</p>	Table 7 of 40 CFR pt. 63, subp. FFFF; 40 CFR Section 63.105(c) through (e); Minn. R. 7011.8050

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-23**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: GP 012 Fire Pump Engines**Associated Items:** EU 028 Fire Pump Engine No. 1

EU 032 Fire Pump Engine No. 2

SV 030 Fire Pump Engine #1

SV 033 Fire Pump Engine #1

SV 034 Fire Pump Engine #2

SV 035 Fire Pump Engine #2

What to do	Why to do it
EMISSION LIMITS	hdr
(All requirements apply to each individual emission unit.)	
Opacity: less than or equal to 20 percent	Minn. R. 7011.2300, subp. 1
Operating Hours: less than or equal to 500 hours/year	Title I Condition: Limit to avoid classification as major for SO ₂ under 40 CFR Section 52.21
Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input (0.29 lbs/million Btu per equipment design).	Minn. R. 7011.2300, subp. 1
OPERATING CONDITIONS	hdr
Fuel Type: No. 2 distillate fuel only, by design.	Minn. R. 7005.0100, subp. 35a
Operation: emergency usage, training, or testing purposes only.	Minn. R. 7007.0800, subp. 2
RECORDKEEPING REQUIREMENTS	hdr
Hours of Operation: The Permittee shall maintain documentation on site that the unit is to be used for emergency (including training and testing) purposes only that qualifies under the U.S. EPA memorandum entitled "Calculating Potential to Emit (PTE) for Emergency Generators" dated September 6, 1995, limiting operation to 500 hours per year.	Minn. R. 7007.0800, subps. 4 and 5
Recordkeeping -- Fuel Type: The Permittee shall keep records of the type of fuel burned in EU 028 and EU 032 when in operation.	Minn. R. 7007.0800, subps. 4 and 5
Fuel Supplier Certification: Obtain and maintain a fuel supplier certification for each shipment of No. 2 distillate oil, certifying that the sulfur content does not exceed 0.5% by weight.	Minn. R. 7007.0800, subps. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-24**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: GP 013 Equipment Leaks**Associated Items:** FS 006 Biodiesel Production Valves

FS 007 Biodiesel Production Relief Valves

FS 008 Biodiesel Production Pump Seals

FS 009 Biodiesel Production Agitator Seals

FS 010 Biodiesel Production Flanges/Connectors

FS 011 Biodiesel Production Sampling Connection Systems

FS 012 Biodiesel Production Open-ended Valves or Lines

FS 013 Biodiesel Production Pumps

FS 014 Biodiesel Production Heat Exchangers

What to do	Why to do it
GP 013 is an affected facility under 40 CFR pt. 60, subp. VV; however, as allowed under 40 CFR Section 63.2535(k), the Permittee has elected to comply with 40 CFR pt. 60, subp. VV by complying with 40 CFR pt. 63, subp. FFFF for this equipment. The Permittee must consider all total organic compounds, minus methane and ethane, in such equipment for purposes of compliance with 40 CFR pt. 63, subp. FFFF, as if they were organic HAP.	40 CFR pt. 60, subp. VV; 40 CFR Section 63.2535(k); Minn. R. 7011.2900(A) and 7011.8050
Leak Detection and Repair (LDAR): In addition to those listed at GP 013, the LDAR requirements that apply to this facility can be found at FS 006, 007, 008, 009, 010, 011, 012, 013, and 014 in this permit.	40 CFR Section 63.2480(a); Minn. R. 7011.8050
OPERATING CONDITIONS	hdr
Requirements for Equipment Leaks: The Permittee must meet each requirement in Table 6 of 40 CFR pt. 63, subp. FFFF that applies to equipment leaks, except as specified below. The Permittee may elect to comply with the provisions in 40 CFR Section 63.2480(b)(1)-(5) as an alternative to the referenced provisions in 40 CFR pt. 63, subp. H or 40 CFR pt. 63, subp. UU.	40 CFR Section 63.2480(a); Minn. R. 7011.8050
Applicable Equipment: Equipment in organic HAP service is subject to Leak Detection and Repair Requirements. In Organic HAP Service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.2550; Minn. R. 7011.8050
EQUIPMENT IDENTIFICATION AND DESIGNATION	HDR
General equipment identification: The Permittee shall identify equipment subject to 40 CFR pt. 63, subp. UU (Equipment Leaks Control Level 2 Standards). Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, by designation of process unit or affected facility boundaries by some form of weatherproof identification, or by other appropriate methods.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(a); Minn. R. 7011.8050
Additional equipment identification: The Permittee shall specifically identify equipment subject to any of the provisions in 40 CFR Sections 63.1023-63.1034 as listed below.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(b); Minn. R. 7011.8050
Additional equipment identification, Connectors: Except for inaccessible, ceramic, or ceramic-lined connectors meeting the provision of 40 CFR Section 63.1027(e)(2) and instrumentation systems identified pursuant to 40 CFR Section 63.1022(b)(4), the Permittee shall identify the connectors subject to the requirements of 40 CFR pt. 63, subp. UU. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions 40 CFR pt. 63, subp. UU are identified as a group, and the number of connectors subject is indicated. With respect to connectors, the identification shall be complete no later than the completion of the initial survey required by 40 CFR Section 63.1022(a).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(b)(1); Minn. R. 7011.8050
Additional equipment identification, Routed to a process or fuel gas system or equipped with a closed vent system and control device: The Permittee shall identify the equipment that the Permittee elects to route to a process or fuel gas system or equip with a closed vent system and control device, under the provisions of 40 CFR Section 63.1026(e)(3) (pumps in light liquid service), 40 CFR Section 63.1028(e)(3) (agitators), 40 CFR Section 63.1030(d) (pressure relief devices in gas and vapor service), or 40 CFR Section 63.1031(e) (compressors).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(b)(2); Minn. R. 7011.8050
Additional equipment identification, Pressure relief devices: The Permittee shall identify the pressure relief devices equipped with rupture disks, under the provisions of 40 CFR Section 63.1030(e).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(b)(3); Minn. R. 7011.8050

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

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Additional equipment identification, Instrumentation systems: The Permittee shall identify instrumentation systems subject to the provisions of 40 CFR Section 63.1029. Individual components in an instrumentation system need not be identified.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(b)(4); Minn. R. 7011.8050
Additional equipment identification, Equipment in service less than 300 hours per calendar year: The Permittee shall identify, either by list, location (area or group), or other method, of equipment in regulated material service less than 300 hours per calendar year within a process unit or affected facilities subject to the provisions of 40 CFR pt. 63, subp. UU shall be recorded.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(b)(5); Minn. R. 7011.8050
Special equipment designations - Equipment that is unsafe or difficult-to-monitor: 1) Designation and criteria for unsafe-to-monitor: Valves meeting the provisions of 40 CFR Section 63.1025(e)(1), pumps meeting the provisions of 40 CFR Section 63.1026(e)(6), connectors meeting the provisions of 40 CFR Section 63.1027(e)(1), and agitators meeting the provisions of 40 CFR Section 63.1028(e)(7) may be designated unsafe-to-monitor if the Permittee determines that monitoring personnel would be exposed to an immediate danger as a consequence of complying with the monitoring requirements of 40 CFR pt. 63, subp. UU.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(c)(1); Minn. R. 7011.8050
Special equipment designations - Equipment that is unsafe or difficult-to-monitor, continued: 2) Designation and criteria for difficult-to-monitor: Valves meeting the provisions of 40 CFR Section 63.1025(e)(2) may be designated difficult-to-monitor if the provisions 40 CFR Section 63.1022(c)(2)(i) apply. Agitators meeting the provisions of 40 CFR Section 63.1028(e)(5) may be designated difficult-to-monitor if the provisions of 40 CFR Section 63.1022(c)(2)(ii) apply.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(c)(2); Minn. R. 7011.8050
Special equipment designations - Equipment that is unsafe or difficult-to-monitor, continued: 3) Identification of unsafe or difficult-to-monitor equipment: The Permittee shall record the identity of equipment designated as unsafe-to-monitor according to the provisions of 40 CFR Section 63.1022(c)(1) and the planned schedule for monitoring this equipment. The Permittee shall record the identity of equipment designated as difficult-to-monitor according to the provisions of 40 CFR Section 63.1022(c)(2), the planned schedule for monitoring this equipment, and an explanation why the equipment is unsafe or difficult-to-monitor. This record must be kept at the plant and be available for review by an inspector.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(c)(3); Minn. R. 7011.8050
i) The Permittee of equipment designated as unsafe-to-monitor according to the provisions of 40 CFR Section 63.1022(c)(1) shall have a written plan that requires monitoring of the equipment as frequently as practical during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in 40 CFR Section 63.1024 if a leak is detected.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(c)(4); Minn. R. 7011.8050
Special equipment designations - Equipment that is unsafe-to-repair: 1) Designation and criteria. Connectors subject to the provisions of 40 CFR Section 63.1024(e) may be designated unsafe-to-repair if the Permittee determines that repair personnel would be exposed to an immediate danger as a consequence of complying with the repair requirements of 40 CFR pt. 63, subp. UU, and if the connector will be repaired before the end of the next process unit or affected facility shutdown as specified in 40 CFR Section 63.1024(e)(2). 2) Identification of equipment. The identity of connectors designated as unsafe-to-repair and an explanation why the connector is unsafe-to-repair shall be recorded.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(d); Minn. R. 7011.8050
Special equipment designations: Equipment in heavy liquid service: The Permittee of equipment in heavy liquid service shall comply with the following requirements. 1) Permittee shall retain information, data, and analyses used to determine that a piece of equipment is in heavy liquid service. OR 2) When requested by the Administrator, Permittee shall demonstrate that the piece of equipment or process is in heavy liquid service. Permittee's determination or demonstration that a piece of equipment or process is in heavy liquid service shall include an analysis or demonstration that the process fluids do not meet the definition of "in light liquid service." Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(f); Minn. R. 7011.8050
MONITORING AND RECORDKEEPING	hdr
Instrument monitoring methods: The Permittee shall comply with the requirements specified in 40 CFR Section 63.1023(b)(1)-(6) for instrument monitoring, as required under 40 CFR pt 63 subp. UU.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1023(b); Minn. R. 7011.8050

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-26**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Instrument monitoring using background adjustments: The Permittee may elect to adjust or not to adjust the instrument readings for background. If the Permittee elects not to adjust instrument readings for background, the Permittee shall monitor the equipment according to the procedures specified in 40 CFR Section 63.1023(b)(1)-(5). In such cases, all instrument readings shall be compared directly to the applicable leak definition for the monitored equipment to determine whether there is a leak or to determine compliance with 40 CFR Section 63.1030(b) (pressure relief devices) or 40 CFR Section 63.1031(f) (alternative compressor standard). If the Permittee elects to adjust instrument readings for background, the Permittee shall monitor the equipment according to the procedures specified in 40 CFR Section 63.1023(c)(1)-(4).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1023(c); Minn. R. 7011.8050
Sensory monitoring methods: Sensory monitoring consists of visual, audible, olfactory, or any other detection method used to determine a potential leak to the atmosphere.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1023(d); Minn. R. 7011.8050
EQUIPMENT STANDARDS FOR LEAKS	hdr
Leaking equipment identification and records: 1) When each leak is detected pursuant to the monitoring specified in 40 CFR Section 63.1023(a), the Permittee shall attach a weatherproof and readily visible identification to the leaking equipment. 2) When each leak is detected, the Permittee shall record and keep the information specified in 40 CFR Section 63.1024(f) pursuant to 40 CFR pt. 63, subp. FFFF, except for the information for connectors complying with the 8 year monitoring period allowed under 40 CFR Section 63.1027(b)(3)(iii) shall be kept 5 years beyond the date of its last use.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1023(e); Minn. R. 7011.8050
Leak repair schedule: The Permittee shall repair each leak detected as soon as practical, but not later than 15 calendar days after it is detected, except as provided in 40 CFR Section 63.1024(d) and (e). A first attempt at repair as defined in 40 CFR pt. 63, subp. UU shall be made no later than 5 calendar days after the leak is detected. First attempt at repair for pumps includes, but is not limited to, tightening the packing gland nuts and/or ensuring that the seal flush is operating at design pressure and temperature. First attempt at repair for valves includes, but is not limited to, tightening the bonnet bolts, and/or replacing the bonnet bolts, and/or tightening the packing gland nuts, and/or injecting lubricant into the lubricated packing.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1024(a); Minn. R. 7011.8050
Leak identification removal: 1) Valves and connectors in gas/vapor and light liquid service. The leak identification on a valve in gas/vapor or light liquid service may be removed after it has been monitored as specified in 40 CFR Section 63.1025(d)(2), and no leak has been detected during that monitoring. The leak identification on a connector in gas/vapor or light liquid service may be removed after it has been monitored as specified in 40 CFR Section 63.1027(b)(3)(iv) and no leak has been detected during that monitoring. 2) Other equipment. The identification that has been placed, pursuant to 40 CFR Section 63.1023(e)(1), on equipment determined to have a leak, except for a valve or for a connector in gas/vapor or light liquid service that is subject to the provisions of 40 CFR Section 63.1027(b)(3)(iv), may be removed after it is repaired.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1024(c) Minn. R. 7011.8050
Delay of repair: Delay of repair is allowed for any of the conditions specified in 40 CFR Section 63.1024(d)(1)-(5). The Permittee shall maintain a record of the facts that explain any delay of repairs and, where appropriate, why the repair was technically infeasible without a process unit shutdown.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1024(d); Minn. R. 7011.8050
Unsafe-to-repair - Connectors: Any connector that is designated, as described in 40 CFR Section 63.1022(d), as an unsafe-to-repair connector is exempt from the requirements of 40 CFR Section 63.1027(d) and 40 CFR Section 63.1024(a).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1024(e); Minn. R. 7011.8050
Leak repair records: The Permittee shall record and maintain, for each leak detected, the information specified in 40 CFR Section 63.1024(f)(1)-(5) pursuant to 40 CFR pt. 63, subp. FFFF. 1) The date of first attempt to repair the leak. 2) The date of successful repair of the leak. 3) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A at the time the leak is successfully repaired or determined to be non-repairable. 4) Repair delayed and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak as specified in 40 CFR Section (f)(4)(i) and (ii). AND 5) Dates of process unit or affected facility shutdowns that occur while the equipment is unrepaired.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1024(f); Minn. R. 7011.8050
RECORDKEEPING	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-27**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Recordkeeping system: The Permittee of more than one regulated source subject to the provisions of 40 CFR pt. 63, subp. UU may comply with the recordkeeping requirements for these regulated sources in one recordkeeping system. The recordkeeping system shall identify each record by regulated source and the type of program being implemented (e.g., quarterly monitoring, quality improvement) for each type of equipment.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(a); Minn. R. 7011.8050
General equipment leak records: 1) As specified in 40 CFR Section 63.1022(a) and (b), the Permittee shall keep general and specific equipment identification if the equipment is not physically tagged and the Permittee is electing to identify the equipment subject to 40 CFR pt. 63, subp. UU through written documentation such as a log or other designation. 2) The Permittee shall keep a written plan as specified in 40 CFR Section 63.1022(c)(4) for any equipment that is designated as unsafe- or difficult-to-monitor. 3) The Permittee shall maintain a record of the identity and an explanation as specified in 40 CFR Section 63.1022(d)(2) for any equipment that is designated as unsafe-to-repair.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(b); Minn. R. 7011.8050
General equipment leak records, continued: 4) As specified in 40 CFR Section 63.1022(e), the Permittee shall maintain the identity of compressors operating with an instrument reading of less than 500 parts per million. 5) The Permittee shall keep records associated with the determination that equipment is in heavy liquid service as specified in 40 CFR Section 63.1022(f). 6) The Permittee shall keep records for leaking equipment as specified in 40 CFR Section 63.1023(e)(2). 7) The Permittee shall keep records for leak repair as specified in 40 CFR Section 63.1024(f) and records for delay of repair as specified in 40 CFR Section 63.1024(d).	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(b); Minn. R. 7011.8050
Valve Records: For valves, the Permittee shall maintain the following records: i) The monitoring schedule for each process unit as specified in 40 CFR Section 63.1025(b)(3)(vi). ii) The valve subgrouping records specified in 40 CFR Section 63.1025(b)(4)(iv), if applicable.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(1); Minn. R. 7011.8050
Pump Records: For pumps, the Permittee shall maintain the following records: i) Documentation of pump visual inspections as specified in 40 CFR Section 63.1026(b)(4). ii) Documentation of dual mechanical seal pump visual inspections as specified in 40 CFR Section 63.1026(e)(1)(v). iii) For the criteria as to the presence and frequency of drips for dual mechanical seal pumps, records of the design criteria and explanations and any changes and the reason for the changes, as specified in 40 CFR Section 63.1026(e)(1)(i).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(2); Minn. R. 7011.8050
Connector Records: For connectors, the Permittee shall maintain the monitoring schedule for each process unit as specified in 40 CFR Section 63.1027(b)(3)(v).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(3); Minn. R. 7011.8050
Agitator Records: For agitators, the Permittee shall maintain the following records: i) Documentation of agitator seal visual inspections as specified in 40 CFR Section 63.1028; and ii) For the criteria as to the presence and frequency of drips for agitators, the Permittee shall keep records of the design criteria and explanations and any changes and the reason for the changes, as specified in 40 CFR Section 63.1028(e)(1)(vi).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(4); Minn. R. 7011.8050
Pressure Relief Device Records: For pressure relief devices in gas and vapor or light liquid service, the Permittee shall keep records of the dates and results of monitoring following a pressure release, as specified in 40 CFR Section 63.1030(c)(3).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(5); Minn. R. 7011.8050
Compressor Records: For compressors, the Permittee shall maintain the following records: i) For criteria as to failure of the seal system and/or the barrier fluid system, record the design criteria and explanations and any changes and the reason for the changes, as specified in 40 CFR Section 63.1031(d)(2). ii) For compressors operating under the alternative compressor standard, record the dates and results of each compliance test as specified in 40 CFR Section 63.1031(f)(2).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(6); Minn. R. 7011.8050
REPORTING	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-28**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

<p>Notification of Compliance Status: In addition to the information specified at GP 010 of this permit, the Notification of Compliance Status listed in Table B of this permit (for GP 010), this report shall contain the following information, as applicable.</p> <p>The notification shall provide the following information for each process unit described by GP 013:</p> <ul style="list-style-type: none"> i) Process unit or affected facility identification. ii) Number of each equipment type (e.g., valves, pumps, etc.) excluding equipment in vacuum service. iii) Method of compliance with the standard (e.g., "monthly leak detection and repair" or "equipped with dual mechanical seals"). iv) Planned schedule for requirements in 40 CFR Section 63.1025 and 63.1026. 	<p>Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1039(a); Minn. R. 7011.8050</p>
<p>Semiannual Compliance Report: In addition to the information specified at GP 010 of this permit, the Permittee shall report the information specified below in the Semiannual Compliance Report listed in Table B of this permit (for GP 010):</p> <ul style="list-style-type: none"> 1) For the equipment specified below, report in a summary format by equipment type, the number of components for which leaks were detected and for valves, pumps and connectors show the percent leakers, and the total number of components monitored. Also include the number of leaking components that were not repaired as required by 40 CFR Section 63.1024, and for valves and connectors, identify the number of components that are determined by 40 CFR Section 63.1025(c)(3) to be nonrepairable. i) Valves in gas and vapor service and in light liquid service pursuant to 40 CFR Section 63.1025(b) and (c). ii) Pumps in light liquid service pursuant to 40 CFR Section 63.1026(b) and (c). 	<p>Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1039(b); Minn. R. 7011.8050</p>
<p>Semiannual Compliance Report, continued:</p> <ul style="list-style-type: none"> iii) Connectors in gas and vapor service and in light liquid service pursuant to 40 CFR Section 63.1027(b) and (c). iv) Agitators in gas and vapor service and in light liquid service pursuant to 40 CFR Section 63.1028(c). v) Compressors pursuant to 40 CFR Section 63.1031(d). <p>2) Where any delay of repair is utilized pursuant to 40 CFR Section 63.1024(d), report that delay of repair has occurred and report the number of instances of delay of repair.</p> <p>3) If applicable, report the valve subgrouping information specified in 40 CFR Section 63.1025(b)(4)(iv).</p>	<p>CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1039(b); Minn. R. 7011.8050</p>
<p>Semiannual Compliance Report, continued:</p> <p>4) For pressure relief devices in gas and vapor service pursuant to 40 CFR Section 63.1030(b) and for compressors pursuant to 40 CFR Section 63.1031(f) that are to be operated at a leak detection instrument reading of less than 500 parts per million, report the results of all monitoring to show compliance conducted within the semiannual reporting period.</p> <p>5) Report, if applicable, the initiation of a monthly monitoring program for valves pursuant to 40 CFR Section 63.1025(b)(3)(i).</p> <p>6) Report, if applicable, the initiation of a quality improvement program for pumps pursuant to 40 CFR Section 63.1035.</p>	<p>CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1039(b); Minn. R. 7011.8050</p>
<p>Semiannual Compliance Report, continued:</p> <p>7) Report the information listed 40 CFR Section 63.1039(a) for the Notification of Compliance Status Report for process units or affected facilities with later compliance dates. Report any revisions to items reported in an earlier Notification of Compliance Status Report if the method of compliance has changed since the last report.</p>	<p>CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1039(b); Minn. R. 7011.8050</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-29**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: GP 014 Biodiesel reactors**Associated Items:** EU 035 Bio-diesel Reactor #1

EU 036 Bio-diesel Reactor #2

SV 036 Biodiesel Process Vent

What to do	Why to do it
EU 035 and EU 036 are affected equipment under 40 CFR pt. 60, subp. RRR; however, as allowed under 40 CFR Section 63.2535(h), the Permittee has elected to comply with 40 CFR pt. 60, subp. RRR by complying with 40 CFR pt. 63, subp. FFFF for this equipment. The Permittee must consider all total organic compounds, minus methane and ethane, in such equipment for purposes of compliance with 40 CFR pt. 63, subp. FFFF, as if they were organic HAP.	40 CFR pt. 60, subp. RRR; 40 CFR Section 63.2535(h); Minn. R. 7011.3430 and 7011.8050

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-30**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: SV 004 Hot Dehulling

What to do	Why to do it
LIMITS	hdr
Total Particulate Matter: less than or equal to 0.026 grains/dry standard cubic foot using 1-Hour Average for any process emissions from SV 004.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; also meets the requirements of Minn. R. 7011.0715, subp. 1A
Particulate Matter < 10 micron: less than or equal to 0.013 grains/dry standard cubic foot using 3-hour Average for any process emissions from SV 004.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)
Performance Test: due before end of each calendar 36 months starting 11/20/2007 to measure PM10 for SV 004.	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-31**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: SV 005 Hull Grinding

What to do	Why to do it
LIMITS	hdr
Total Particulate Matter: less than or equal to 0.0050 grains/dry standard cubic foot using 1-Hour Average for any process emissions from SV 005.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.0050 grains/dry standard cubic foot using 3-hour Average for any process emissions from SV 005.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)
Performance Test: due before end of each calendar 60 months starting 04/27/2004 to measure PM10 for SV 005.	Minn. R. 7007.0800, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-32**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: SV 006 Ground Hull Bins

What to do	Why to do it
LIMITS	hdr
Total Particulate Matter: less than or equal to 0.0050 grains/dry standard cubic foot using 1-Hour Average for any process emissions from SV 006.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.0050 grains/dry standard cubic foot using 3-hour Average for any process emissions from SV 006.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)
Performance Test: due before end of each calendar 60 months starting 08/12/2004 to measure PM10 for SV 006.	Minn. R. 7007.0800, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-33**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: SV 007 Pellet Cooler

What to do	Why to do it
LIMITS	hdr
Total Particulate Matter: less than or equal to 0.026 grains/dry standard cubic foot using 1-Hour Average for any process emissions from SV 007.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000, also meets the requirements of Minn. R. 7011.0715, subp. 1A
Particulate Matter < 10 micron: less than or equal to 0.013 grains/dry standard cubic foot using 3-hour Average for any process emissions from SV 007.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)
Performance Test: due before end of each calendar 60 months starting 04/27/2004 to measure PM10 for SV 007.	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-34**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: SV 008 Pellet Storage Bin

What to do	Why to do it
LIMITS	hdr
Total Particulate Matter: less than or equal to 0.0050 grains/dry standard cubic foot using 1-Hour Average for any process emissions from SV 008.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.0050 grains/dry standard cubic foot using 3-hour Average for any process emissions from SV 008.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-35**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: SV 009 Blending and Meal Lump Grinding**Associated Items:** EU 034 Meal Lump Grinder

What to do	Why to do it
LIMITS	hdr
Total Particulate Matter: less than or equal to 0.0050 grains/dry standard cubic foot using 1-Hour Average for any process emissions from SV 009.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.0050 grains/dry standard cubic foot using 3-hour Average for any process emissions from SV 009.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-36**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: SV 011 Flakers (8)

What to do	Why to do it
LIMITS	hdr
Total Particulate Matter: less than or equal to 0.026 grains/dry standard cubic foot using 1-Hour Average for any process emissions from SV 011.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000, also meets the requirements of Minn. R. 7011.0715, subp. 1A
Particulate Matter < 10 micron: less than or equal to 0.013 grains/dry standard cubic foot using 3-hour Average for any process emissions from SV 011.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)
Performance Test: due before end of each calendar 60 months starting 04/26/2007 to measure PM10 for SV 011.	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-37**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: SV 032 DT/DC Decks**Associated Items:** EU 016 Dryer Deck 1

EU 017 Dryer Deck 2

EU 018 Dryer Deck 3

EU 019 Cooler Deck 1

GP 005 Cyclone Units

What to do	Why to do it
LIMITS	hdr
Total Particulate Matter: less than or equal to 0.026 grains/dry standard cubic foot using 1-Hour Average for any process emissions from SV 032.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; also meets the requirements of Minn. R. 7011.0715, subp. 1A
Particulate Matter < 10 micron: less than or equal to 0.013 grains/dry standard cubic foot using 3-hour Average for any process emissions from SV 032.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)
Performance Test: due before end of each calendar 60 months starting 04/27/2004 to measure PM10 for SV 032.	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-38**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: EU 001 Receiving**Associated Items:** GP 002 Fabric Filter Equipment

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.0030 grains/dry standard cubic foot using 3-hour Average .	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; also meets the requirements of 40 CFR 60.302(b)(1) and Minn. R. 7011.1005, subp. 2
Particulate Matter < 10 micron: less than or equal to 0.0030 grains/dry standard cubic foot using 3-hour Average .	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Opacity: less than or equal to 0 percent for any process emissions.	40 CFR Section 60.302(b)(2); Minn. R. 7011.1005, subp. 2
Opacity: less than or equal to 5 percent for fugitive emissions from any grain unloading station	40 CFR Section 60.302(c)(1); Minn. R. 7011.1005, subp. 2
Opacity: less than or equal to 0 percent for any fugitive emissions from grain handling operations	40 CFR Section 60.302(c)(2); Minn. R. 7011.1005, subp. 2
OPERATING REQUIREMENTS	hdr
Clean up commodities spilled on facility property, as required, to minimize emissions to a level required with RACT	Minn. R. 7011.1005, subp. 1
Maintain air pollution control equipment in proper operating condition and utilize the air pollution control systems as designed. See GP 002 for Fabric Filter requirements.	Minn. R. 7011.1005, subp. 1
Maintain total enclosure around the grain truck for the entire grain receiving by complete closure of all doors on the grain receiving building.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
PERFORMANCE TESTS	hdr
Performance Test: due before end of each calendar 24 months starting 09/25/2007 to measure PM for EU 001.	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each calendar 24 months starting 09/25/2007 to measure PM10 for EU 001.	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-39**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: EU 002 Grain Elevator Transfer**Associated Items:** GP 002 Fabric Filter Equipment

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.0050 grains/dry standard cubic foot using 1-Hour Average	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; also meets the requirements of 40 CFR 60.302(b)(1) and Minn. R. 7011.1005, subp. 2
Particulate Matter < 10 micron: less than or equal to 0.0050 grains/dry standard cubic foot using 3-hour Average	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Opacity: less than or equal to 0 percent from any process emissions	40 CFR Section 60.302(b)(2); Minn. R. 7011.1005, subp. 2
Opacity: less than or equal to 0 percent for any fugitive emissions from grain handling operations	40 CFR Section 60.302(c)(2); Minn. R. 7011.1005, subp. 2
OPERATING REQUIREMENTS	hdr
Clean up commodities spilled on facility property, as required, to minimize emissions to a level required with RACT	Minn. R. 7011.1005, subp. 1
Maintain air pollution control equipment in proper operating condition and utilize the air pollution control systems as designed. See GP 002 for Fabric Filter requirements.	Minn. R. 7011.1005, subp. 1
REPORTING REQUIREMENTS	hdr
PERFORMANCE TESTS	hdr
Performance Test: due before end of each calendar 60 months starting 04/27/2004 to measure PM for EU 002.	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each calendar 60 months starting 04/27/2004 to measure PM10 for EU 002.	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-40**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: EU 003 Bean Cleaning**Associated Items:** CE 003 Centrifugal Collector - High Efficiency

GP 002 Fabric Filter Equipment

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.0030 grains/dry standard cubic foot using 1-Hour Average .	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.0030 grains/dry standard cubic foot .	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)
OPERATING REQUIREMENTS	hdr
Fabric filters for each individual stack shall be operated at all times when the emission unit is in operation. See GP 002 for Fabric Filter requirements.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Cyclones for each individual stack shall be operated at all times whenever the emission unit vented to that stack is in operation.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Install and maintain a monitoring device in each cyclone that will continuously monitor for plugging of the cyclone. The monitoring devices will be connected to audible and visible alarms to indicate plugging or failure of the probe.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 14
The monitoring devices and alarm system shall be operated whenever the corresponding cyclone is operating.	Minn. R. 7007.0800, subps. 4 & 5
Inspect each cyclone quarterly, or as required by manufacturing specifications, all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subps. 2, 5, and 14
Inspect each cyclone quarterly, or as required by manufacturing specifications, all components that are subject to wear or plugging. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subps. 2, 5, and 14
PERFORMANCE TESTS	hdr
Performance Test: due before end of each calendar 60 months starting 04/27/2004 to measure PM10 for EU 003.	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-41**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: EU 014 Pellet Storage Bin**Associated Items:** GP 002 Fabric Filter Equipment

What to do	Why to do it
OPERATING REQUIRMENTS	hdr
Fabric filters for each individual stack shall be operated at all times when the emission unit is in operation.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Clean up commodities spilled on facility property, as required, to minimize emissions to a level required with RACT.	Minn. R. 7011.1005, subp. 1
Maintain air pollution control equipment in proper operating condition and utilize the air pollution control systems as designed. See GP 002 for Fabric Filter requirements.	Minn. R. 7011.1005, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-42**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: EU 015 Blending**Associated Items:** GP 002 Fabric Filter Equipment

What to do	Why to do it
OPERATING REQUIRMENTS	hdr
Fabric filters for each individual stack shall be operated at all times when the emission unit is in operation.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Clean up commodities spilled on facility property, as required, to minimize emissions to a level required with RACT.	Minn. R. 7011.1005, subp. 1
Maintain air pollution control equipment in proper operating condition and utilize the air pollution control systems as designed. See GP 002 for Fabric Filter requirements.	Minn. R. 7011.1005, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-43**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: EU 020 Meal Grinding**Associated Items:** GP 002 Fabric Filter Equipment

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.0030 grains/dry standard cubic foot using 1-Hour Average .	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.0030 grains/dry standard cubic foot .	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent	Minn. R. 7011.0715, subp. 1(B)
OPERATING REQUIREMENTS	hdr
Fabric filters for each individual stack shall be operated at all times when the emission unit is in operation. See GP 002 for Fabric Filter requirements	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Maintain air pollution control equipment in proper operating condition and utilize the air pollution control systems as designed. See GP 002 for Fabric Filter requirements.	Minn. R. 7011.1005, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-44**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: EU 021 Meal Bin**Associated Items:** GP 002 Fabric Filter Equipment

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.0050 grains/actual cubic foot using 1-Hour Average	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; also meets the requirements of 7011.1005, subp. 3(D)
Particulate Matter < 10 micron: less than or equal to 0.0050 grains/dry standard cubic foot using 3-hour Average	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Opacity: less than or equal to 10 percent	Minn. R. 7011.1005, subp. 3(D)
OPERATING REQUIRMENTS	hdr
Fabric filters for each individual stack shall be operated at all times when the emission unit is in operation.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Clean up commodities spilled on facility property, as required, to minimize emissions to a level required with RACT.	Minn. R. 7011.1005, subp. 1
Maintain air pollution control equipment in proper operating condition and utilize the air pollution control systems as designed. See GP 002 for Fabric Filter requirements.	Minn. R. 7011.1005, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-45**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: EU 026 Boiler #1 (with low-NOx burner)

What to do	Why to do it
EMISSION LIMITS	hdr
Nitrogen Oxides: less than or equal to 0.050 lbs/million Btu heat input when combusting natural gas, using 3-hour average.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 0.1250 lbs/million Btu heat input when combusting distillate fuel oil, using 3-hour Average.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 0.00524 lbs/million Btu heat input when combusting natural gas.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 0.00143 lbs/million Btu heat input when combusting distillate fuel oil.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.00745 lbs/million Btu heat input when combusting natural gas.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.0236 lbs/million Btu heat input when combusting distillate fuel oil.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.00745 lbs/million Btu heat input when combusting natural gas.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.0236 lbs/million Btu heat input when combusting distillate fuel oil.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Sulfur Dioxide: less than or equal to 0.0507 lbs/million Btu heat input	Title I Condition: Limit to avoid classification as major for SO ₂ under 40 CFR Section 52.21; also meets the requirements of 40 CFR Section 60.42c(d)
Opacity: less than or equal to 20 percent (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.	40 CFR Section 60.43c(c)
Front-half Particulate Matter: less than or equal to .0020 lbs/million Btu heat input when combusting natural gas.	40 CFR Section 63.6(f)(i); 40 CFR Section 63.55(a); Minn. R. 7007.3010
Front-half Particulate Matter: less than or equal to .014 lbs/million Btu heat input when combusting distillate fuel oil.	40 CFR Section 63.6(f)(i); 40 CFR Section 63.55(a); Minn. R. 7007.3010
Carbon Monoxide: less than or equal to 20 parts per million at 3% oxygen when combusting natural gas.	40 CFR Section 63.6(f)(i); 40 CFR Section 63.55(a); Minn. R. 7007.3010
Carbon Monoxide: less than or equal to 20 parts per million at 3% oxygen when combusting distillate fuel oil.	40 CFR Section 63.6(f)(i); 40 CFR Section 63.55(a); Minn. R. 7007.3010
Mercury: less than or equal to .0000030 lbs/million Btu heat input when combusting natural gas.	40 CFR Section 63.6(f)(i); 40 CFR Section 63.55(a); Minn. R. 7007.3010
Mercury: less than or equal to .0000060 lbs/million Btu heat input when combusting distillate fuel oil.	40 CFR Section 63.6(f)(i); 40 CFR Section 63.55(a); Minn. R. 7007.3010
OPERATING REQUIREMENTS	hdr
Fuel type: pipeline natural gas and low sulfur distillate fuel oil only.	Minn. R. 7005.0100, subp. 35a; Minn. R. 7007.0800, subp. 2
Fuel Sulfur Content: Maximum sulfur content 0.05%, by weight, for distillate fuel oil.	Title I Condition: Limit to avoid classification as major for SO ₂ under 40 CFR Section 52.21
Except during start-up and shutdown, operate CE 027 at all times that EU 026 is operating.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
The Permittee shall develop and maintain a written startup, shutdown, and malfunction plan (SSMP) according to all of the provisions in 49 CFR Section 63.3 (e)(3). The plan must be available for inspection and copying by the administrator upon request.	40 CFR Section 63.6(e)(3)(i), (v), (vi), (vii), and (viii)
Startup, Shutdown, and Malfunction Report (SSMR): The Permittee shall submit an immediate SSMR if the boiler had a startup, shutdown, or malfunction during the reporting period that is not consistent with the Permittee's SSMP, and the boiler exceeded any applicable emission limitation.	40 CFR Sections 63.6(e)(3)(iv) and 63.10(d)(5)(ii)

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-46**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

(SSMR continued) The Permittee shall submit: 1) an immediate report, by fax or telephone within 2 working days after starting actions inconsistent with the plan, stating actions taken for the event; and 2) a letter report within 7 working days after the end of the event unless the Permittee has made alternative arrangements with the EPA Administrator. This report shall contain: a) the name, title, and signature of a responsible official who is certifying its accuracy; b) an explanation of the circumstances of the event; c) the reasons for not following the SSMP; and d) whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred; and e) actions taken to minimize emissions in conformance with 40 CFR Section 63.6(e)(1)(1).	40 CFR Sections 63.6(e)(3)(iv) and 63.10(d)(5)(ii) (continued)
The Semi-Annual Compliance Report shall contain the following: 1) If there are no deviations from the required for work practice standards that apply, a statement that there were no deviations from the work practice standards during the reporting period. 2) If the Permittee has a deviation from the work practice standard during the reporting period; and 3) if the boiler had a startup, shutdown, or malfunction during the reporting period and the Permittee took actions consistent with the SSMP the compliance shall include the information in 40 CFR 63.10(d)(5)(i).	40 CFR Section 63.10(d)(5)(i); Minn. R. 7007.0800 subp. 6
Any changes in the information provided under 40 CFR Section 63.9 shall be provided in writing within 15 calendar days after the change.	40 CFR Section 63.9(j); Minn. R. 7007.0800 subp. 6
FUEL USAGE LIMIT (see GP 007)	hdr
PERFORMANCE TESTING	hdr
Performance Test: due before end of each calendar 60 months starting 04/26/2007 to measure NOx for EU 026 while firing natural gas.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Performance Test: due before end of each calendar 60 months starting 04/26/2007 to measure NOx for EU 026 while firing distillate fuel oil.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Performance Test: due before end of each calendar 60 months starting 04/26/2007 to measure opacity for EU 026 while firing distillate fuel oil.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Performance Test: due 180 days after Permit Issuance to measure CO while combusting natural gas.	40 CFR Section 63.6(f)(i); 40 CFR Section 63.55(a); Minn. R. 7007.3010

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-47**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: EU 027 Boiler #2 (with low-NOx burner)

What to do	Why to do it
EMISSION LIMITS	hdr
Nitrogen Oxides: less than or equal to 0.050 lbs/million Btu heat input when combusting natural gas, using 3-hour average.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 0.1250 lbs/million Btu heat input when combusting distillate fuel oil, using 3-hour Average.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 0.00524 lbs/million Btu heat input when combusting natural gas.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 0.00143 lbs/million Btu heat input when combusting distillate fuel oil.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.00745 lbs/million Btu heat input when combusting natural gas.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.0236 lbs/million Btu heat input when combusting distillate fuel oil.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.00745 lbs/million Btu heat input when combusting natural gas.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.0236 lbs/million Btu heat input when combusting distillate fuel oil.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Sulfur Dioxide: less than or equal to 0.0507 lbs/million Btu heat input	Title I Condition: Limit to avoid classification as major for SO ₂ under 40 CFR Section 52.21; also meets the requirements of 40 CFR Section 60.42c(d)
Opacity: less than or equal to 20 percent (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.	40 CFR Section 60.43c(c)
Front-half Particulate Matter: less than or equal to .0020 lbs/million Btu heat input when combusting natural gas.	40 CFR Section 63.6(f)(i); 40 CFR Section 63.55(a); Minn. R. 7007.3010
Front-half Particulate Matter: less than or equal to .014 lbs/million Btu heat input when combusting distillate fuel oil.	40 CFR Section 63.6(f)(i); 40 CFR Section 63.55(a); Minn. R. 7007.3010
Carbon Monoxide: less than or equal to 20 parts per million at 3% oxygen when combusting natural gas.	40 CFR Section 63.6(f)(i); 40 CFR Section 63.55(a); Minn. R. 7007.3010
Carbon Monoxide: less than or equal to 20 parts per million at 3% oxygen when combusting distillate fuel oil.	40 CFR Section 63.6(f)(i); 40 CFR Section 63.55(a); Minn. R. 7007.3010
Mercury: less than or equal to .0000030 lbs/million Btu heat input when combusting natural gas.	40 CFR Section 63.6(f)(i); 40 CFR Section 63.55(a); Minn. R. 7007.3010
Mercury: less than or equal to .0000060 lbs/million Btu heat input when combusting distillate fuel oil.	40 CFR Section 63.6(f)(i); 40 CFR Section 63.55(a); Minn. R. 7007.3010
OPERATING REQUIREMENTS	hdr
Fuel type: pipeline natural gas and low sulfur distillate fuel oil only.	Minn. R. 7005.0100, subp. 35a; Minn. R. 7007.0800, subp. 2
Fuel Sulfur Content: Maximum sulfur content 0.05%, by weight, for distillate fuel oil.	Title I Condition: Limit to avoid classification as major for SO ₂ under 40 CFR Section 52.21
Except during start-up and shutdown, operate CE 028 at all times that EU 027 is operating.	Title I Condition: 40 CFR Section 52.21(j)
The Permittee shall develop and maintain a written startup, shutdown, and malfunction plan (SSMP) according to all of the provisions in 49 CFR Section 63.3 (e)(3). The plan must be available for inspection and copying by the administrator upon request.	40 CFR Section 63.6(e)(3)(i), (v), (vi), (vii), and (viii)
Startup, Shutdown, and Malfunction Report (SSMR): The Permittee shall submit an immediate SSMR if the boiler had a startup, shutdown, or malfunction during the reporting period that is not consistent with the Permittee's SSMP, and the boiler exceeded any applicable emission limitation.	40 CFR Sections 63.6(e)(3)(iv) and 63.10(d)(5)(ii)

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-48**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

(SSMR continued) The Permittee shall submit: 1) an immediate report, by fax or telephone within 2 working days after starting actions inconsistent with the plan, stating actions taken for the event; and 2) a letter report within 7 working days after the end of the event unless the Permittee has made alternative arrangements with the EPA Administrator. This report shall contain: a) the name, title, and signature of a responsible official who is certifying its accuracy; b) an explanation of the circumstances of the event; c) the reasons for not following the SSMP; and d) whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred; and e) actions taken to minimize emissions in conformance with 40 CFR Section 63.6(e)(1)(1).	40 CFR Sections 63.6(e)(3)(iv) and 63.10(d)(5)(ii) (continued)
The Semi-Annual Compliance Report shall contain the following: 1) If there are no deviations from the required for work practice standards that apply, a statement that there were no deviations from the work practice standards during the reporting period. 2) If the Permittee has a deviation from the work practice standard during the reporting period; and 3) if the boiler had a startup, shutdown, or malfunction during the reporting period and the Permittee took actions consistent with the SSMP the compliance shall include the information in 40 CFR 63.10(d)(5)(i).	40 CFR Section 63.10(d)(5)(i); Minn. R. 7007.0800 subp. 6
Any changes in the information provided under 40 CFR Section 63.9 shall be provided in writing within 15 calendar days after the change.	40 CFR Section 63.9(j); Minn. R. 7007.0800 subp. 6
FUEL USAGE LIMIT (see GP 007)	hdr
PERFORMANCE TESTING	hdr
Performance Test: due before end of each calendar 60 months starting 04/26/2007 to measure NOx for EU 027 while firing natural gas.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Performance Test: due before end of each calendar 60 months starting 04/26/2007 to measure NOx for EU027 while firing distillate fuel oil.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Performance Test: due before end of each calendar 60 months starting 04/26/2007 to measure opacity for EU 027 while firing distillate fuel oil.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Performance Test: due 180 days after Permit Issuance to measure CO while combusting natural gas.	40 CFR Section 63.6(f)(i); 40 CFR Section 63.55(a); Minn. R. 7007.3010

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-49**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: EU 031 Emergency Generator #1

What to do	Why to do it
EMISSION LIMITS	hdr
Opacity: less than or equal to 20 percent	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input (0.29 lbs/million Btu per equipment design).	Minn. R. 7011.2300, subp. 1
OPERATING CONDITIONS	hdr
Fuel Type: No. 2 distillate fuel only, by design.	Minn. R. 7005.0100, subp. 35a
Operation: emergency usage, training, or testing purposes only.	Minn. R. 7007.0800, subp. 2
Alternative Operating Scenario: Other than for limited testing/training purposes, the emergency generator is only allowed to operate for providing power to the compressed air system, the cooling water pumps, and the emergency lighting during the event of a power outage.	Title I Condition: BACT limit as per 40 CFR Section 52.21(j)
RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping -- Hours of Operation: The Permittee shall maintain documentation on-site that the unit is to be used for emergency (including training and testing) purposes only that qualifies under the U.S. EPA memorandum entitled "Calculating Potential to Emit (PTE) for Emergency Generators" dated September 6, 1995, limiting operation to 500 hours per year.	Minn. R. 7007.0800, subps. 4 and 5
Fuel Supplier Certification: Obtain and maintain a fuel supplier certification for each shipment of No. 2 distillate oil, certifying that the sulfur content does not exceed 0.5% by weight.	Minn. R. 7007.0800, subps. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-50**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: EU 033 Biodiesel Process Vent / Water Absorber**Associated Items:** GP 010 Bio-diesel Production - Equipment Subject to 40 CFR pt. 63, subp. FFFF

SV 036 Biodiesel Process Vent

What to do	Why to do it
Emission Limit/Work Practice Standard: The Permittee shall use a recovery device (EU 033 - Water Absorber) to maintain the total resource effectiveness (TRE) above 5.0 for a new source.	40 CFR Section 63.2455(a); Table 1 of 40 CFR pt. 63, subp. FFFF; Minn. R. 7011.8050
<p>The Permittee shall designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in 40 CFR Section 63.115(d), except as follows:</p> <p>1) The Permittee is not required to determine the Group status or the TRE index value for any continuous process vent that is combined with Group 1 batch process vents before a control device or recovery device because the requirements of 40 CFR Section 63.2450(c)(2)(i) apply to the combined stream.</p> <p>2) When a TRE index value of 4.0 is referred to in 40 CFR Section 63.115(d), TRE index value of 8.0 for new and reconstructed affected sources apply for the purposes of 40 CFR pt. 63, subp. FFFF.</p> <p>3) When 40 CFR Section 63.115(d) refers to "emission reductions specified in 40 CFR Section 63.113(a)," the reductions specified in Table 1 in 40 CFR pt. 63, subp. FFFF apply.</p>	40 CFR Section 63.2455(b); Minn. R. 7011.8050
TRE Index Value Determination: The Permittee shall conduct a TRE determination and calculate the TRE index value according to the procedures in 40 CFR Section 63.115(d)(1) or (2) and the TRE equation in 40 CFR Section 63.115(d)(3).	40 CFR Sections 63.2455(b) and 63.115(d); Minn. R. 7011.8050
<p>TRE Index Calculation Option 1: The Permittee may use engineering assessments to determine vent stream flow rate, net heating value, TOC emission rate, and total organic HAP emission rate for the representative operating condition expected to yield the lowest TRE index value.</p> <p>i) If the TRE value calculated using such engineering assessment and the TRE equation in 40 CFR Section 63.115(d)(3) is greater than 8.0, then the Permittee is not required to perform the measurements specified in 40 CFR Section 63.115(d)(2).</p> <p>ii) If the TRE value calculated using such engineering assessment and the TRE equation in 40 CFR Section 63.115(d)(3) is less than or equal to 5.0, then the Permittee is required to perform the measurements specified in 40 CFR Section 63.115(d)(2) for group determination or consider the process vent a Group 1 vent and comply with the emission reduction specified in Table 1 of 40 CFR pt. 63, subp. FFFF.</p>	40 CFR Sections 63.2455(b) and 63.115(d)(1); Minn. R. 7011.8050
<p>continued:</p> <p>iii) Engineering assessment includes, but is not limited to, the following:</p> <p>(A) Previous test results provided the tests are representative of current operating practices at the process unit.</p> <p>(B) Bench-scale or pilot-scale test data representative of the process under representative operating conditions.</p> <p>(C) Maximum flow rate, TOC emission rate, organic HAP emission rate, or net heating value limit specified or implied within a permit limit applicable to the process vent.</p> <p>(D) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to:</p> <p>(1) Use of material balances based on process stoichiometry to estimate maximum organic HAP concentrations,</p> <p>(2) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities,</p>	CONTINUED: 40 CFR Sections 63.2455(b) and 63.115(d)(1); Minn. R. 7011.8050

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-51**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

continued: (3) Estimation of TOC or organic HAP concentrations based on saturation conditions. (4) Estimation of maximum expected net heating value based on the vent stream concentration of each organic compound or, alternatively, as if all TOC in the vent stream were the compound with the highest heating value. (E) All data, assumptions, and procedures used in the engineering assessment shall be documented.	CONTINUED: 40 CFR Sections 63.2455(b) and 63.115(d)(1); Minn. R. 7011.8050
TRE Index Calculation Option 2: Except as provided in 40 CFR Section 63.115(d)(1), vent stream flow rate, net heating value, TOC emission rate, and total organic HAP emission rate shall be measured and calculated according to the procedures below and used as input to the TRE index value calculation as described later in this permit. i) Permittee shall determine the vent stream volumetric flow rate (Qs), in standard cubic meters per minute at 20 degrees Celsius using Method 2, 2A, 2C, or 2D of 40 CFR pt 60, appendix A, as appropriate. If the vent stream tested passes through a final steam jet ejector and is not condensed, the vent stream volumetric flow shall be corrected to 2.3 percent moisture. ii) Permittee shall determine the molar composition of the vent stream, which is used to calculate net heating value, using one of the methods in 40 CFR Section 63.115(d)(2)(ii)(A) through (C).	40 CFR Sections 63.2455(b) and 63.115(d)(2); Minn. R. 7011.8050
continued: iii) The Permittee shall calculate the net heating value of the vent stream as specified in Appendix B of this permit. iv) The Permittee shall calculate the emission rate of TOC (minus methane and ethane) (ETOC) and the emission rate of total organic HAP (EHAP) in the vent stream as specified in Appendix B of this permit. v) In order to determine whether a vent stream is halogenated, the Permittee shall calculate the mass emission rate of halogen atoms contained in organic compounds using the procedures in 63.115(d)(2)(iv)(A)(1) through (4) and as specified in Appendix B of this permit.	CONTINUED: 40 CFR Sections 63.2455(b) and 63.115(d)(2); Minn. R. 7011.8050
TRE Index Calculation Equation: The Permittee shall calculate the TRE index value of the vent stream using the following procedures: i) The Permittee shall calculate the TRE index for a vent stream controlled by a flare or incinerator as specified in Appendix B of this permit. ii) For nonhalogenated vent streams, the Permittee shall calculate the TRE index value based on the use of a flare, a thermal incinerator with 0% heat recovery, and a thermal incinerator with 70% heat recovery and shall select the lowest TRE index value. The Permittee shall use the applicable coefficients in Table 2 of 40 CFR pt. 63, subp. G for nonhalogenated vent streams located within new sources. iii) For halogenated vent streams, the Permittee shall calculate the TRE index value based on the use of a thermal incinerator with 0% heat recovery, and a scrubber. The Permittee shall use the applicable coefficients Table 2 of 40 CFR pt. 63, subp. G for halogenated vent streams located within new sources	40 CFR Sections 63.2455(b) and 63.115(d)(3); Minn. R. 7011.8050
RECOVERY DEVICE	hdr
Recovery Device Requirements: The Permittee must meet the requirements of 40 CFR Section 63.982(e) and the requirements referenced therein, except as specified in 40 CFR Section 63.2450 and as follows. When 40 CFR Section 63.993 uses the phrase "the TRE index value is between the level specified in a referencing subpart and 4.0," the phrase "the TRE index value is greater than 5.0 but less than or equal to 8.0" applies for a new and reconstructed affected source, for the purposes of 40 CFR pt. 63, subp. FFFF.	40 CFR Sections 63.2455(c) and 63.982(e); Minn. R. 7011.8050
The Permittee shall meet the requirements in 40 CFR Section 63.993 and the monitoring, recordkeeping, and reporting requirements referenced therein that are applicable to the recovery device being used; the applicable monitoring requirements in 40 CFR Section 63.996 and the recordkeeping and reporting requirements referenced therein; and the applicable recordkeeping and reporting requirements of 40 CFR Section 40 CFR Sections 63.998 and 63.999. No other provisions of 40 CFR pt. 63, subp. SS apply to process vent emissions routed to a final recovery device.	40 CFR Sections 63.2455(c) and 63.982(e); Minn. R. 7011.8050

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-52**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

<p>Final recovery device equipment and operating requirements:</p> <p>1) The Permittee using a final recovery device to maintain a TRE above a level specified in a referencing subpart shall meet the requirements of 40 CFR Section 63.993(a).</p> <p>2) Recovery devices used to comply with the provisions of a referencing subpart and 40 CFR pt. 63, subp. SS shall be operated at all times when emissions are vented to them.</p>	<p>40 CFR Sections 63.2455(c), 63.993(a), and 63.982(e); Minn. R. 7011.8050</p>
<p>Recordkeeping. The Permittee shall record and maintain the following TRE index value determination information:</p> <ul style="list-style-type: none"> - where the saturated scrubbing fluid and specific gravity of the scrubbing fluid is greater than or equal to 0.02 specific gravity units, the exit specific gravity and average exit temperature of the absorbing liquid averaged over the same time period as the TRE index value determination (both measured while the vent stream is normally routed and constituted); and - all measurements and calculations performed to determine the TRE index value of the vent stream. <p>The Permittee shall submit reports as specified in 40 CFR Section 63.999(a)(2)(iii)(C).</p>	<p>40 CFR Sections 63.2455(c), 63.993(b), 63.982(e), and 63.998(c); Minn. R. 7011.8050</p>
<p>Recovery device monitoring requirements: If the TRE index value is greater than 5.0 but less than or equal to 8.0, either an organic monitoring device capable of providing a continuous record or a scrubbing liquid temperature monitoring device & a specific gravity monitoring device, each capable of providing a continuous record, shall be used.</p> <p>If the difference between the specific gravity of the saturated scrubbing fluid & specific gravity of the fresh scrubbing fluid is less than 0.02 specific gravity units, an organic monitoring device capable of providing a continuous record shall be used. Monitoring results shall be recorded as specified in 40 CFR Section 63.998(b) & (c), as applicable. General requirements for monitoring & continuous parameter monitoring systems are contained in 40 CFR Section 63.996.</p> <p>Note: If the TRE is shown to be greater than 8.0, then, in accordance with 40 CFR Section 63.993(c), the continuous monitoring requirements are not applicable.</p>	<p>40 CFR Sections 63.2455(c), 63.993(c), and 63.982(e); Minn. R. 7011.8050</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-53**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: EU 034 Meal Lump Grinder**Associated Items:** CE 016 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 009 Blending and Meal Lump Grinding

What to do	Why to do it
OPERATING REQUIRMENTS	hdr
Fabric filters for each individual stack shall be operated at all times when the emission unit is in operation.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Clean up commodities spilled on facility property, as required, to minimize emissions to a level required with RACT.	Minn. R. 7011.1005, subp. 1
Maintain air pollution control equipment in proper operating condition and utilize the air pollution control systems as designed. See GP 002 for Fabric Filter requirements.	Minn. R. 7011.1005, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-54**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: EU 037 Emergency Generator #2**Associated Items:** SV 037 Emergency Generator #2 stack

What to do	Why to do it
EMISSION LIMITS	hdr
Opacity: less than or equal to 20 percent	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input (0.29 lbs/million Btu per equipment design).	Minn. R. 7011.2300, subp. 1
OPERATING CONDITIONS	hdr
Fuel Type: No. 2 distillate fuel only, by design.	Minn. R. 7005.0100, subp. 35a
Operation: emergency usage, training, or testing purposes only.	Minn. R. 7007.0800, subp. 2
RECORDKEEPING REQUIREMENTS	hdr
Hours of Operation: The Permittee shall maintain documentation on-site that the unit is to be used for emergency (including training and testing) purposes only that qualifies under the U.S. EPA memorandum entitled "Calculating Potential to Emit (PTE) for Emergency Generators" dated September 6, 1995, limiting operation to 500 hours per year.	Minn. R. 7007.0800, subps. 4 and 5
Fuel Supplier Certification: Obtain and maintain a fuel supplier certification for each shipment of No. 2 distillate oil, certifying that the sulfur content does not exceed 0.5% by weight.	Minn. R. 7007.0800, subps. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-55**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

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

What to do	Why to do it
LIMITS	hdr
Pressure Drop: greater than or equal to 0.2 inches of water column and less than or equal to 5.8 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.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter < 10 micron: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
OPERATING REQUIREMENTS (see GP 002)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-56**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

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

What to do	Why to do it
LIMITS	hdr
Pressure Drop: greater than or equal to 0.2 inches of water column and less than or equal to 5.8 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.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter < 10 micron: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
OPERATING REQUIREMENTS (see GP 002)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-57**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

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

What to do	Why to do it
LIMITS	dr
Pressure Drop: greater than or equal to 0.2 inches of water column and less than or equal to 5.8 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.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter < 10 micron: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
OPERATING REQUIREMENTS (see GP 002)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-58**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: CE 010 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
LIMITS	hdr
Pressure Drop: greater than or equal to 0.2 inches of water column and less than or equal to 5.8 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.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter < 10 micron: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
OPERATING REQUIREMENTS (see GP 002)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-59**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: CE 011 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
LIMITS	hdr
Pressure Drop: greater than or equal to 0.2 inches of water column and less than or equal to 5.8 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.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter < 10 micron: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
OPERATING REQUIREMENTS (see GP 002)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-60**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: CE 015 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
LIMITS	hdr
Pressure Drop: greater than or equal to 0.2 inches of water column and less than or equal to 5.8 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.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter < 10 micron: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
OPERATING REQUIREMENTS (see GP 002)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-61**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: CE 016 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 034 Meal Lump Grinder

What to do	Why to do it
LIMITS	hdr
Pressure Drop: greater than or equal to 0.2 inches of water column and less than or equal to 5.8 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.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter < 10 micron: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
OPERATING REQUIREMENTS (see GP 002)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-62**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: CE 021 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
LIMITS	hdr
Pressure Drop: greater than or equal to 0.2 inches of water column and less than or equal to 5.8 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.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter < 10 micron: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
OPERATING REQUIREMENTS (see GP 002)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-63**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: CE 022 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
LIMITS	hdr
Pressure Drop: greater than or equal to 0.2 inches of water column and less than or equal to 5.8 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.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter < 10 micron: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
OPERATING REQUIREMENTS (see GP 002)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-64**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: CE 024 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
LIMITS	hdr
Pressure Drop: greater than or equal to 0.2 inches of water column and less than or equal to 5.8 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.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter < 10 micron: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
OPERATING REQUIREMENTS (see GP 002)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-65**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: CE 025 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
LIMITS	hdr
Pressure Drop: greater than or equal to 0.2 inches of water column and less than or equal to 5.8 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.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter < 10 micron: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter: less than or equal to 99.0 percent	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
OPERATING REQUIREMENTS (see GP 002)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-66**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: FS 003 Soybean Pile

What to do	Why to do it
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
Operation: During soybean piling, the free fall height between conveyance drop point and top of soybean pile shall not exceed 5 feet.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
All paved roads and areas shall be cleaned to minimize the discharge to the atmosphere of fugitive particulate emissions. Such cleaning shall be accomplished in a manner which minimizes the resuspension of particulate matter.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000
Clean up all bean/bean material spilled on roads or access areas, as soon as practicable, using methods that minimize the amount of dust suspended.	Title I Condition: 40 CFR Section 52.21(j); Minn. R. 7007.3000

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-67**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: FS 006 Biodiesel Production Valves**Associated Items:** GP 010 Bio-diesel Production - Equipment Subject to 40 CFR pt. 63, subp. FFFF

GP 013 Equipment Leaks

What to do	Why to do it
<p>Leak detection: Unless otherwise specified in 40 CFR Section 63.1021(b) or (e), or 40 CFR pt. 63, subp. FFFF, the Permittee shall monitor all valves at the intervals specified below and shall comply with all other provisions of 40 CFR Section 63.1025.</p> <p>1) Monitoring method: The valves shall be monitored to detect leaks by the method specified in 40 CFR Section 63.1023(b) and, as applicable, 40 CFR Section 63.1023(c).</p> <p>2) Instrument reading that defines a leak: The instrument reading that defines a leak is 500 parts per million or greater.</p> <p>3) Monitoring frequency: The Permittee shall monitor valves for leaks at the intervals specified in 40 CFR Section 63.1025(b)(3)(i)-(v) and shall keep the record specified 40 CFR Section 63.1025(b)(3)(vi).</p>	<p>Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(b); Minn. R. 7011.8050</p>
<p>Leak Detection, continued:</p> <p>4) Valve subgrouping: For a process unit or a group of process units to which 40 CFR pt. 63, subp. UU applies, the Permittee may choose to subdivide the valves in the applicable process unit or group of process units and apply the provisions of 40 CFR Section 63.1025(b)(3) to each subgroup. If the Permittee elects to subdivide the valves in the applicable process unit or group of process units, then the provisions of 40 CFR Section 63.1025(b)(4)(i)-(viii) apply. See Appendix B of this permit for specific formulas for calculating the overall performance of total valves (equations from 40 CFR Section 63.1025(b)).</p>	<p>CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(b); Minn. R. 7011.8050</p>
<p>Percent leaking valves calculation:</p> <p>1) Calculation basis and procedures:</p> <p>i) The Permittee shall decide no later than Initial Startup of any unit in GP 010 whether to calculate percent leaking valves on a process unit or group of process units basis. Once the Permittee has decided, all subsequent percentage calculations shall be made on the same basis and this shall be the basis used for comparison with the subgrouping criteria specified 40 CFR Section 63.1025(b)(4)(i).</p> <p>ii) The percent leaking valves for each monitoring period for each process unit or valve subgroup, as provided 40 CFR Section 63.1025(b)(4), shall be calculated as specified in Appendix B of this permit.</p>	<p>Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(c); Minn. R. 7011.8050</p>
<p>Percent leaking valves calculation, continued:</p> <p>2) Calculation for monitoring frequency: When determining monitoring frequency for each process unit or valve subgroup subject to monthly, quarterly, or semiannual monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last two monitoring periods. When determining monitoring frequency for each process unit or valve subgroup subject to annual or biennial (once every 2 years) monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods.</p>	<p>CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(c); Minn. R. 7011.8050</p>
<p>Percent leaking valves calculation, continued:</p> <p>3) Nonrepairable valves:</p> <p>i) Nonrepairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and nonrepairable and as required to comply with item #ii below. Otherwise, a number of nonrepairable valves (identified and included in the percent leaking valves calculation in a previous period) up to a maximum of 1 percent of the total number of valves in regulated material service at a process unit or affected facility may be excluded from calculation of percent leaking valves for subsequent monitoring periods.</p> <p>ii) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in regulated material service at a process unit or affected facility, the number of nonrepairable valves exceeding 1 percent of the total number of valves in regulated material service shall be included in the calculation of percent leaking valves.</p>	<p>CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(c); Minn. R. 7011.8050</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-68**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

<p>Leak repair:</p> <p>1) If a leak is determined pursuant to 40 CFR Section 63.1025(b), (e)(1), or (e)(2), then the leak shall be repaired using the procedures in 40 CFR Section 63.1024, as applicable.</p> <p>2) After a leak has been repaired, the valve shall be monitored at least once within the first 3 months after its repair. The monitoring required by 40 CFR Section 63.1025(d) is in addition to the monitoring required to satisfy the definition of repaired and first attempt at repair.</p> <p>- The monitoring shall be conducted as specified in 40 CFR Section 63.1023(b) and (c), as appropriate, to determine whether the valve has resumed leaking.</p>	<p>Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(d); Minn. R. 7011.8050</p>
<p>Leak Repair, 2) continued:</p> <p>- Periodic monitoring required by 40 CFR Section 63.1025(b) may be used to satisfy this requirement, if the timing of the monitoring period coincides with the time specified in 40 CFR Section 63.1025(d). Alternatively, other monitoring may be performed to satisfy this requirement, regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in 40 CFR Section 63.1025(d).</p> <p>- If a leak is detected by monitoring that is conducted pursuant to 40 CFR Section 63.1025(d)(2), the Permittee shall follow the provisions of 40 CFR Section 63.1025(d)(2)(iii)(A) and (B), to determine whether that valve must be counted as a leaking valve for purposes of 40 CFR Section 63.1025(c)(1)(ii).</p>	<p>CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(d); Minn. R. 7011.8050</p>
<p>Special provisions for valves:</p> <p>1) Unsafe-to-monitor valves: Any valve that is designated, as described in 40 CFR Section 63.1022(c)(1), as an unsafe-to-monitor valve is exempt from the requirements of 40 CFR Section 63.1025(b) and (d)(2) and the Permittee shall monitor the valve according to the written plan specified in 40 CFR Section 63.1022(c)(4).</p> <p>2) Difficult-to-monitor valves: Any valve that is designated, as described in 40 CFR Section 63.1022(c)(2), as a difficult-to-monitor valve is exempt from the requirements of 40 CFR Section 63.1025(b) and the Permittee shall monitor the valve according to the written plan specified in 40 CFR Section 63.1022(c)(4).</p>	<p>Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(e); Minn. R. 7011.8050</p>
<p>Special provisions for valves, continued:</p> <p>3) Fewer than 250 valves: Any equipment located at a plant site with fewer than 250 valves in regulated material service is exempt from the requirements for monthly monitoring specified 40 CFR Section 63.1025(b)(3)(i). Instead, the Permittee shall monitor each valve in regulated material service for leaks once each quarter, as provided in 40 CFR Section 63.1025(e)(1) and (2).</p>	<p>CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(e); Minn. R. 7011.8050</p>
<p>ADDITIONAL REQUIREMENTS (see GP 010 and GP 013)</p>	<p>hdr</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-69**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: FS 007 Biodiesel Production Relief Valves**Associated Items:** GP 010 Bio-diesel Production - Equipment Subject to 40 CFR pt. 63, subp. FFFF

GP 013 Equipment Leaks

What to do	Why to do it
Compliance standard: Except during pressure releases as provided for 40 CFR Section 63.1029(c), or as otherwise specified in 40 CFR Section 40 CFR Section 63.1029(d) and (e), each pressure relief device in gas and vapor service shall be operated with an instrument reading of less than 500 parts per million as measured by the method specified in 40 CFR Section 63.1023(b) and, as applicable, 40 CFR Section 63.1023(c).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1030(b); Minn. R. 7011.8050
<p>Pressure relief requirements:</p> <p>1) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million, as soon as practical, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR Section 63.1024(d).</p> <p>2) The pressure relief device shall be monitored no later than five calendar days after the pressure to confirm the condition indicated by an instrument reading of less than 500 parts per million above background, as measured by the method specified in 40 CFR Section 63.1023(b) and, as applicable, 40 CFR Section 63.1023(c).</p> <p>3) The Permittee shall record the dates and results of the monitoring required by 40 CFR Section 63.1030(c)(2) following a pressure release including the background level measured and the maximum instrument reading measured during the monitoring.</p>	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1030(c); Minn. R. 7011.8050
Pressure relief devices routed to a process or fuel gas system or equipped with a closed vent system and control device: Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage from the pressure relief device to a control device meeting the requirements of 40 CFR Section 63.1034 is exempt from the requirements of 40 CFR Section 63.1030(b) and (c).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1030(d); Minn. R. 7011.8050
Rupture disk exemption: Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of 40 CFR Section 63.1030(b) and (c) provided the Permittee installs a replacement rupture disk upstream of the pressure relief device as soon as practical after each pressure release but no later than 5 calendar days after each pressure release, except as provided in 40 CFR Section 63.1024(d).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1030(e); Minn. R. 7011.8050
ADDITIONAL REQUIREMENTS (see GP 010 and GP 013)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-70**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: FS 008 Biodiesel Production Pump Seals**Associated Items:** GP 010 Bio-diesel Production - Equipment Subject to 40 CFR pt. 63, subp. FFFF

GP 013 Equipment Leaks

What to do	Why to do it
<p>Leak detection: Unless otherwise specified in 40 CFR Sections 63.1021(b) or 63.1026(e), the Permittee shall monitor each pump to detect leaks and shall comply with all other provisions 40 CFR Section 63.1026.</p> <p>1) Monitoring method and frequency: The pumps shall be monitored monthly to detect leaks by the method specified in 40 CFR Section 63.1023(b) and, as applicable, 40 CFR Section 63.1023(c).</p> <p>2) Instrument reading that defines a leak: The instrument reading that defines a leak is specified as follows:</p> <ul style="list-style-type: none"> - 5,000 parts per million or greater for pumps handling polymerizing monomers; - 2,000 parts per million or greater for pumps in food/medical service; and - 1,000 parts per million or greater for all other pumps. <p>3) Leak repair exception: For pumps to which a 1,000 parts per million leak definition applies, repair is not required unless an instrument reading of 2,000 parts per million or greater is detected.</p>	<p>Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(b); Minn. R. 7011.8050</p>
<p>Leak Detection, continued:</p> <p>4) Visual inspection: Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. The Permittee shall document that the inspection was conducted and the date of the inspection. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the Permittee shall follow the procedure specified in either 40 CFR Section 63.1026(b)(4)(i) or (ii).</p>	<p>CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(b); Minn. R. 7011.8050</p>
<p>Percent leaking pumps calculation:</p> <p>1) The Permittee shall decide no later than Initial Startup of any unit in GP 010 whether to calculate percent leaking pumps on a process unit basis or group of process units basis. Once the Permittee has decided, all subsequent percentage calculations shall be made on the same basis.</p> <p>2) If, when calculated on a 6-month rolling average, at least the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak, the Permittee shall implement a quality improvement program for pumps that complies with the requirements of 40 CFR Section 63.1035.</p> <p>3) The number of pumps at a process unit or affected facility shall be the sum of all the pumps in regulated material service, except that pumps found leaking in a continuous process unit or affected facility within 1 month after start-up of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only.</p>	<p>Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(c); Minn. R. 7011.8050</p>
<p>Percent leaking pumps calculation, continued:</p> <p>4) Percent leaking pumps shall be determined as specified in Appendix B of this permit.</p>	<p>CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(c); Minn. R. 7011.8050</p>
<p>Leak repair: If a leak is detected pursuant to 40 CFR Section 63.1026(b), then the leak shall be repaired using the procedures in 40 CFR Section 63.1024, as applicable, unless otherwise specified in 40 CFR Section 63.1026(b)(5) for leaks identified by visual indications of liquids dripping.</p>	<p>Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(d); Minn. R. 7011.8050</p>
<p>Special provisions for pumps:</p> <p>1) Dual mechanical seal pumps: Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 40 CFR Section 63.1026(b), provided the requirements specified in 40 CFR Section 63.1026(e)(1)(i)-(viii) are met.</p> <p>(2) No external shaft: Any pump that is designed with no externally actuated shaft penetrating the pump housing is exempt from the requirements of 40 CFR Section 63.1026(b).</p>	<p>Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(e); Minn. R. 7011.8050</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-71**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Special provisions for pumps, continued: 3) Routed to a process or fuel gas system or equipped with a closed vent system: Any pump that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage from the pump to a control device meeting the requirements of 40 CFR Section 63.1034 of this part or 40 CFR Section 63.1021(b) is exempt from the requirements of 40 CFR Section 63.1026(b). 4) Unmanned plant site: Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of 40 CFR Section 63.1026(b)(4) and (e)(1)(v), and the daily requirements of 40 CFR Section 63.1026(e)(1)(vii), provided that each pump is visually inspected as often as practical and at least monthly.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(e); Minn. R. 7011.8050
Special provisions for pumps, continued: 5) 90 percent exemption: If more than 90 percent of the pumps at a process unit or affected facility meet the criteria in either 40 CFR Section 63.1026(e)(1) or (e)(2), the process unit or affected facility is exempt from the percent leaking calculation 40 CFR Section 63.1026(c). 6) Unsafe-to-monitor pumps: Any pump that is designated, as described in 40 CFR Section 63.1022(c)(1), as an unsafe-to-monitor pump is exempt from the requirements of 40 CFR Section 63.1026(b), the monitoring and inspection requirements of 40 CFR Section 63.1026(e)(1)(v)-(viii), and the Permittee shall monitor and inspect the pump according to the written plan specified in 40 CFR Section 63.1022(c)(4).	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(e); Minn. R. 7011.8050
ADDITIONAL REQUIREMENTS (see GP 010 and GP 013)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-72**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: FS 009 Biodiesel Production Agitator Seals**Associated Items:** GP 010 Bio-diesel Production - Equipment Subject to 40 CFR pt. 63, subp. FFFF

GP 013 Equipment Leaks

What to do	Why to do it
<p>Leak detection:</p> <p>1) Monitoring method: Each agitator seal shall be monitored monthly to detect leaks by the methods specified in 40 CFR Section 63.1023(b) and, as applicable, 40 CFR Section 63.1023(c), except as provided in 40 CFR Sections 63.1021(b) or 63.1028(e).</p> <p>2) Instrument reading that defines a leak: If an instrument reading equivalent of 10,000 parts per million or greater is measured, a leak is detected.</p> <p>3) Visual inspection:</p> <p>(i) Each agitator seal shall be checked by visual inspection each calendar week for indications of liquids dripping from the agitator seal. The Permittee shall document that the inspection was conducted and the date of the inspection.</p> <p>(ii) If there are indications of liquids dripping from the agitator seal, the Permittee shall follow the procedures specified in 40 CFR Section 63.1028(c)(3)(ii)(A) or (B) prior to the next required inspection.</p>	<p>Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1028(c); Minn. R. 7011.8050</p>
<p>Leak repair: If a leak is detected, then the leak shall be repaired using the procedures in 40 CFR Section 63.1024.</p>	<p>Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1028(d); Minn. R. 7011.8050</p>
<p>Special provisions for agitators:</p> <p>1) Dual mechanical seal: Each agitator equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 40 CFR Section 63.1028(c), provided the requirements specified in 40 CFR Section 63.1028(e)(1)(i)-(vi) are met.</p> <p>2) No external shaft: Any agitator that is designed with no externally actuated shaft penetrating the agitator housing is exempt from 40 CFR Section 63.1028(c).</p> <p>3) Routed to a process or fuel gas system or equipped with a closed vent system: Any agitator that is routed to a process or fuel gas system that captures and transports leakage from the agitator to a control device meeting the requirements of either 40 CFR Section 63.1034 or 40 CFR Section 63.1021(b) is exempt from the requirements of 40 CFR Section 63.1028(c).</p>	<p>Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1028(e); Minn. R. 7011.8050</p>
<p>Special provisions for agitators, continued:</p> <p>4) Unmanned plant site: Any agitator that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of 40 CFR Section 63.1028(c)(3) and (e)(1)(iv), and the daily requirements of 40 CFR Section 63.1028(e)(1)(v), provided that each agitator is visually inspected as often as practical and at least monthly.</p> <p>5) Difficult-to-monitor agitator seals: Any agitator seal that is designated, as described in 40 CFR Section 63.1022(c)(2), as a difficult-to-monitor agitator seal is exempt from the requirements of 40 CFR Section 63.1028(c) and the Permittee shall monitor the agitator seal according to the written plan specified in 40 CFR Section 63.1022(c)(4).</p> <p>6) Equipment obstructions: Any agitator seal that is obstructed by equipment or piping that prevents access to the agitator by a monitor probe is exempt from the monitoring requirements 40 CFR Section 63.1028(c).</p>	<p>CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1028(e); Minn. R. 7011.8050</p>
<p>Special provisions for agitators, continued:</p> <p>7) Unsafe-to-monitor agitator seals: Any agitator seal that is designated, as described in 40 CFR Section 63.1022(c)(1), as an unsafe-to-monitor agitator seal is exempt from the requirements of 40 CFR Section 63.1028(c) and the Permittee of the agitator seal monitors the agitator seal according to the written plan specified in 40 CFR Section 63.1022(c)(4).</p>	<p>CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1028(e); Minn. R. 7011.8050</p>
<p>ADDITIONAL REQUIREMENTS (see GP 010 and GP 013)</p>	<p>hdr</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-73**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: FS 010 Biodiesel Production Flanges/Connectors**Associated Items:** GP 010 Bio-diesel Production - Equipment Subject to 40 CFR pt. 63, subp. FFFF

GP 013 Equipment Leaks

What to do	Why to do it
Compliance schedule: The Permittee shall monitor all connectors in each process unit initially for leaks by 12 months after initial startup of any unit in GP 010. If all connectors in each process unit have been monitored for leaks prior to this date specified in the referencing subpart, no initial monitoring is required provided either no process changes have been made since the monitoring or the Permittee can determine that the results of the monitoring, with or without adjustments, reliably demonstrate compliance despite process changes. If required to monitor because of a process change, the Permittee is required to monitor only those connectors involved in the process change.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1027(a); Minn. R. 7011.8050
Leak detection: Except as allowed in 40 CFR Sections 63.1021(b) or 63.1027(e), the Permittee shall monitor all connectors in gas and vapor and light liquid service as specified in 40 CFR Section 63.1027(a) and (b)(3). 1) Monitoring method: The connectors shall be monitored to detect leaks by the method specified in 40 CFR Section 63.1023(b) and, as applicable, 40 CFR Section 63.1023(c). 2) Instrument reading that defines a leak: If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1027(b); Minn. R. 7011.8050
Leak detection, continued: 3) Monitoring periods: The Permittee shall perform monitoring, subsequent to the initial monitoring required 40 CFR Section 63.1027(a), as specified in 40 CFR Section 63.1027(b)(3)(i)-(iii), and shall comply with the requirements of 40 CFR Section 63.1027(b)(3)(iv) and (v). The required period in which monitoring must be conducted shall be determined from 40 CFR Section 63.1027(b)(3)(i)-(iii) using the monitoring results from the preceding monitoring period. The percent leaking connectors shall be calculated as specified 40 CFR Section 63.1027(c).	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1027(b); Minn. R. 7011.8050
Percent leaking connectors calculation: For use in determining the monitoring frequency, as specified in 40 CFR Section 63.1027(a) and (b)(3), the percent leaking connectors as used in 40 CFR Section 63.1027(a) and (b)(3) shall be calculated as specified in Appendix B of this permit.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1027(c); Minn. R. 7011.8050
Leak repair: If a leak is detected pursuant to 40 CFR Section 63.1027(a) and (b), then the leak shall be repaired using the procedures in 40 CFR Section 63.1024, as applicable.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1027(d); Minn. R. 7011.8050
Special provisions for connectors: 1) Unsafe-to-monitor connectors: Any connector that is designated, as described in 40 CFR Section 63.1022(c)(1), as an unsafe-to-monitor connector is exempt from the requirements of 40 CFR Section 63.1027(a) and (b) and the Permittee shall monitor according to the written plan specified in 40 CFR Section 63.1022(c)(4).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1027(e); Minn. R. 7011.8050
Special provisions for connectors, continued: 2) Inaccessible, ceramic, or ceramic-lined connectors: i) Any connector that is inaccessible or that is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of 40 CFR Section 63.1027(a) and (b), from the leak repair requirements of 40 CFR Section 63.1027(d), and from the recordkeeping and reporting requirements of 40 CFR Section 40 CFR Sections 63.1038 and 63.1039. An inaccessible connector is one that meets any of the provisions specified in 40 CFR Section 63.1027(e)(2)(i)(A)-(F), as applicable. ii) If any inaccessible, ceramic or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practical.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1027(e); Minn. R. 7011.8050
ADDITIONAL REQUIREMENTS (see GP 010 and GP 013)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-74**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: FS 011 Biodiesel Production Sampling Connection Systems**Associated Items:** GP 010 Bio-diesel Production - Equipment Subject to 40 CFR pt. 63, subp. FFFF

GP 013 Equipment Leaks

What to do	Why to do it
Sampling Connection Systems Compliance: The Permittee shall comply with 40 CFR Section 63.1032 no later than initial startup of any unit in GP 010.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1032(a); Minn. R. 7011.8050
Equipment requirement: Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed vent system, except as provided in 40 CFR Section 40 CFR Sections 63.1021(b) or 63.1032(d). Gases displaced during filling of the sample container are not required to be collected or captured.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1032(b); Minn. R. 7011.8050
Equipment design and operation: Each closed-purge, closed-loop, or closed vent system as required 40 CFR Section 63.1032(b) shall meet the following applicable requirements: 1) The system shall return the purged process fluid directly to a process line or to a fuel gas system that meets the requirements of either 40 CFR Section 63.1034 or 40 CFR Section 63.1021(b); or 2) Be designed and operated to capture and transport all the purged process fluid to a control device that meets the requirements of either 40 CFR Section 63.1034 or 40 CFR Section 63.1021(b); or 3) Collect, store, and transport the purged process fluid to a system or facility identified 40 CFR Section 63.1032(c)(4)(i), (ii), or (iii). 4) Containers that are part of a closed purge system must be covered or closed when not being filled or emptied.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR pt. 63, subp. UU; 40 CFR Section 63.1032(c); Minn. R. 7011.8050
ADDITIONAL REQUIREMENTS (see GP 010 and GP 013)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-75**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: FS 012 Biodiesel Production Open-ended Valves or Lines**Associated Items:** GP 010 Bio-diesel Production - Equipment Subject to 40 CFR pt. 63, subp. FFFF

GP 013 Equipment Leaks

What to do	Why to do it
Open-ended Valves or Line Compliance: The Permittee shall comply with 40 CFR Section 63.1033 no later than initial start-up of any unit in GP 010.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1033(a); Minn. R. 7011.8050
Equipment and operational requirements: 1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR Sections 63.1021(b) and 63.1033(c) and (d). The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance. 2) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. 3) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with 40 CFR Section 63.1033(b)(1) at all other times.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1033(b); Minn. R. 7011.8050
Emergency shutdown exemption: Open-ended valves or lines in an emergency shutdown system that are designed to open automatically in the event of a process upset are exempt from the requirements of 40 CFR Section 63.1033(b).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1033(c); Minn. R. 7011.8050
ADDITIONAL REQUIREMENTS (see GP 010 and GP 013)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-76**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: FS 013 Biodiesel Production Pumps**Associated Items:** GP 010 Bio-diesel Production - Equipment Subject to 40 CFR pt. 63, subp. FFFF

GP 013 Equipment Leaks

What to do	Why to do it
<p>Criteria: If, on a 6-month rolling average, at least the greater of either 10 percent of the pumps in a process unit or affected facility (or plant site) or three pumps in a process unit or affected facility (or plant site) leak, the Permittee shall comply with the following requirements:</p> <p>1) Pumps that are in food and medical service or in polymerizing monomer service shall comply with all requirements except for those specified 40 CFR Section 63.1035(d)(8).</p> <p>2) Pumps that are not in food and medical or polymerizing monomer service shall comply with all of the requirements 40 CFR Section 63.1035.</p>	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1035(a); Minn. R. 7011.8050
<p>Exiting the QIP: The Permittee shall comply with the requirements 40 CFR Section 63.1035 until the number of leaking pumps is less than the greater of either 10 percent of the pumps or three pumps, calculated as a 6-month rolling average, in the process unit or affected facility (or plant site). Once the performance level is achieved, the Permittee shall comply with the requirements in 40 CFR Section 63.1026.</p>	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1035(b); Minn. R. 7011.8050
<p>Resumption of QIP: If, in a subsequent monitoring period, the process unit or affected facility (or plant site) has greater than either 10 percent of the pumps leaking or three pumps leaking (calculated as a 6-month rolling average), the Permittee shall resume the quality improvement program starting at performance trials.</p>	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1035(c); Minn. R. 7011.8050
<p>QIP requirements: The quality improvement program shall meet the requirements specified in 40 CFR Section 63.1035(d)(1)-(8) as detailed in Appendix B of this permit.</p>	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1035(d); Minn. R. 7011.8050
<p>QIP recordkeeping: In addition to the records required by 40 CFR Section 63.1035(d)(2), the Permittee shall maintain records specified below for the period of the quality improvement program for the process unit or affected facility.</p> <p>1) When using a pump quality improvement program as specified in 40 CFR Section 63.1035, record the following information:</p> <p>i) The rolling average percent leaking pumps.</p> <p>ii) Documentation of all inspections conducted under the requirements of 40 CFR Section 63.1035(d)(4), and any recommendations for design or specification changes to reduce leak frequency.</p> <p>iii) The beginning and ending dates while meeting the requirements of 40 CFR Section 63.1035(d).</p> <p>2) If a leak is not repaired within 15 calendar days after discovery of the leak, the reason for the delay and the expected date of successful repair.</p>	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1035(e); Minn. R. 7011.8050
<p>QIP recordkeeping, continued:</p> <p>3) Records of all analyses required in 40 CFR Section 63.1035(d). The records will include the following information:</p> <p>i) A list identifying areas associated with poorer than average performance and the associated service characteristics of the stream, the operating conditions and maintenance practices.</p> <p>ii) The reasons for rejecting specific candidate superior emission performing pump technology from performance trials.</p> <p>iii) The list of candidate superior emission performing valve or pump technologies, and documentation of the performance trial program items required under 40 CFR Section 63.1035(d)(6)(iii).</p> <p>iv) The beginning date and duration of performance trials of each candidate superior emission performing technology.</p>	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1035(e); Minn. R. 7011.8050
<p>QIP recordkeeping, continued:</p> <p>4) All records documenting the quality assurance program for pumps as specified 40 CFR Section 63.1035(d)(7), including records indicating that all pumps replaced or modified during the period of the quality improvement program are in compliance with the quality assurance.</p> <p>5) Records documenting compliance with the 20 percent or greater annual replacement rate for pumps as specified 40 CFR Section 63.1035(d)(8).</p> <p>6) Information and data to show the corporation has fewer than 100 employees, including employees providing professional and technical contracted services.</p>	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1035(e); Minn. R. 7011.8050

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-77**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

<p>Pump QIP Records: For a pump QIP program, the Permittee shall maintain the following records specified:</p> <p>i) Individual pump records as specified in 40 CFR Section 63.1035(d)(2).</p> <p>ii) Trial evaluation program documentation as specified in 40 CFR Section 63.1035(d)(6)(iii).</p> <p>iii) Engineering evaluation documenting the basis for judgment that superior emission performance technology is not applicable as specified in 40 CFR Section 63.1035(d)(6)(vi).</p> <p>iv) Quality assurance program documentation as specified in 40 CFR Section 63.1035(d)(7).</p> <p>v) QIP records as specified in 40 CFR Section 63.1035(e).</p>	<p>Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(7); Minn. R. 7011.8050</p>
ADDITIONAL REQUIREMENTS (see GP 010 and GP 013)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-78**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Subject Item: FS 014 Biodiesel Production Heat Exchangers**Associated Items:** GP 010 Bio-diesel Production - Equipment Subject to 40 CFR pt. 63, subp. FFFF

GP 013 Equipment Leaks

What to do	Why to do it
<p>The Permittee must meet each requirement in Table 10 to 40 CFR pt. 63, subp. FFFF that applies to heat exchanger systems except as specified as follows:</p> <p>1) The phrase "a chemical manufacturing process unit meeting the conditions of 40 CFR Section 63.100 (b)(1) through (b)(3) of this section" in 40 CFR Section 63.104(a) means "an MCPU meeting the conditions of 40 CFR Section 63.2435" for the purposes of 40 CFR pt. 63, subp. FFFF.</p> <p>2) The reference to 40 CFR Section 63.100(c) in 40 CFR Section 63.104(a) does not apply for the purposes of 40 CFR pt. 63, subp. FFFF.</p>	40 CFR Section 63.2490(a); Minn. R. 7011.8050
<p>Heat exchange system exemption:</p> <p>Unless one or more of the conditions specified in below (1 through 6) are met, the Permittee shall monitor FS 014 according to the provisions in either 40 CFR Section 63.104(b) or (c). Whenever a leak is detected, the Permittee shall comply with the requirements 40 CFR Section 63.104(d).</p> <p>1) The heat exchange system is operated with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.</p> <p>2) There is an intervening cooling fluid, containing less than 5 percent by weight of total hazardous air pollutants listed in table 4 of 40 CFR pt. 63, subp. F, between the process and the cooling water. This intervening fluid serves to isolate the cooling water from the process fluid and the intervening fluid is not sent through a cooling tower or discharged. For purposes of 40 CFR Section 63.104, discharge does not include emptying for maintenance purposes.</p>	Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(a); Minn. R. 7011.8050
<p>Heat exchange system exemption, continued:</p> <p>3) The once-through heat exchange system is subject to a National Pollution Discharge Elimination System (NPDES) permit with an allowable discharge limit of 1 part per million or less above influent concentration or 10 percent or less above influent concentration, whichever is greater.</p> <p>4) The once-through heat exchange system is subject to an NPDES permit that:</p> <ul style="list-style-type: none"> i) Requires monitoring of a parameter(s) or condition(s) to detect a leak of process fluids into cooling water; ii) Specifies or includes the normal range of the parameter or condition; iii) Requires monitoring for the parameters selected as leak indicators no less frequently than monthly for the first six months and quarterly thereafter; and iv) Requires the Permittee to report and correct leaks to the cooling water when the parameter or condition exceeds the normal range. 	CONTINUED: Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(a); Minn. R. 7011.8050
<p>Heat exchange system exemption, continued:</p> <p>5) The recirculating heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutants listed in table 4 of 40 CFR pt. 63, subp. F.</p> <p>6) The once-through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutants listed in table 9 of 40 CFR pt. 63, subp. G.</p>	CONTINUED: Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(a); Minn. R. 7011.8050
<p>Heat Exchanger Monitoring: The Permittee shall monitor the cooling water for the presence of one or more organic hazardous air pollutants or other representative substances whose presence in cooling water indicates a leak by complying with items (1)-(6) below. The cooling water shall be monitored for methanol, which will indicate the presence of a leak in the heat exchange system.</p> <p>1) The cooling water shall be monitored monthly for the first 6 months and quarterly thereafter to detect leaks.</p> <p>2) For recirculating heat exchange systems (cooling tower systems), the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in table 4 of 40 CFR Section 63, pt. F.</p>	Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(b); Minn. R. 7011.8050

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-79**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

<p>Heat Exchanger Monitoring, continued:</p> <p>3) The concentration of the monitored substance(s) in the cooling water shall be determined using any EPA-approved method listed in part 136 of this chapter as long as the method is sensitive to concentrations as low as 10 parts per million and the same method is used for both entrance and exit samples. Alternative methods may be used upon approval by the Administrator.</p> <p>4) The samples shall be collected either at the entrance and exit of each heat exchange system or at locations where the cooling water enters and exits each heat exchanger or any combination of heat exchangers.</p> <p>i) For samples taken at the entrance and exit of recirculating heat exchange systems, the entrance is the point at which the cooling water leaves the cooling tower prior to being returned to the process equipment and the exit is the point at which the cooling water is introduced to the cooling tower after being used to cool the process fluid.</p>	<p>CONTINUED: Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(b); Minn. R. 7011.8050</p>
<p>Heat Exchanger Monitoring, continued:</p> <p>ii) For samples taken at the entrance and exit of each heat exchanger or any combination of heat exchangers in chemical manufacturing process units, the entrance is the point at which the cooling water enters the individual heat exchanger or group of heat exchangers and the exit is the point at which the cooling water exits the heat exchanger or group of heat exchangers.</p> <p>5) A minimum of three sets of samples shall be taken at each entrance and exit as defined 40 CFR Section 63.104(b)(4). The average entrance and exit concentrations shall then be calculated. The concentration shall be corrected for the addition of any makeup water or for any evaporative losses, as applicable.</p>	<p>CONTINUED: Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(b); Minn. R. 7011.8050</p>
<p>Heat Exchanger Monitoring, continued:</p> <p>6) A leak is detected if the exit mean concentration is found to be greater than the entrance mean using a one-sided statistical procedure at the 0.05 level of significance and the amount by which it is greater is at least 1 part per million or 10 percent of the entrance mean, whichever is greater.</p>	<p>CONTINUED: Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(b); Minn. R. 7011.8050</p>
<p>Heat Exchanger Leak Detection and Repair:</p> <p>If a leak is detected according to the criteria of 40 CFR Section 63.104(b) or (c), the Permittee shall comply with the following requirements, except as provided 40 CFR Section 63.104(e).</p> <p>1) The leak shall be repaired as soon as practical but not later than 45 calendar days after the Permittee receives results of monitoring tests indicating a leak. The leak shall be repaired unless the Permittee demonstrates that the results are due to a condition other than a leak.</p> <p>2) Once the leak has been repaired, the Permittee shall confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later.</p>	<p>Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(d); Minn. R. 7011.8050</p>
<p>Heat Exchanger Delay of Leak Repair: Delay of repair of heat exchange systems for which leaks have been detected is allowed if the equipment is isolated from the process. Delay of repair is also allowed if repair is technically infeasible without a shutdown and any one of the following conditions is met. All such time periods shall be determined from the date when the Permittee determines that delay of repair is necessary.</p> <p>1) If a shutdown is expected within the next 2 months, a special shutdown before that planned shutdown is not required.</p> <p>2) If a shutdown is not expected within the next 2 months, the Permittee may delay repair as provided below). Documentation of a decision to delay repair shall state the reasons repair was delayed and shall specify a schedule for completing the repair as soon as practical.</p>	<p>Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(e); Minn. R. 7011.8050</p>
<p>Heat Exchanger Delay of Leak Repair, continued:</p> <p>i) If a shutdown for repair would cause greater emissions than the potential emissions from delaying repair, the Permittee may delay repair until the next shutdown of the process equipment associated with the leaking heat exchanger. The Permittee shall document the basis for the determination that a shutdown for repair would cause greater emissions than the emissions likely to result from delaying repair as specified in 40 CFR Section 63.104(e)(2)(i)(A) and (B).</p> <p>ii) If repair is delayed for reasons other than those specified in item (2)(i) above, the Permittee may delay repair up to a maximum of 120 calendar days. The Permittee shall demonstrate that the necessary parts or personnel were not available.</p>	<p>CONTINUED: Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(e); Minn. R. 7011.8050</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-80**

12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

Heat Exchanger Recordkeeping: The Permittee shall retain the following records: i) Monitoring data required by 40 CFR Section 63.104 indicating a leak and the date when the leak was detected, and if demonstrated not to be a leak, the basis for that determination; ii) Records of any leaks detected by procedures subject to 40 CFR Section 63.103(c)(2) and the date the leak was discovered; iii) The dates of efforts to repair leaks; and iv) The method or procedure used to confirm repair of a leak and the date repair was confirmed.	Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a), 63.104(f)(1), and 63.103(c)(1); Minn. R. 7011.8050
Record Format and Retention: The Permittee shall retain records in such a manner that they can be readily accessed. The most recent 6 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request. The remaining four and one-half years of records may be retained offsite. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.	Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a), 63.104(f), and 63.103(c)(1); Minn. R. 7011.8050
Reporting: If the Permittee invokes the delay of repair provisions for a heat exchange system, the following information shall be submitted in the next Semiannual Compliance Report listed for GP 010. If the leak remains unrepaired, the information shall also be submitted in each subsequent report, until repair of the leak is reported. i) The Permittee shall report the presence of the leak and the date that the leak was detected. ii) The Permittee shall report whether or not the leak has been repaired. iii) The Permittee shall report the reason(s) for delay of repair. If delay of repair is invoked due to the reasons described 40 CFR Section 63.104(e)(2), documentation of emissions estimates must also be submitted. iv) If the leak remains unrepaired, the Permittee shall report the expected date of repair. v) If the leak is repaired, the Permittee shall report the date the leak was successfully repaired.	Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(f)(2); Minn. R. 7011.8050
ADDITIONAL REQUIREMENTS (see GP 010 and GP 013)	hdr

TABLE B: SUBMITTALS**B-1** 12/10/08

Facility Name: Minnesota Soybean Processors - Brewster
Permit Number: 10500053 - 006

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.

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

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.

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

Facility Name: Minnesota Soybean Processors - Brewster
Permit Number: 10500053 - 006

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility

TABLE B: RECURRENT SUBMITTALS**B-3** 12/10/08

Facility Name: Minnesota Soybean Processors - Brewster

Permit Number: 10500053 - 006

What to send	When to send	Portion of Facility Affected
Fuel Supplier Certification	due 30 days after end of each half-year starting 04/07/2004. Keep records and submit semi-annual reports. Each Half-year report shall be postmarked by the 30th day following the end of the reporting period. The report shall include both 1) the calendar dates covered in the reporting period, 2) a copy of all certifications of fuel deliveries for fuel oil burned during the reporting period, and 3) a statement certifying that the records of fuel supplier certifications submitted represent all of the fuel oil combusted during the reporting period, 4) a copy of any sulfur fuel analysis results from the reporting period.	GP007
Semiannual Compliance Report	due before end of each calendar half-year following Initial Startup of any unit in GP 010. The Semiannual Compliance Report shall contain the information specified in Table A of this permit under GP 010. The first report due February 28 of each calendar year covers January 1 through June 30. The second report due August 31 of each calendar year covers July 1 through December 31.	GP010
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
Compliance Certification	due before end of each calendar year following Notification of compliance status ("year" is any 12 calendar months, no necessarily Jan-ec). This report shall contain the information listed in Table A of this permit for GP 001. Each annual compliance certification is due 12 calendar months after the previous annual compliance certification. The annual compliance certification provides the compliance status for each operating month during the 12 calendar month period ending 60 days prior to the date on which the report is due.	GP001

APPENDIX A
40 CFR pt. 63, subp. GGGG Equations
Facility Name: Minnesota Soybean Processors - Brewster
Permit Number: 10500053-006

Equation 1A:

40 CFR § 63.2840

Compliance Ratio: The compliance ratio for total solvent loss is calculated by using the following equation:

$$\text{Compliance Ratio} = \frac{f * \text{Actual Solvent Loss}}{0.64 * \sum_{i=1}^n (\text{Oilseed})_i * (SLF)_i}$$

Equation 1A

Where:

f = The weighted average volume fraction of HAP in solvent received during the previous 12 operating months, as determined in accordance with 40 CFR § 63.2854, dimensionless.

0.64 = The average volume fraction of HAP in solvent in the baseline performance data, dimensionless.

Actual Solvent Loss = Gallons of actual solvent loss during previous 12 operating months, as determined in accordance with 40 CFR § 63.2853.

Oilseed = Tons of each oilseed type “i” processed during the previous 12 operating months, as shown in 40 CFR § 63.2855.

SLF = The corresponding solvent loss factor (gal/ton) for oilseed “i” listed in Table 1 of 40 CFR § 63.2840 (0.3 rapeseed (canola) for new sources).

Equation 2A:

40 CFR § 63.2853

Monthly Actual Solvent Loss -- By the end of each calendar month following an operating month, calculate the actual extraction solvent loss during the previous operating month. The monthly actual extraction solvent loss is to be determined as follows:

$$\text{Monthly Actual Solvent (gal)} = \sum_i^n (SOLV_B - SOLV_E - SOLV_R - SOLV_A)_i$$

Equation 2A

Where:

SOLV_B = Gallons of solvent in the inventory at the beginning of normal operating period “i” as determined in accordance with 40 CFR § 63.2853(a)(3).

SOLV_E = Gallons of solvent in the inventory at the end of normal operating period “i” as determined in accordance with 40 CFR § 63.2853(a)(3).

SOLV_R = Gallons of solvent received between the beginning and ending inventory dates of normal operating period “i” as determined in accordance with 40 CFR § 63.2853(a)(4). This includes

APPENDIX A
40 CFR pt. 63, subp. GGGG Equations
Facility Name: Minnesota Soybean Processors - Brewster
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purchased hexane and hexane recovered from imported oil that is added to the extraction plant inventory.

$SOLV_A$ = Gallons of solvent added or removed from the extraction solvent inventory during normal operating period “i” as determined in accordance with 40 CFR § 63.2853(a)(5).

n = Number of normal operating periods in a calendar month.

Equation 3A:

40 CFR § 63.2854

Monthly Weighted Average HAP Content: By the end of each calendar month following an operating month, calculate weighted average HAP content (volume fraction). The monthly weighted average HAP content is to be determined using the following equation:

$$\frac{\text{Monthly Average HAP content}}{\text{Extraction Solvent (volume fraction)}} = \frac{\sum_{i=1}^n (\text{Received}_i * \text{Content}_i)}{\text{Total Received}}$$

Equation 3A

Where:

Received_i = Gallons of extraction solvent received in delivery “i” as determined in accordance with 40 CFR § 63.2853(a)(4).

Content_i = The volume fraction of HAP in extraction solvent delivery “i” as determined in accordance with 40 CFR § 63.2854(b)(1).

Total Received = Total gallons of extraction solvent received since the end of the previous operating month.

n = Number of extraction solvent deliveries since the end of the previous operating month

Equation 4A:

40 CFR § 63.2854

12-month Weighted Average of HAP Content of Solvent Received:

$$\frac{\text{12 - month Weighted Average HAP}}{\text{Content in Solvent Received}} = \frac{\sum_{i=1}^{12} (\text{Received}_i * \text{Content}_i)}{\text{Total Received}}$$

Equation 4A

Where:

APPENDIX A
40 CFR pt. 63, subp. GGGG Equations
Facility Name: Minnesota Soybean Processors - Brewster
Permit Number: 10500053-006

Received_i = Gallons of extraction solvent received in operating month “i” as determined in accordance with 40 CFR § 63.2853(a)(4).

Content_i = Average volume fraction of HAP in extraction solvent received in operating month “i” as determined in accordance with 40 CFR § 63.2854(b)(1).

Total Received = Total gallons of extraction solvent received during the previous 12 operating months.

Equation 5A:

40 CFR § 63.2855

Oilseed Quantity Processed: By the end of each calendar month following an operating month, calculate the monthly quantity of each oilseed processed by using the following equation:

$$\text{Monthly Quantity of Canola Processed (tons)} = \sum_i^n (SEED_B - SEED_E + SEED_R \pm SEED_A)_i$$

Equation 5A

Where:

SEED_B = Tons of canola in the inventory at the beginning of normal operating period “i” as determined in accordance with 40 CFR § 63.2855(a)(3).

SEED_E = Tons of canola in the inventory at the end of normal operating period “i” as determined in accordance with 40 CFR § 63.2855(a)(3).

SEED_R = Tons of canola received during normal operating period “i” as determined in accordance with 40 CFR § 63.2855(a)(4).

SEED_A = Tons of canola added or removed from the oilseed inventory during normal operating period “i” as determined in accordance with 40 CFR § 63.2855(a)(5).

n = Number of normal operating periods in the calendar month during which canola was processed.

APPENDIX B
40 CFR pt. 63, subp. FFFF Equations
Facility Name: Minnesota Soybean Processors - Brewster
Permit Number: 10500053-006

Equation 1B:

40 CFR § 63.115(d)(2)(iii)

The net heating value of the vent stream shall be calculated using the following equation:

$$H_T = K_1 \left(\sum_{j=1}^n C_j H_j \right) (1 - B_{ws})$$

Equation 6B

Where:

H_T = Net heating value of the sample, megaJoule per standard cubic meter, where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 millimeters of mercury, but the standard temperature for determining the volume corresponding to one mole is 20 °C, as in the definition of Q_s (vent stream flow rate).

K_1 = Constant, 1.740×10^{-7} (parts per million)⁻¹ (gram-mole per standard cubic meter) (megaJoule per kilocalorie), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.

B_{ws} = Water vapor content of the vent stream, proportion by volume; except that if the vent stream passes through a final steam jet and is not condensed, it shall be assumed that $B_{ws} = 0.023$ in order to correct to 2.3 percent moisture.

C_j = Concentration on a dry basis of compound j in parts per million, as measured for all organic compounds by Method 18 of 40 CFR part 60, appendix A and measured for hydrogen and carbon monoxide by American Society for Testing and Materials D1946–77 as indicated in 40 CFR § 63.115(d)(2)(ii).

H_j = Net heat of combustion of compound j, kilocalorie per gram-mole, based on combustion at 25 °C and 760 millimeters mercury. The heats of combustion of vent stream components shall be determined using American Society for Testing and Materials D2382–76 if published values are not available or cannot be calculated

APPENDIX B
40 CFR pt. 63, subp. FFFF Equations
Facility Name: Minnesota Soybean Processors - Brewster
Permit Number: 10500053-006

Equation 2B:

40 CFR § 63.115(d)(2)(iv)

The emission rate of TOC (minus methane and ethane) (ETOC) and the emission rate of total organic HAP (EHAP) in the vent stream shall both be calculated using the following equation:

$$E = K_2 \left[\sum_{j=1}^n C_j M_j \right] Q_s$$

Equation 7B

Where:

E = Emission rate of TOC (minus methane and ethane) or emission rate of total organic HAP in the sample, kilograms per hour.

K₂ = Constant, 2.494×10⁻⁶ (parts per million)⁻¹ (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20°C.

C_j = Concentration on a dry basis of organic compound j in parts per million as measured by Method 18 of 40 CFR part 60, appendix A as indicated in 40 CFR § 63.115(d)(2)(ii). If the TOC emission rate is being calculated, C_j includes all organic compounds measured minus methane and ethane; if the total organic HAP emission rate is being calculated, only organic HAP compounds listed in table 2 in 40 CFR pt. 63, subp. F of this part are included.

M_j = Molecular weight of organic compound j, gram/gram-mole.

Q_s = Vent stream flow rate, dry standard cubic meter per minute, at a temperature of 20°C.

Equation 3B:

40 CFR § 63.115(d)(2)(v)(B)

The following equation shall be used to calculate the mass emission rate of halogen atoms:

$$E = K_2 Q \left[\sum_{j=1}^n \sum_{i=1}^m C_j * L_{ji} * M_{ji} \right]$$

Equation 8B

Where:

E = mass of halogen atoms, dry basis, kilogram per hour.

K₂ = Constant, 2.494×10⁻⁶ (parts per million)⁻¹ (kilogram-mole per standard cubic meter) (minute/hour), where standard temperature is 20°C.

APPENDIX B
40 CFR pt. 63, subp. FFFF Equations
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C_j = Concentration of halogenated compound j in the gas stream, dry basis, parts per million by volume.

M_{ji} = Molecular weight of halogen atom i in compound j of the gas stream, kilogram per kilogram-mole.

L_{ji} = Number of atoms of halogen i in compound j of the gas stream.

Q = Flow rate of gas stream, dry standard cubic meters per minute, determined according to 40 CFR § 63.115(d)(1) or (d)(2)(i).

j = Halogenated compound j in the gas stream.

i = Halogen atom i in compound j of the gas stream.

n = Number of halogenated compounds j in the gas stream.

m = Number of different halogens i in each compound j of the gas stream.

Equation 4B:

40 CFR § 63.115(d)(3)

The equation for calculating the TRE index for a vent stream controlled by a flare or incinerator is as follows:

$$TRE = \frac{1}{E_{HAP}} [a + b(Q_s) + c(H_T) + d(E_{TOC})]$$

Equation 9B

Where:

TRE = TRE index value.

E_{HAP} = Hourly emission rate of total organic HAP, kilograms per hour, as calculated in 40 CFR § 63.115(d)(1) or (2)(iv).

Q_s = Vent stream flow rate, standard cubic meters per minute, at a standard temperature of 20 °C, as calculated in 40 CFR § 63.115(d)(1) or (2)(i).

H_T = Vent stream net heating value, megaJoules per standard cubic meter, as calculated in 40 CFR § 63.115(d)(1) or (2)(iii).

E_{TOC} = Emission rate of TOC (minus methane and ethane), kilograms per hour, as calculated in 40 CFR § 63.115(d)(1) or (2)(iv).

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a,b,c,d = Coefficients presented in table 1 of 40 CFR pt. 63, subp. G, selected in accordance with 40 CFR § 63.115(d)(3)(ii) and (iii).

Equation 5B:

40 CFR § 63.1025(b)

The overall performance of total valves in the applicable process unit or group of process units shall be calculated as a weighted average of the percent leaking valves by using the following equation:

$$\%V_{LO} = \frac{\sum_{i=1}^n (\%V_{Li} \times V_i)}{\sum_{i=1}^n V_i}$$

Equation 10B

Where:

$\%V_{LO}$ = Overall performance of total valves in the applicable process unit or group of process units

$\%V_{Li}$ = Percent leaking valves in subgroup i, most recent value calculated according to the procedures in 40 CFR § 63.1025(c)(1)(ii) and (c)(2).

V_i = Number of valves in subgroup i.

n = Number of subgroups.

Equation 6B:

40 CFR § 63.1025(c)

The percent leaking valves for each monitoring period for each process unit or valve subgroup shall be calculated by using the following equation:

$$\%V_L = (V_L / V_T) \times 100$$

Equation 6B

Where:

$\%V_L$ = Percent leaking valves.

V_L = Number of valves found leaking, excluding nonrepairable valves, as provided 40 CFR § 63.1025(c)(3), and including those valves found leaking pursuant to 40 CFR § 63.1025(d)(2)(iii)(A) and (B).

V_T = The sum of the total number of valves monitored.

Equation 7B:

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40 CFR § 63.1026(c)

The percent leaking pumps shall be calculated by using the following equation:

$$\%P_L = ((P_L - P_S)/(P_T - P_S)) \times 100$$

Equation 7B

Where:

$\%P_L$ = Percent leaking pumps

P_L = Number of pumps found leaking as determined through monthly monitoring as required 40 CFR § 63.1026(b)(1). Do not include results from inspection of unsafe-to-monitor pumps pursuant to 40 CFR § 63.1026(e)(6).

P_S = Number of pumps leaking within 1 month of start-up during the current monitoring period.

P_T = Total pumps in regulated material service, including those meeting the criteria in 40 CFR § 63.1026(e)(1)-(3) and (6).

Equation 8B:

40 CFR § 63.1027(c)

The percent leaking connectors as used in 40 CFR § 63.1027(a) and (b)(3) shall be calculated by using the following equation:

$$\%C_L = C_L/C_t \times 100$$

Equation 8B

Where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in 40 CFR § 63.1027(a) and (b)(3)(i)-(iii).

C_L = Number of connectors measured at 500 parts per million or greater, by the method specified in 40 CFR § 63.1023(b).

C_t = Total number of monitored connectors in the process unit or affected facility.

Equation 9B:

40 CFR § 63.987(b)

The percent leaking connectors as used in 40 CFR § 63.1027(a) and (b)(3) shall be calculated by using the following equation:

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$$H_T = K_1 \sum_{j=1}^n D_j H_j$$

Equation 9B

Where:

H_T = Net heating value of the sample, megajoules per standard cubic meter; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 millimeters of mercury (30 inches of mercury), but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$K_1 = 1.740 \times 10^{-7}$ (parts per million by volume)⁻¹ (gram-mole per standard cubic meter) (megajoules per kilocalories), where the standard temperature for gram mole per standard cubic meter is 20 °C;

n = number of sample components;

D_j = Concentration of sample component j , in parts per million by volume on a wet basis, as measured for organics by Method 18 of 40 CFR part 60, appendix A, or by American Society for Testing and Materials (ASTM) D6420–99 (available for purchase from at least one of the following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106) under the conditions specified in 40 CFR § 63.997(e)(2)(iii)(D)(1)-(3). Hydrogen and carbon monoxide are measured by ASTM D1946–90; and

H_j = Net heat of combustion of sample component j , kilocalories per gram mole at 25 °C and 760 millimeters of mercury (30 inches of mercury).

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Quality Improvement Program (QIP) Requirements: The quality improvement program shall meet the requirements detailed in this Appendix C.

(1) The Permittee shall comply with the requirements in 40 CFR § 63.1026.

(2) Data collection: The Permittee shall collect the data specified below (items (i) through (v)) and maintain records for each pump in each process unit or affected facility (or plant site) subject to the quality improvement program. The data may be collected and the records may be maintained on a process unit, affected facility, or plant site basis.

(i) Pump type (e.g., piston, horizontal or vertical centrifugal, gear, bellows); pump manufacturer; seal type and manufacturer; pump design (e.g., external shaft, flanged body); materials of construction; if applicable, barrier fluid or packing material; and year installed.

(ii) Service characteristics of the stream such as discharge pressure, temperature, flow rate, corrosivity, and annual operating hours.

(iii) The maximum instrument readings observed in each monitoring observation before repair, response factor for the stream if appropriate, instrument model number, and date of the observation.

(iv) If a leak is detected, the repair methods used and the instrument readings after repair.

(v) If the data will be analyzed as part of a larger analysis program involving data from other plants or other types of process units or affected facilities, a description of any maintenance or quality assurance programs used in the process unit or affected facility that are intended to improve emission performance.

(3) The Permittee shall continue to collect data on the pumps as long as the process unit or affected facility (or plant site) remains in the quality improvement program.

(4) Pump or pump seal inspection: The Permittee shall inspect all pumps or pump seals that exhibited frequent seal failures and were removed from the process unit or affected facility due to leaks. The inspection shall determine the probable cause of the pump seal failure or of the pump leak and shall include recommendations, as appropriate, for design changes or changes in specifications to reduce leak potential.

(5) Data analysis:

(i) The Permittee shall analyze the data collected to comply with the requirements of 40 CFR § 63.1035(d)(2) (Data Collection, as detailed earlier in this Appendix C) to determine the services, operating or maintenance practices, and pump or pump seal designs or technologies that have poorer than average emission performance and those that have better than average emission performance. The analysis shall determine if specific trouble areas can be identified on the basis of service, operating conditions or maintenance practices, equipment design, or other process-specific factors.

(ii) The analysis shall also be used to determine if there are superior performing pump or pump seal technologies that are applicable to the service(s), operating conditions, or pump or pump seal designs

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associated with poorer than average emission performance. A superior performing pump or pump seal technology is one with a leak frequency of less than 10 percent for specific applications in the process unit, affected facility, or plant site. A candidate superior performing pump or pump seal technology is one demonstrated or reported in the available literature or through a group study as having low emission performance and as being capable of achieving less than 10 percent leaking pumps in the process unit or affected facility (or plant site).

(iii) The analysis shall include consideration of the following information:

(A) The data obtained from the inspections of pumps and pump seals removed from the process unit or affected facility due to leaks;

(B) Information from the available literature and from the experience of other plant sites that will identify pump designs or technologies and operating conditions associated with low emission performance for specific services; and

(C) Information on limitations on the service conditions for the pump seal technology operating conditions as well as information on maintenance procedures to ensure continued low emission performance.

(iv) The data analysis may be conducted through an inter- or intra-company program (or through some combination of the two approaches) and may be for a single process unit, a plant site, a company, or a group of process units.

(v) The first analysis of the data shall be completed no later than 18 months after the start of the quality improvement program. The first analysis shall be performed using data collected for a minimum of 6 months. An analysis of the data shall be done each year the process unit or affected facility is in the quality improvement program.

(6) Trial evaluation program: A trial evaluation program shall be conducted at each plant site for which the data analysis does not identify use of superior performing pump seal technology or pumps that can be applied to the areas identified as having poorer than average performance, except as provided in item (v) below. The trial program shall be used to evaluate the feasibility of using in the process unit or affected facility (or plant site) the pump designs or seal technologies, and operating and maintenance practices that have been identified by others as having low emission performance.

(i) The trial evaluation program shall include on-line trials of pump seal technologies or pump designs and operating and maintenance practices that have been identified in the available literature or in analysis by others as having the ability to perform with leak rates below 10 percent in similar services, as having low probability of failure, or as having no external actuating mechanism in contact with the process fluid. If any of the candidate superior performing pump seal technologies or pumps is not included in the performance trials, the reasons for rejecting specific technologies from consideration shall be documented as required 40 CFR § 63.1035(e)(3)(ii).

(ii) The number of pump seal technologies or pumps in the trial evaluation program shall be the lesser of 1 percent or two pumps for programs involving single process units or affected facilities and the lesser of 1 percent or five pumps for programs involving a plant site or groups of process units or

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affected facilities. The minimum number of pumps or pump seal technologies in a trial program shall be one.

(iii) The trial evaluation program shall specify and include documentation of the following information:

(A) The candidate superior performing pump seal designs or technologies to be evaluated, the stages for evaluating the identified candidate pump designs or pump seal technologies, including the time period necessary to test the applicability;

(B) The frequency of monitoring or inspection of the equipment;

(C) The range of operating conditions over which the component will be evaluated; and

(D) Conclusions regarding the emission performance and the appropriate operating conditions and services for the trial pump seal technologies or pumps.

(iv) The performance trials shall initially be conducted, at least, for a 6-month period beginning not later than 18 months after the start of the quality improvement program. No later than 24 months after the start of the quality improvement program, the Permittee shall have identified pump seal technologies or pump designs that, combined with appropriate process, operating, and maintenance practices, operate with low emission performance for specific applications in the process unit or affected facility. The Permittee shall continue to conduct performance trials as long as no superior performing design or technology has been identified, except as provided in item (vi) below. The initial list of superior emission performance pump designs or pump seal technologies shall be amended in the future, as appropriate, as additional information and experience are obtained.

(v) Any plant site with fewer than 400 valves and owned by a corporation with fewer than 100 employees shall be exempt from trial evaluations of pump seals or pump designs. Plant sites exempt from the trial evaluations of pumps shall begin the pump seal or pump replacement program at the start of the fourth year of the quality improvement program.

(vi) The Permittee who has conducted performance trials on all alternative superior emission performance technologies suitable for the required applications in the process unit or affected facility may stop conducting performance trials provided that a superior performing design or technology has been demonstrated or there are no technically feasible alternative superior technologies remaining. The Permittee shall prepare an engineering evaluation documenting the physical, chemical, or engineering basis for the judgment that the superior emission performance technology is technically infeasible or demonstrating that it would not reduce emissions.

(7) Quality assurance program: The Permittee shall prepare and implement a pump quality assurance program that details purchasing specifications and maintenance procedures for all pumps and pump seals in the process unit or affected facility. The quality assurance program may establish any number of categories, or classes, of pumps as needed to distinguish among operating conditions and services associated with poorer than average emission performance as well as those associated with better than average emission performance. The quality assurance program shall be developed considering the findings of the data analysis required under 40 CFR § 63.1035(d)(5); and, if applicable, the findings of

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the trial evaluation required 40 CFR § 63.1035(d)(6); and the operating conditions in the process unit or affected facility. The quality assurance program shall be updated each year as long as the process unit or affected facility has the greater of either 10 percent or more leaking pumps or has three leaking pumps.

(i) The quality assurance program shall meet the following requirements:

(A) Establish minimum design standards for each category of pumps or pump seal technology. The design standards shall specify known critical parameters such as tolerance, manufacturer, materials of construction, previous usage, or other applicable identified critical parameters;

(B) Require that all equipment orders specify the design standard (or minimum tolerances) for the pump or the pump seal;

(C) Provide for an audit procedure for quality control of purchased equipment to ensure conformance with purchase specifications. The audit program may be conducted by the Permittee of the plant site or process unit or affected facility, or by a designated representative; and

(D) Detail off-line pump maintenance and repair procedures. These procedures shall include provisions to ensure that rebuilt or refurbished pumps and pump seals will meet the design specifications for the pump category and will operate so that emissions are minimized.

(ii) The quality assurance program shall be established no later than the start of the third year of the quality improvement program for plant sites with 400 or more valves or 100 or more employees; and no later than the start of the fourth year of the quality improvement program for plant sites with less than 400 valves and less than 100 employees.

(8) Pump or pump seal replacement: Three years after the start of the quality improvement program for plant sites with 400 or more valves or 100 or more employees and at the start of the fourth year of the quality improvement program for plant sites with less than 400 valves and less than 100 employees, the Permittee shall replace, as described in items (i) and (ii) below, the pumps or pump seals that are not superior emission performance technology with pumps or pump seals that have been identified as superior emission performance technology and that comply with the quality assurance standards for the pump category. Superior emission performance technology is that category or design of pumps or pump seals with emission performance that when combined with appropriate process, operating, and maintenance practices, will result in less than 10 percent leaking pumps for specific applications in the process unit, affected facility, or plant site. Superior emission performance technology includes material or design changes to the existing pump, pump seal, seal support system, installation of multiple mechanical seals or equivalent, or pump replacement.

(i) Pumps or pump seals shall be replaced at the rate of 20 percent per year based on the total number of pumps in light liquid service. The calculated value shall be rounded to the nearest nonzero integer value. The minimum number of pumps or pump seals shall be one. Pump replacement shall continue until all pumps subject to the requirements of 40 CFR § 63.1026 are pumps determined to be superior performance technology.

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(ii) The Permittee may delay replacement of pump seals or pumps with superior technology until the next planned process unit or affected facility shutdown, provided the number of pump seals and pumps replaced is equivalent to the 20 percent or greater annual replacement rate.

(iii) The pumps shall be maintained as specified in the quality assurance program.

IA001 Laboratory
Basis: Minn. R. 7007.1300, subp. 3 G

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Insignificant Activity
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- IA002 Lime Silo (part of process water treatment)
Basis: Minn. R. 7007.1300, subp. 3 D
- IA003 Soda Ash Silo (part of process water treatment)
Basis: Minn. R. 7007.1300, subp. 3D
- IA004 Crude containment #1 – Baby berth
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA005 Crude containment #2 – Crude tank
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA006 Crude containment #3 – RB storage
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA007 Crude shift tank
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA008 Phos. Treated oil tank #1
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA009 Phos. Treated oil tank #2
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA010 RB Shift tank #1
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA011 RB Shift tank #2
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA012 Rework tank
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA013 Soapstock tank
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA014 Sodium Hydroxide (caustic)
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA015 Phosphoric acid tank
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA016 HCL acid tank

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Basis: Minn. R. 7007.1300, subp. 3(I)(2)

IA017 Fatty acid tank

Basis: Minn. R. 7007.1300, subp. 3(I)(2)

IA018 Biodiesel shift tank #1

Basis: Minn. R. 7007.1300, subp. 3(I)(2)

IA019 Biodiesel shift tank #2

Basis: Minn. R. 7007.1300, subp. 3(I)(2)

IA020 Biodiesel tank #3

Basis: Minn. R. 7007.1300, subp. 3(I)(2)

IA021 Glycerin tank

Basis: Minn. R. 7007.1300, subp. 3(I)(2)

IA022 Biodiesel rework tank

Basis: Minn. R. 7007.1300, subp. 3(I)(2)

IA023 Pellet surge tank bin vent

Basis: Minn. R. 7007.1300, subp. 3(I)(2)

IA024 Bleaching Clay Vent

Basis: Minn. R. 7007.1300, subp. 3(I)(2)

IA025 Spent Bleaching Clay Load out

Basis: Minn. R. 7007.1300, subp. 3(I)(2)

IA026 Temporary Spent Bleaching Clay Handling and Storage Pile

Basis: Minn. R. 7007.1300, subp. 3(I)(2)

IA027 Caustic 50% Tank

Basis: Minn. R. 7007.1300, subp. 3(I)(2)

IA028 Bleached oil Tank #1

Basis: Minn. R. 7007.1300, subp. 3(I)(2)

IA029 Bleached Oil Tank #2

Basis: Minn. R. 7007.1300, subp. 3(I)(2)

IA030 Soap Stock Tank

Basis: Minn. R. 7007.1300, subp. 3(I)(2)

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- IA031 Biodiesel Tank #1
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA032 Biodiesel Tank #2
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA033 Hydrochloric Acid Tank
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA034 Glycerin Tank
Basis: Minn. R. 7007.1300, subp. 3(I)(2)
- IA035 Fatty Acid Tank
Basis: Minn. R. 7007.1300, subp. 3(I)(2)

**APPENDIX D
Modeling Data**

**MN Soybean Processors Modeling Area
Source Parameters**

**Facility Name: Minnesota Soybean Processors - Brewster
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Model Stack	Source Description	Easting Northing UTM Coordinates		Base Elevation		Release Height		X Side Length	X Side Length	Y Side Length	Y Side Length	Angle from North	Initial Vert. Plume Dim.
ID		(m)	(m)	(ft)	(m)	(ft)	(m)	(ft)	(m)	(ft)	(m)	(deg)	(m)
FS001	VOC Fugitives	--	--	--	--	--	--	--	--	--	--	--	--
FS002A	Plant Entrance	302,330.90	4,842,163.00	1,473.1	449.0	3.28	1.00	55.8	17.00	20.0	6.1	0.0	3.0
FS002B	Plant Entrance	302,269.90	4,842,163.00	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	0.0	3.0
FS002C	Plant Entrance	302,259.72	4,842,151.47	1,473.1	449.0	3.28	1.00	65.6	20.00	20.0	6.1	-42.4	3.0
FS002D	Plant Entrance	302,214.38	4,842,110.66	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002E	Plant Entrance	302,169.06	4,842,069.80	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002F	Plant Entrance	302,123.70	4,842,029.00	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002G	Loop	302,100.48	4,842,006.45	1,473.1	449.0	3.28	1.00	105.0	32.00	20.0	6.1	-42.4	3.0
FS002H	Loop	302,055.16	4,841,965.62	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002I	Loop	302,009.83	4,841,924.80	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002J	Loop	301,964.50	4,841,884.00	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002K	Loop	301,963.00	4,841,883.00	1,473.1	449.0	3.28	1.00	20.0	6.10	200.1	61.0	-100.55	3.0
FS002L	Loop	301,903.12	4,841,871.37	1,473.1	449.0	3.28	1.00	20.0	6.10	98.4	30.0	-100.55	3.0
FS002M	Loop	301,870.40	4,841,863.14	1,473.1	449.0	3.28	1.00	20.0	6.10	200.1	61.0	-42.4	3.0
FS002N	Loop	301,829.52	4,841,908.46	1,473.1	449.0	3.28	1.00	20.0	6.10	200.1	61.0	-42.4	3.0
FS002O	Loop	301,788.74	4,841,953.81	1,473.1	449.0	3.28	1.00	20.0	6.10	200.1	61.0	-42.4	3.0
FS002P	Loop	301,747.91	4,841,999.14	1,473.1	449.0	3.28	1.00	20.0	6.10	55.8	17.0	-42.4	3.0
FS002Q	Loop	301,745.10	4,842,011.41	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002R	Loop	301,790.39	4,842,052.24	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002S	Loop	301,835.74	4,842,093.05	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002T	Loop	301,881.07	4,842,133.87	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002U	Loop	301,926.40	4,842,174.69	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002V	Loop	301,971.73	4,842,215.51	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002W	Loop	302,017.06	4,842,256.33	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002X	Loop	302,062.39	4,842,297.15	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002Y	Loop	302,107.72	4,842,337.97	1,473.1	449.0	3.28	1.00	200.1	61.00	20.0	6.1	-42.4	3.0
FS002Z	Loop	302,153.05	4,842,378.79	1,473.1	449.0	3.28	1.00	131.2	40.00	20.0	6.1	-42.4	3.0
FS002AA	Loop	302,219.55	4,842,364.77	1,473.1	449.0	3.28	1.00	20.0	6.10	200.1	61.0	-42.4	3.0
FS002BB	Loop	302,260.37	4,842,319.44	1,473.1	449.0	3.28	1.00	20.0	6.10	200.1	61.0	-42.4	3.0
FS002CC	Loop	302,301.18	4,842,274.11	1,473.1	449.0	3.28	1.00	20.0	6.10	200.1	61.0	-42.4	3.0
FS002DD	Loop	302,342.00	4,842,228.78	1,473.1	449.0	3.28	1.00	20.0	6.10	200.1	61.0	-42.4	3.0
FS003	Bean Storage Pile	301,904.95	4,841,878.67	1,473.1	449.0	42.00	12.80	290.4	88.50	290.4	88.5	-42.4	0.0
FS004	Cooling Tower	302,065.96	4,842,019.71	1,473.1	449.0	30.00	9.14	39.4	12.00	39.4	12.0	-42.4	0.0

APPENDIX D
Modeling Data
Facility Name: Minnesota Soybean Processors - Brewster
Permit Number: 10500053-006

MN Soybean Processors Modeling Area

Source Parameters

Model Stack	Source Description	PM10 Emission Rate		Comment
ID		(g/s/m2)	(g/s)	
FS001	VOC Fugitives	--	--	Source not modeled. Does not emit particulate matter.
FS002A	Plant Entrance	5.83E-06	0.01	Emission rate based on potential to emit (PTE).
FS002B	Plant Entrance	5.83E-06	0.01	Emission rate based on potential to emit (PTE).
FS002C	Plant Entrance	5.83E-06	0.01	Emission rate based on potential to emit (PTE).
FS002D	Plant Entrance	5.83E-06	0.01	Emission rate based on potential to emit (PTE).
FS002E	Plant Entrance	5.83E-06	0.01	Emission rate based on potential to emit (PTE).
FS002F	Plant Entrance	5.83E-06	0.01	Emission rate based on potential to emit (PTE).
FS002G	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002H	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002I	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002J	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002K	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002L	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002M	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002N	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002O	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002P	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002Q	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002R	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002S	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002T	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002U	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002V	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002W	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002X	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002Y	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002Z	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002AA	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002BB	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002CC	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS002DD	Loop	7.35E-06	0.06	Emission rate based on potential to emit (PTE).
FS003	Bean Storage Pile	4.15E-06	0.04	Emission rate based on potential to emit (PTE).
FS004	Cooling Tower	4.03E-05	0.01	Emission rate based on potential to emit (PTE).

APPENDIX D
Modeling Data
Facility Name: Minnesota Soybean Processors - Brewster
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MN Soybean Processors Modeling
Stack Parameters

Stack	Emission	UTM Coordinates		Elevation Base		Height Stack		Stack Temperature		Exhaust Flowrate ²	Exit Velocity	Stack Diameter		PM10 Emissions	NOx Emissions
		Easting	Northing												
ID	Unit	(m)	(m)	(ft)	(m)	(ft)	(m)	(F)	(K)	(acfm)	(m/s)	(ft)	(m)	(g/s)	(g/s)
SV001	Receiving	301,803.60	4,841,967.51	1,473	449	140	42.7	58	287.4	38,110	12.17	4.5	1.37	0.116	--
SV002	Transfer	301,868.95	4,842,020.82	1,473	449	140	42.7	49	282.4	7,745	12.52	2	0.61	0.04	--
SV003	Bean Cleaning	301,986.15	4,842,075.50	1,473	449	140.5	42.8	69	293.6	2,319	5.44	1.66	0.51	0.007	--
SV004	Hot Dehulling	301,993.69	4,842,082.13	1,473	449	150	45.7	123	323.6	85,822	34.69	4	1.22	1.028	--
SV005	Hull Grinding	301,964.67	4,842,084.03	1,473	449	141.3	43.1	78	298.6	5,265	10.17	1.83	0.56	0.026	--
SV006	Hull Bins	301,954.70	4,842,145.49	1,473	449	127	38.7	72	295.2	2,026	1.46	3	0.91	0.01	--
SV007	Pelletizing	301,987.90	4,842,105.05	1,473	449	142	43.3	129	326.9	4,250	12.22	1.5	0.46	0.044	--
SV008	Pellet Bins	301,960.18	4,842,140.46	1,473	449	127	38.7	80	299.7	700	0.5	3	0.91	0.004	--
SV009	Blending and Meal Lump Grinders	301,963.53	4,842,149.07	1,473	449	80	24.4	70	294.1	10,500	7.55	3	0.91	0.057	--
SV011	Flakers	301,980.36	4,842,069.64	1,473	449	146	44.3	169	349.1	11,162	11.55	2.5	0.76	0.116	--
SV012	Meal Grinding	301,962.09	4,842,082.05	1,473	449	141.3	43.1	100	310.8	16,000	19.06	2.3	0.71	0.052	--
SV017	Meal Storage	301,940.61	4,842,128.35	1,473	449	126	38.4	80	299.7	6,550	10.59	2	0.61	0.035	--
SV018	Load Out Truck #1	301,930.40	4,842,175.04	1,473	449	80	24.38	70	294.1	42,600	19.08	3.8	1.16	0.138	--
SV019	Load Out Truck #2/Rail	301,956.68	4,842,197.05	1,473	449	80	24.38	70	294.1	42,600	19.08	3.8	1.16	0.138	--
SV020	Mineral Oil System (MOS)	302,021.11	4,842,046.10	1,473	449	65	19.7	100	310.8	100	0.001	0.7	0.21	--	--
SV021	Boilers	301,946.09	4,842,088.98	1,473	449	150	45.7	325	335.8	15,900	16.83	4.2	1.28	0.535	1.854
SV030-033-035	Fire Pump Engines	Not Modeled	Not Modeled	--	--	--	--	--	--	--	--	--	--	--	--
SV031, SV037	Emergency Generators	Not Modeled	Not Modeled	--	--	--	--	--	--	--	--	--	--	--	--
SV032	DT/DC #1, #2, #3	302,002.98	4,842,025.47	1,473	449	150	45.7	117	320.2	64,054	21.4	4.4	1.34	0.683	--

1 Ambient temperatures are assumed to be 70 deg. F based on the lowest stack temperature used for the CIPS Fairmont, MN PSD application. The exhaust flowrate is used to calculate the exit velocity. Not Modeled. Rounding errors occur in converting to metric units for the diameter and exhaust flowrate.

APPENDIX D
Modeling Data
Facility Name: Minnesota Soybean Processors - Brewster
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Stack ID	Emission Unit	Comment
SV001	Receiving	Actual exhaust flowrate and temperature based on October 12, 2004 emission compliance testing. Emissions based on 0.003 gr/dscf BACT Limit.
SV002	Transfer	Actual exhaust flowrate and temperature based on April 27, 2004 emission compliance testing. Emissions based on 0.005 gr/dscf BACT Limit.
SV003	Bean Cleaning	Actual exhaust flowrate and temperature based on April 28, 2004 emission compliance testing. Emissions based on 0.003 gr/dscf BACT Limit.
SV004	Hot Dehulling	Actual exhaust flowrate and temperature based on September 9, 2004 emission compliance testing. Emissions based on 0.013 gr/dscf BACT Limit.
SV005	Hull Grinding	Actual exhaust flowrate and temperature based on April 29, 2004 emission compliance testing. Emissions based on 0.005 gr/dscf BACT Limit.
SV006	Hull Bins	Actual exhaust flowrate and temperature based on August 12, 2004 emission compliance testing. Emissions based on 0.005 gr/dscf BACT Limit.
SV007	Pelletizing	Actual exhaust flowrate and temperature based on April 29, 2004 emission compliance testing. Emissions based on 0.013 gr/dscf BACT Limit.
SV008	Pellet Bins	Emission rate based on PM/PM ₁₀ BACT limit of 0.005 gr/dscf.
SV009	Blending and Meal Lump Grinders	Emission rate based on PM/PM ₁₀ BACT limit of 0.005 gr/dscf.
SV011	Flakers	Actual exhaust flowrate and temperature based on April 27, 2004 emission compliance testing. Emissions based on 0.013 gr/dscf BACT Limit.
SV012	Meal Grinding	Emission rate based on PM/PM ₁₀ BACT limit of 0.003 gr/dscf.
SV017	Meal Storage	Emission rate based on PM/PM ₁₀ BACT limit of 0.005 gr/dscf.
SV018	Load Out Truck #1	Emission rate based on PM/PM ₁₀ BACT limit of 0.003 gr/dscf. Stack height set to 80 ft.
SV019	Load Out Truck #2/Rail	Emission rate based on PM/PM ₁₀ BACT limit of 0.003 gr/dscf. Stack height set to 80 ft.
SV020	Mineral Oil System (MOS)	Source not modeled. Does not emit particulate matter. Horizontal exhaust.
SV021	Boilers	Emission rate based on AP-42 emission factors. Emissions doubled due to both boilers venting to one stack.
SV030, 033-035	Fire Pump Engines	Fire Pumps not modeled because the shortest modeling averaging time is 24 hours and it will only be used in case of an extreme emergency.
SV031, SV037	Emergency Generators	Generators not modeled because they only provide enough power to power the compressed air system, the cooling water pumps, emergency lighting, and safe boiler in the event of a power outage when the plant is not operating.
SV032	DT/DC #1, #2, #3	Actual exhaust flowrate and temperature based on April 29, 2004 emission compliance testing. Emissions based on 0.013 gr/dscf BACT Limit.

¹ Ambient temperatures are assumed to be 70 deg. F based on the lowest stack temperature used for the CHS Fairmont, MN PSD application. ² The exhaust flowrate is used to calculate the exit velocity. Rounding errors occur in converting to metric units for the diameter and exhaust flowrate.

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 10500053-006

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 draft/proposed permit.

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 2075)
Minnesota Soybean Processors - Brewster	121 Zeh Ave Brewster Nobles County
Contact: Molly Getzel Phone: 507-842-6719	

1.2. Description of the Facility

From the initial Permit (10500053-001), Minnesota Soybean Processors (MnSP) was authorized to construct and operate a 3,000 ton per day soybean processing plant in the city of Brewster, Nobles County, Minnesota.

The overall facility can be divided into three main processes. The first process is the soybean extraction. This process converts the soybeans into “crude” oil. The second process is the “crude” oil refining. The third process is the bio-diesel manufacturing process.

First of all, the soybean extraction process is as follows. The facility at Brewster receives raw soybeans and process them, extracting crude soybean oil from the beans. By-products of the oil processing are soy meal and hulls, which are sold for animal feed.

Soybeans are delivered from the local farmers by semi-trailer truck. The soybeans are off-loaded and stored in bins having a storage capacity of 2.3 million bushels. From storage, the beans are sent to a screening and cleaning area in the preparation building where debris accompanying the beans is removed. From here, the beans are routed to the dehulling process. The hull of the bean is ground. The ground soybean hulls are usually formed into pellets and sold as animal feed. The meat of the bean is cracked into larger chunks, conditioned (heated) and then pressed into flakes. These materials are then sent to the extraction building.

The flakes are washed in the extraction building with a solvent, commercial hexane, to strip the oil from the flakes. The mixture of solids and solvent are separated. The solids, which are still laden with hexane, are sent to a meal desolventizer where they are heated and the solvent is volatilized. The volatilized solvent is routed to the solvent recovery system where over 99% of the solvent is recovered for reuse. The solvent-free solids are then cooled, ground and stored as meal. This meal is sold as animal feed. The liquid removed from the solids consists of hexane, soybean oil and water and is called the miscella.

The miscella is separated into its components using distillation. The hexane is reused, the water disposed of and the oil, termed “crude oil,” is stored. The crude oil can either be shipped off-site or refined.

Besides receiving, preparation and extraction, there is a weigh station, offices and a lab, a steam generation plant, maintenance, and warehousing. The steam plant contains two boilers. The steam plant currently fires natural gas and distillate oil.

The second process is the refining process. The refining process removes impurities contained in the crude oil. The refinery process, generally, consists of the following stages: refining, water wash, vacuum drying, bleaching, and deodorization. For example, the bleaching process removes trace amounts of undesirable compounds which affect the stability of the oil. After the refining process, one additional step is needed before the refined oil can be used as a food product. This facility does not perform that step. If the refined oil is to be used as a food product, the facility purchasing the refined oil will complete the last step. The refined oil can either be sold as nearly processed vegetable oil (for human consumption) or sent through the bio-diesel manufacturing process.

On December 19, 2002, the MPCA issued the air permit (10500053-001). In December 2003, the soybean oil extraction facility began initial operation.

The third process is the bio-diesel manufacturing. This process converts the “refined” oil into a bio-diesel product. The “crude” oil must be “refined” before it can begin the bio-diesel process. Bio-diesel is produced from the reaction of the fatty acids in the “refined” oil with methanol in the presence of a catalyst. The reaction produces mono-alkyl esters (bio-diesels) and glycerol. The construction of bio-diesel manufacturing process was permitted through a minor amendment (10500053-003).

1.3 Description of Changes Allowed or incorporated with this Permit Issuance

This permit is a reissuance of the Part 70 permit for Minnesota Soybean Processors facility. This permit also incorporates other changes described here.

This permit also incorporates operating requirements and stack test frequency requirements due to performance tests on Receiving (SV 001) and Hot Dehulling (SV 004).

This permit corrects the generator's rated electrical capacity of EU 031 from 150 kW to 170 kW. There was no change in PTE of the facility because the calculations used the correct capacity of the diesel engine.

The permittee submitted a supplement to the reissuance application which added an emergency generator and expanded the cooling towers as separate projects. The second emergency generator (EU 037) has a rated capacity of 650 Hp. The new cooling tower cell (FS004) is for the biodiesel facility. Summary of calculations for this modification can be found in Table 3 of this TSD. The modification is not subject to PSD and qualified as a minor amendment.

This permit incorporates the installation of Meal Lump Grinder System (EU034) as an Insignificant Modification. The Meal Lump Grinder System vents through the same vent (SV 009) as Blending (EU015). There is an existing BACT limit for PM/PM₁₀ of 0.005 grains/dry standard cubic foot. The facility has accepted this limit on the new unit for simplicity's sake because it will vent through the same stack vent. There will be a small change in potential and actual emissions because of increased air flow.

This permit incorporates a second fire pump engine (EU 032). The original fire pump engine has been shown to be inadequate.

Delta projects that are being rolled into this reissuance

DQ# 1203 – Major amendment to incorporate 40 CFR Subpart FFFF, received August 26, 2006

DQ# 1232 – Reopening to incorporate 40 CFR Subpart FFFF.

DQ# 1642 – Test deadline extension request.

DQ# 1704 – Notice of Violation October 1, 2007

DQ# 1877 - Notice of Compliance January 8, 2008.

1.5. Facility Emissions:

Table 1. Total Facility Limited Potential to Emit

Emission Unit Description	EU #	SV #	PM (tpy)	PM ₁₀ (tpy)	SO ₂ (tpy)	NO _x (tpy)	VOC (tpy)	CO (tpy)	Pb (tpy)	Single HAP (tpy)	All HAPs (tpy)
Receiving	001	001	4.29	4.29							0.00
Transfer	002	002	1.45	1.45							0.00
Bean cleaning	003	003	0.26	.26							0.00
Bean heating	004	004	71.5	35.7							0.00
Jet drying	005										
Hulloosensors	006										

Cracking	007										
Secondary aspirator	008										
Hot Dehulling											
Hull grinding	009	005	.99	.99							0.00
Ground Hull Bins	010	006	0.38	.38							0.00
Pellet cooler	011	007	4.15	2.07							0.00
Flakers	012	011	10.9	5.45							0.00
Mineral Oil System	013	020					30.9			20.4	20.4
Pellet storage bin	014	008	0.13	0.13							0.00
Blending and Meal Lump Grinding	015	009	1.97	1.97							0.00
Dryer deck # 1	016	032									
Dryer deck # 2	017										
Cooling deck # 1	018										
Cooling deck # 2	019										
Dryer deck # 3 (future)	029										
Cooler deck # 3 (future)	030										
DT/DC Decks			62.52	31.26			278			184	184
Meal grinding	020	012	1.80	1.80							0.00
Meal bin	021	017	1.23	1.23							0.00
Bleach clay/diatomaceous earth	022	025	0.14	0.14							0.00
Meal/hull load-out (Truck #1)	024	018	4.80	4.80							0.00
Meal/hull load-out (Truck # 2/rail)	025	019	4.80	4.80							0.00
Boilers		021									
Boiler #1	026		6.37	6.37	11.05	32.22	2.13	32.5	1.99E-03		1.41E-01
Boiler #2	027		6.37	6.37	11.05	32.22	2.13	32.5	1.99E-03		1.41E-01
Fire Pump Engine #1	028	030/033	0.32	0.32	0.29	4.46	0.36	0.96			0.00
Emergency Gen #1	031	033	0.58	.58	0.55	8.31	0.68	1.79			0.00
Fire Pump Engine #2	32	034/035	.32	.32	.29	4.46	.36	.96			
Biodiesel Process Vent	33	036									
Meal lump Grinder	34	009	-	-	-	-	-	-	-	-	-
Biodiesel Reactor #1	35	036									
Biodiesel Reactor #2	36	036									
Emergency Gen #2	37	037	.11	.11	.66	2.11	.11	.89			
Commercial Hexane 1	TK 001	020									0.00
Commercial Hexane 2	TK 002	020									0.00

Commercial Hexane 3	TK 003	020									0.00
Commercial Hexane 4	TK 004	020									0.00
First Distillate FO #2	TK 005						0.01				0.00
Second Distillate FO#2	TK 006						0.01				0.00
Fugitive Emissions		FS 001					309			204	204
Onsite Vehicle Traffic		FS 002	13.3	2.56		0.79					0.00
Bean Pile		FS 003	4.94	1.23							0.00
Cooling Tower		FS 004	0.81	0.6							0.00
Lab Hood		IA 001					0.33			0.16	0.33
		Totals	204	115	23.9	84.6	624	69.6	.004	408.6	409
Emission Unit Description	EU #	SV #	PM (tpy)	PM₁₀ (tpy)	SO₂ (tpy)	NO_x (tpy)	VOC (tpy)	CO (tpy)	Pb (tpy)	Single HAP (tpy)	All HAPs (tpy)

Table 2. Total Facility Limited 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	204	115	23.9	84.6	69.6	624	408.6	409.0
Total Facility Actual Emissions (2006)	110	59.8	0.44	16.8	40.1	340	HAPs not reported in emission inventory	

Table 3. Title I Emissions Increase Summary

Pollutant	second emergency generator	cooling tower cell	Meal Lump Grinder System	second fire pump engine	PSD/112(g) Significant Thresholds for major sources	NSR/112(g) Review Required? (Yes or No)

	EU037 (tpy)	FS 004 (tpy)	EU034 (tpy)	EU032 (tpy)		
PM	0.11	0.81	1.27	0.32	25	No
PM ₁₀	0.11	0.60	1.27	0.32	15	No
SO ₂	0.66			0.29	40	No
NO _x	2.11			4.46	40	No
VOC	0.11			0.36	100	No
CO	0.89			0.96	40	No
Lead	None Detected (ND)				0.6	No

*** Note: Each column represents a separate project.**

Table 4. Facility Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD	PM, PM ₁₀ , NO _x , VOC		CO, SO ₂ , Pb
Part 70 Permit Program	PM, PM ₁₀ , VOC, Single HAP (n-Hexane), total HAP	SO ₂ , NO _x	CO, Pb

2. Regulatory and/or Statutory Basis

New Source Review

The facility is a major source under New Source Review (NSR) regulations. Changes authorized by this permit are not subject to NSR. There are existing Title I BACT Limits on the facility.

Part 70 Permit Program

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

New Source Performance Standards (NSPS)

The boilers EU026 & EU027 are subject to Standards of Performance for Small and Industrial Commercial and Institutional Steam Generating Units (40 CFR § 60 Subp. Dc).

The biodiesel facility is subject to Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006 (40 CFR 60 Subp. VV). However, as allowed under 40 CFR Section 63.2535(k), the Permittee has elected to comply with 40 CFR pt. 60, subp. VV by complying with 40 CFR pt. 63, subp. FFFF for this equipment.

Compliance Assurance Monitoring (CAM)

The initial permit (10500053-001) was issued after CAM requirements were effective. Monitoring requirements used in the initial Title V permit were modeled after the requirements of CAM. All units that would be subject to CAM are exempt through exemption #2 of Table C. Continuous compliance monitoring is already specified in the operating permit. There are no additional requirements due to the CAM.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility is a major source of hazardous air pollutants (HAP).

40 CFR Part 63 subpart GGGG “Solvent Extraction for Vegetable Oil Production” applies to the soybean extraction process as described in Section 1.2 of this Technical Support Document (TSD). The facility will show compliance through the “compliance ratio” option. This is a calculation using actual solvent (n-hexane) loss.

40 CFR Part 63 subpart FFFF “Miscellaneous Organic Chemical Manufacturing” applies to the biodiesel production process as described in Section 1.2 of this TSD. This NESHAP has been incorporated through this permit action. Facility has opted to comply with the “vapor balance alternative” option. Vapor balance will prevent the release of HAP (primarily methanol) during offload of tanker trucks into the facility’s tanks. The displaced vapors from the facility’s tanks will be piped to the tanker trucks.

The facility will be subject to the pending NESHAP, 40 CFR pt. 63, subp. DDDDD “Industrial Boilers” category standards, as it applies, after promulgation as a final rule.

Minnesota State Rules

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

- Minn. R. 7011.0515 Standards of Performance for New Indirect Heating Equipment
- Minn. R. 7011.0150 Preventing Particulate Matter from Becoming Airborne
- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment
- Minn. R. 7011.1005 Standards of Performance for Dry Bulk Agricultural Commodity Facilities
- 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:
GP 001	40 CFR Pt. 63 subp. GGGG	Solvent Extraction for Vegetable Oil Production NESHAP.
GP 002	40 CFR § 52.21(j)	Prevention of Significant Deterioration. BACT limits set on PM and PM ₁₀ .
GP 003	40 CFR § 52.21(j)	Prevention of Significant Deterioration. BACT limits set on VOC.
GP 004 GP 005	40 CFR § 52.21(j) Minn. R. 7011.0715	Prevention of Significant Deterioration. BACT limits set on PM and PM ₁₀ Standards of Performance for Post-1969 Industrial Process Equipment
GP 007	40 CFR § 52.21(j) Minn. R. 7007.0515 40 CFR pt. 60, subp. Dc	Prevention of Significant Deterioration. BACT limits set on PM, PM ₁₀ , VOC, NO _x , SO ₂ , and fuel usage limits. Standards of Performance for New Indirect Heating Equipment.
GP 008	40 CFR § 52.21(j) Minn. R. 7011.1005	Prevention of Significant Deterioration. BACT limits set on PM and PM ₁₀ . Standards of Performance for Dry Bulk Agricultural Commodity Facilities.
GP 010 GP 009 GP 013 EU 033 FS 006 FS 007 FS 008 FS 009 FS 010 FS 011 FS 012 FS 013 FS 014	40 CFR Pt. 63 subp. FFFF	Miscellaneous Organic Chemical Manufacturing NESHAP.
EU 001 EU 002 EU 020	40 CFR § 52.21(j) Minn. R. 7011.1005	Prevention of Significant Deterioration. BACT limits set on PM and PM ₁₀ . Standards of Performance for Dry Bulk Agricultural

EU 021		Commodity Facilities.
EU 003	40 CFR § 52.21(j)	Prevention of Significant Deterioration. BACT limits set on PM and PM ₁₀ .
EU 031 EU 037	Minn R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines.

The language 'This is a state-only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act' refers to permit requirements that are mandated by state law rather than by the federal Clean Air Act. The language is to clarify the distinction between permit conditions that are required by federal law and those that are required by state law. State law requirements are not enforceable by U.S. EPA or by citizens under the federal Clean Air Act, but are fully enforceable by the MPCA and citizens under provisions of state law.

3. Technical Information

3.1 Biodiesel reactors

Reclassified biodiesel reactors from “tanks” to “emission units” in facility description.

3.2 Cyclones

The permittee requested that the cyclones be reclassified as process equipment. This is approved because the original 2002 BACT analysis was performed under conditions where the cyclones were designated as process equipment. The cyclones are process equipment because their main function is to recover product. The BACT analysis was performed at the outlet of the process cyclones. The results of the original BACT analysis were that no additional control equipment was required.

3.3 Emergency Generator #2 (EU037)

Not subject to 40 CFR Part 60 Subp. IIII because the generator was manufactured in 1994 as per 40 CFR § 60.4200. Not subject to 40 CFR Part 63 ZZZZ because the generator is for emergency use only as per 63.6590 (b)(1)(i).

3.4 40 CFR Part 63 Subpart FFFF

Facility was a new affected source under 40 CFR Pt 63 Subp. FFFF, however the facility was permitted as an existing source. Enforcement decided that no action was necessary because when the facility discovered the problem they informed the MPCA, started to comply with the standard, and submitted an application to incorporate Subp. FFFF into their permit. Emissions are either fugitives from equipment leaks or are from the Water Absorber EU. The biodiesel system is a closed loop system which makes it difficult to identify the large pieces of equipment as emission units because they are sealed and not directly vented to the atmosphere.

3.5 Biodiesel as an allowable fuel in boilers

The facility failed a VOC stack test (12/6/06) when firing 100% biodiesel (B99 biodiesel). The reissuance application requests that this limit be changed. This limit can not be changed without doing a completely new top down BACT analysis. The permit 10500053-005 had a provision that if any of the biodiesel tests show an exceedance of any limits that the permittee was not allowed to combust biodiesel. The permit condition also specified that the permittee would have to apply for a Major amendment under Minn. R. 7007.1500 to change these conditions.

3.6 Biodiesel plant emission units

All emissions from the biodiesel plant come from the Biodiesel Process Vent (absorber), methanol tanks, sodium methylate tank, and fugitive sources. The biodiesel plant is a closed loop system. There are many separate pieces of equipment within the plant that could be seen as separate emission units. These pieces of equipment are not vented and all of their emissions are from fugitive sources, connections, flanges, pumps, etc. All of these emissions are accounted for within the groups' fugitive sources to which FFFF applies. Process flow diagrams of the biodiesel facility are found in attachment 3 to this TSD.

3.7 Compliance assurance Monitoring (CAM)

The initial permit (10500053-001) was issued after CAM requirements were effective. Monitoring requirements used in the initial Title V permit were modeled after the requirements of CAM. All units that would be subject to CAM are exempt through exemption #2 of Table C. Continuous compliance monitoring is already specified in the operating permit. There are no additional requirements due to the CAM.

3.8 112(g) analysis

The boilers (EU026 and EU027) should have gone through case-by-case MACT analysis during initial permit issuance. The boilers are located at a major source of HAPs and 40 CFR part 63 subpart DDDDD (industrial boiler MACT) was not promulgated at the time of construction of the plant. After EPA promulgated the MACT, the boilers were subject to and complied with Subpart DDDDD until its vacature by the courts. The facility was asked to submit a 112(g) case-by-case MACT analysis using 2008 control equipment data. This analysis can be found in attachment #4 to this TSD. Limits and stack testing requirements have been incorporated into this permit action. The limited pollutants are Front-half PM, CO, Mercury, and HCl.

3.9 Air Quality Analysis (Modeling Results)

Air dispersion modeling was performed for NO_x, PM₁₀, and n-hexane by MnSP for the proposed facility during the initial permitting in 2002. The NO_x and PM₁₀ modeling were conducted to demonstrate compliance with the National and Minnesota Ambient Air Quality Standards (NAAQS and MAAQS) and PSD increment standards. In addition, modeling was used to evaluate the impact of n-hexane emissions. Updated PM₁₀ modeling data for the as-constructed plant was submitted and reviewed by the MPCA in 2005. Standard permit conditions were added to the permit that would require an update to the modeling if a modification to the facility would change the parameter of appendix D.

The air dispersion modeling results showed that potential emissions do not cause or contribute to an exceedance of a NAAQS, MAAQS, or a PSD increment standard

As part of the Minnesota Air Toxics Review process, MnSP was required to model the n-hexane emissions. Hence, MnSP performed dispersion modeling to predict ambient concentrations of n-hexane (also designated as a federal Hazardous Air Pollutant under federal rule) in addition to the criteria pollutants concentrations. The modeled concentration was compared to the Minnesota Health Departments chronic Health Risk Value (HRV). The modeled concentration was below the HRV. Accordingly, an air toxics risk assessment was not required.

3.10 Calculations of Limited Potential to Emit and Emissions Increase Analysis

Table 1 of this TSD shows the PTE of the Facility by emission unit and stack vent.

Table 2 of this TSD summarizes the PTE and actual emissions of the facility.

Table 3 of this TSD contains the Title 1 emissions increase calculations for this modification. This demonstrates that this modification is not a major modification for PSD.

3.11 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 4. Periodic Monitoring

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
GP 001 (subject to GGGG)	Compliance ratio - less than or equal to 1.00 For n-hexane (HAP) 40 CFR 63	Recordkeeping, 12-month rolling sum; 12-month weighted average	The limit is set in accordance with the proposed MACT standard and recording times.
GP 003 (VOC Limit)	VOC \leq 619 tons/ year 40 CFR 52.21 BACT Limit	Monthly recordkeeping	This is calculated using actual solvent lost.
GP 004 (Hull grind, bin, pellet, and blending)	PM \leq 0.0050 grains/dry standard cubic foot PM ₁₀ \leq 0.0050 grains/dry standard cubic foot 40 CFR 52.21 BACT Limit	Performance testing for PM ₁₀ Control Equipment O & M Daily record keeping	
GP 005 (process cyclone unit)	PM \leq 0.026 grains/dry standard cubic foot PM ₁₀ \leq 0.013 grains/dry standard cubic foot 40 CFR 52.21 BACT Limit	Quarterly inspections Monitoring for plugging	The cyclone must be inspected to assure compliance. Cyclones are equipped with monitoring devices to detect plugging at all times that they are in operation.
GP 007 (fuel usage limit)	Fuel oil combusted \leq 6,080,000 gal/year. 40 CFR 52.21 BACT Limit	Recordkeeping, 12-month rolling sum	Limit taken to keep facility SO ₂ emissions below significance level.
GP 008 (load out units)	PM ₁₀ \leq 0.0030 grains/dry standard cubic foot 40 CFR 52.21 BACT Limit Opacity	Control Equipment O & M	Due to the nature of the work, frequency of use PTE of the operation stack testing is not required.
GP 012 (fire pump engines)	SO ₂ \leq 0.50 lbs/mmbtu 7011.2300	Recordkeeping, fuel certification	Due to low sulfur content of available fuel it is very unlikely that the limit will be violated.
EU 026 & EU 027 (boilers)	NO _x \leq 0.050 lb/mmbtu While burning natural gas 40 CFR 52.21, BACT Limit	Performance testing	Testing is required to show compliance.

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
	NO _x ≤ 0.1250 lb/mmbtu While combusting fuel oil 40 CFR 52.21 BACT Limit	Performance testing	Testing is required to show compliance.
	PM ≤ 0.00745 lb/mmbtu PM ₁₀ ≤ 0.00745 lb/mmbtu While burning natural gas 40 CFR 52.21 BACT Limit	Allowable fuel type.	Violation of the limit is very unlikely due to allowed fuel types. Additional testing is not required.
	PM ≤ 0.00745 lb/mmbtu PM ₁₀ ≤ 0.00745 lb/mmbtu while combusting fuel oil 40 CFR 52.21 BACT Limit	Allowable fuel type.	Violation of the limit is very unlikely due to allowed fuel types. Additional testing is not required.
	Front-half PM ≤ 0.0020 lb/mmbtu when burning natural gas. 40 CFR Section 63.6(f)(i)	Allowable fuel type.	Violation of the limit is very unlikely due to allowed fuel types. Additional testing is not required.
	Front-half PM ≤ 0.014 lb/mmbtu when burning distillate fuel oil. 40 CFR Section 63.6(f)(i)	Allowable fuel type.	Violation of the limit is very unlikely due to allowed fuel types. Additional testing is not required.
	SO ₂ ≤ 0.0507 lb/mmbtu 40 CFR 52.21 BACT Limit	Fuel usage limit, recordkeeping, fuel certification	Due to the sulfur content of available fuel it is very unlikely that this limit will be violated.
	VOC ≤ 0.00524 lb/mmbtu When burning natural gas. 40 CFR 52.21 BACT Limit	Allowable fuel type.	Violation of the limit is very unlikely due to allowed fuel types. Additional testing is not required.
	VOC ≤ 0.00143 lb/mmbtu When burning distillate fuel oil. 40 CFR 52.21 BACT Limit	Allowable fuel type.	Violation of the limit is very unlikely due to allowed fuel types. Additional testing is not required.
	CO ≤ 20 PPM at 3% oxygen when burning natural gas. 40 CFR Section 63.6(f)(i)	Performance testing	Testing is required to show compliance.
	CO ≤ 20 PPM at 3% oxygen when burning Distillate fuel oil. 40 CFR Section 63.6(f)(i)	Allowable fuel types.	Actual CO emissions were shown to be well below the limit when tested during other required stack test.
	Hg ≤ 0.0000030 lb/mmbtu when burning natural gas.	Allowable fuel type.	The use of only pipeline quality natural gas ensures that this limit will

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
	40 CFR Section 63.6(f)(i)		not be exceeded
	Hg \leq 0.0000060 lb/mmbtu when burning distillate fuel oil. 40 CFR Section 63.6(f)(i)	Allowable fuel type.	It is very unlikely that this limit will be violated.
EU001, EU003, EU020, (units with fabric filters)	PM \leq 0.0030 grains/dry standard cubic foot PM ₁₀ \leq 0.0030 grains/dry standard cubic foot 40 CFR 52.21 BACT Limit	Performance testing Control Equipment O & M	Testing is required to show compliance with the modeled PM ₁₀ emission rate.
EU002, EU009, EU010, EU014, EU015, EU021, (units with fabric filters)	PM \leq 0.0050 grains/dry standard cubic foot PM ₁₀ \leq 0.0050 grains/dry standard cubic foot 40 CFR 52.21 BACT Limit	Performance testing Control Equipment O & M	Testing is required to show compliance with the modeled PM ₁₀ emission rate.
EU004, EU005, EU006, EU007, EU008, EU011, EU012, EU016, EU017, EU018, EU019, (units with cyclones)	PM \leq 0.026 grains/dry standard cubic foot PM ₁₀ \leq 0.013 grains/dry standard cubic foot 40 CFR 52.21 BACT Limit	Performance testing	Testing is required to show compliance with the modeled PM ₁₀ emission rate.
EU031, EU037, (emergency generators)	SO ₂ \leq 0.50 lbs/mmbtu 7011.2300	Recordkeeping, fuel certification	Due to low sulfur content of available fuel it is very unlikely that the limit will be violated.

3.12 Insignificant Activities

Minnesota Soybean processor has several operations which are classified as insignificant activities. These are listed in Appendix C to the permit.

The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per EPA guidance. The insignificant activities at this Facility are only subject to general applicable requirements. Using the criteria outlined earlier in this TSD, the following table documents the justification why no additional periodic monitoring is necessary for the current insignificant activities.

Table 5. Insignificant Activities

Insignificant Activity	General Applicable Emission limit	Discussion
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.
Individual units with actual emissions less than 2000 lb/year of certain pollutants 7007.1300 subp. 3(I)(2)	PM, variable depending on airflow Opacity \leq 20% (with exceptions) (Minn. R. 7011.0715 and Minn. R. 7011.610) or SO ₂ \leq 0.5 lb/MMBtu Opacity \leq 20% (Minn. R. 7011.2300)	These are natural gas combustion units, an emergency generator, and a specialty mixing area. For the natural gas units and generator, based on the fuels used and EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, all of these units are operated and vented inside a building, so testing for PM or opacity is not feasible. The mixing area is not expected to generate particulate matter.
Tumblers with a batch capacity of 1,000 pounds or less. Minn. R. 7007.1300 subp. 3(D)	PM, variable depending on airflow Opacity \leq 20% (with exceptions) (Minn. R. 7011.0715 and Minn. R. 7011.610)	These are very small units that typically do not even have any emissions. It is highly unlikely that they could violate the applicable requirement.

3.13 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.

3.14 Comments Received

This part of the TSD will be completed after the public notice and EPA review period.

Public Notice Period: October 18, 2008 - November 17, 2008

EPA 45-day Review Period: October 18, 2008 - December 4, 2008

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 Soybean Processors - Brewster, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 10500053-006 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Benjamin Klismith (permit writer/engineer)
Sarah Kilgriff (enforcement)
Sean O'Connor (stack testing)
Paula Connell (peer reviewer)

AQ File No. 4045; DQ 1203, 1232, 1599, 1642, 1704, 1877

Attachments: 1. PTE Summary and Emissions Increase Calculation Spreadsheets
2. Facility Description and CD-01 Forms
3. Biodiesel Process Flow Diagrams
4. 112(g) analysis (EU026, EU027)