

DRAFT/PROPOSED

AIR EMISSION PERMIT NO. 16100035-004

Major Amendment

IS ISSUED TO

Guardian Energy LLC

Guardian Energy LLC
4745 380th Ave
Janesville, Waseca County, MN 56048

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

This permit amendment and issuance supersedes Air Emission Permit No. 16100035-003 and authorizes the Permittee to operate and modify the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

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

Permit Type: Federal; Part 70 with Limits to Avoid NSR

Operating Permit Issue Date: <issue date>

Expiration Date: <expiration date> – All Title I Conditions do not expire.

DRAFT/PROPOSED

Don A. Smith, Manager
Air Quality Permits Section
Industrial Division

for John Linc Stine
Commissioner
Minnesota Pollution Control Agency

Permit Applications Table

| Permit Type | Application Date | Permit Action |
|-----------------------------------------------|-------------------------|----------------------|
| Reopening for test frequency plan | 6/11/2010 | 004 |
| First Time Part 70 Permit and Major Amendment | 8/30/2012 | 004 |
| Additional Information | 3/20/2013 | 004 |

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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:

Guardian Energy, LLC is the owner of a fuel-grade ethanol production facility in Janesville, MN. The facility uses corn as the primary raw material and produces Distillers Dried Grains and Solubles (DDGS) for animal feed as a byproduct. The facility emissions are from corn receiving, handling, and milling, DDGS handling and loadout, fermentation, distillation, drying DDGS, and natural gas-fired thermal oxidizers and dryers. Emissions are controlled by fabric filters, wet scrubbers, flares, and thermal oxidizers.

AMENDMENT DESCRIPTION:

The facility was originally permitted to produce 120 million gallons per year of denatured ethanol product. This permit action allows the facility to increase production to 140 million gallons of undenatured ethanol with no physical modifications to the facility. This permit action changes the permit from a State Permit to Part 70 permit due to greenhouse gas (GHG) emissions. This permit also incorporates a reopening for the test frequency plan approved June 21, 2011.

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-1 04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080 |
| Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted. | Minn. R. 7011.0020 |
| Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated. | Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J) |
| Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment, and the records kept to demonstrate plan implementation. | Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J) |
| Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate. | Minn. R. 7019.1000, subp. 4 |
| Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150. | Minn. R. 7011.0150 |
| Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. | Minn. R. 7030.0010 - 7030.0080 |
| Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A). | Minn. R. 7007.0800, subp. 9(A) |
| The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16. | Minn. R. 7007.0800, subp. 16 |
| SOURCE-SPECIFIC REQUIREMENTS | hdr |
| Production: less than or equal to 140.0 million gallons/year using 12-month Rolling Sum of undenatured ethanol. | Title I Condition: to avoid major source classification under 40 CFR Section 52.21; 40 CFR Section 63.2; and Minn. R. 7007.3000 |
| Clean up commodities spilled on the driveway and other facility property as required to minimize fugitive emissions; maintain air pollution control equipment in proper operating condition and utilize the air pollution control systems as designed. | Minn.R. 7011.1005, Subp. 1 |
| Permit Appendices: This permit contains appendices as listed in the permit Table of Contents. The Permittee shall comply with all requirements contained in the appendices. | Minn. R. 7011.0150; Minn. R. 7007.0800, subp. 2 |
| Parameters used in Modeling: The parameters used in PM10 modeling for permit action 002 are listed in Appendix I of this permit. | Minn. R. 7009.0020 |
| The Permittee shall install fencing around the facility. The fencing shall be fully installed prior to the receipt of grain. In areas where fencing is not permissible by set backs, right-of-ways, safety concerns, or clearances, the Permittee shall install signs and conduct patrols to sufficiently restrict public access to the property outlined as fenced in the dispersion modeling. | Minn. R. 7009.0020 |
| PERFORMANCE TESTING | hdr |

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-2** 04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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| Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A and/or B. | Minn. R. ch. 7017 |
| <p>Performance Test Notifications and Submittals:</p> <p>Performance Tests are due as outlined in Table A of the permit. See Table B for additional testing requirements.</p> <p>Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test</p> <p>The Notification, Test Plan, and Test Report may be submitted in an alternative format as allowed by Minn. R. 7017.2018.</p> | Minn. R. 7017.2018; Minn. R. 7017.2030, subps. 1-4, Minn. R. 7017.2035, subps. 1-2 |
| Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change. | Minn. R. 7017.2025, subp. 3 |
| MONITORING REQUIREMENTS | hdr |
| Monitoring Equipment Calibration: The Permittee shall calibrate all required monitoring equipment at least once every 12 months (any requirements applying to continuous emission monitors are listed separately in this permit). | Minn. R. 7007.0800, subp. 4(D) |
| Operation of Monitoring Equipment: Unless otherwise noted in Tables A and/or B, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system. | Minn. R. 7007.0800, subp. 4(D) |
| RECORDKEEPING | hdr |
| Ethanol Production Daily Recordkeeping: On each day of operation, the Permittee shall record and maintain the total quantity of all ethanol produced at the facility. This shall be based on a flow meter of 200-proof ethanol transferred to the storage tanks. | Title I Condition: to avoid major source classification under 40 CFR Section 52.21; 40 CFR Section 63.2; and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 and 5 |
| <p>Ethanol Monthly Recordkeeping: By the 15th of the month, the Permittee shall calculate and record the following:</p> <p>1) The total ethanol production for the previous calendar month using the daily production records. 2) The 12-month rolling sum ethanol production in gallons for the previous 12-month period by summing the monthly ethanol production data for the previous 12 months.</p> | Minn. R. 7007.0800, subps. 4 and 5 |
| Retain all records at the stationary source, unless otherwise specified within this permit, for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A). | Minn. R. 7007.0800, subp. 5(C) |
| Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes. | Minn. R. 7007.0800, subp. 5(B) |
| If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. These records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format. | Minn. R. 7007.1200, subp. 4 |
| REPORTING/SUBMITTALS | hdr |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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| <p>Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3.</p> <p>At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.</p> | Minn. R. 7019.1000, subp. 3 |
| <p>Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.</p> <p>At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.</p> | Minn. R. 7019.1000, subp. 2 |
| <p>Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.</p> | Minn. R. 7019.1000, subp. 1 |
| <p>Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description:</p> <ol style="list-style-type: none"> 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 |
| <p>Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.</p> | Minn. R. 7007.1150 through Minn. R. 7007.1500 |
| <p>Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H). Performance testing deadlines from the General Provisions of 40 CFR pt. 60 and pt. 63 are examples of deadlines for which the MPCA does not have authority to grant extensions and therefore do not meet the requirements of Minn. R. 7007.1400, subp. 1(H).</p> | Minn. R. 7007.1400, subp. 1(H) |
| <p>Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance, to be submitted on a form approved by the Commissioner.</p> | Minn. R. 7019.3000 - 7019.3100 |
| <p>Emission Fees: due 60 days after receipt of an MPCA bill.</p> | Minn. R. 7002.0005 through Minn. R. 7002.0095 |
| <p>RISK MANAGEMENT PLAN</p> | hdr |
| <p>The Permittee must submit a Risk Management Plan (RMP) under 40 CFR pt. 68. Each owner or operator of a stationary source, at which a regulated substance is present above a threshold quantity in a process, shall design and implement an accidental release prevention program. An initial RMP must be submitted no later than the latest of the following dates: 1) June 21, 1999; 2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or 3) The date on which a regulated substance is first present above a threshold quantity in a process. A full update and resubmission of the RMP is required at least once every five years. The five-year anniversary date is reset whenever your facility fully updates and resubmits their RMP. Submit RMPs to the Risk Management Plan Reporting Center, P.O. Box 1515, Lanham-Seabrook, Maryland 20703-1515. RMP information may be obtained at http://www.epa.gov/swercepp or by calling 1-800-424-9346.</p> | 40 CFR pt. 68 |

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-4** 04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: GP 001 Floating roof tanks**Associated Items:** TK 001 190 Proof Ethanol

TK 002 200 Proof Ethanol

TK 004 Denatured Ethanol 1

TK 005 Denatured Ethanol 2

TK 006 Natural Gasoline

| What to do | Why to do it |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| The following requirements apply individually to each tank in GP 001. | hdr |
| POLLUTION CONTROL REQUIREMENTS | hdr |
| The storage vessels shall be equipped with a fixed roof in combination with an internal floating roof meeting the requirements of 40 CFR Section 60.112b(a)(1). | 40 CFR Section 60.112b(a); Minn. R. 7011.1520(C) |
| Internal Floating Roof Seal Requirement: Each internal roof shall be equipped with one of the closure devices between the wall of the storage vessel and the edge of the internal floating roof as described in Section 60.112b(a)(1)(ii). | 40 CFR Section 60.112b(a)(1)(ii); Minn. R. 7011.1520(C) |
| MONITORING REQUIREMENTS | hdr |
| Initial Inspection - Prior to filling the storage vessel: Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with Volatile Organic Liquid (VOL). If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric; or defects in the internal floating roof, or both, the Permittee shall repair the items before filling the storage vessel. | 40 CFR Section 60.113b(a)(1); Minn. R. 7011.1520(C) |
| Annual Inspection: Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every twelve (12) months after initial fill as required by Section 60.113b(a)(2). | 40 CFR Section 60.113b(a)(2) and (4); Minn. R. 7011.1520(C) |
| Inspection - Tank Empty and Degassed: Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the tank is emptied and degassed as required by Section 60.113b(a)(4). In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years. | 40 CFR Section 60.113b(a)(2) and (4); Minn. R. 7011.1520(C) |
| RECORDKEEPING REQUIREMENTS | hdr |
| Keep a record of each inspection performed as required by 40 CFR Section 60.113b(a). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings.) | 40 CFR Section 60.115b(a)(2); Minn. R. 7011.1520(C) |
| Recordkeeping: Maintain records showing the dimensions of each tank and an analysis showing tank capacity. | 40 CFR Section 60.116b(c); Minn. R. 7011.1520(C) |
| Recordkeeping: Maintain records of the volatile organic liquid (VOL) stored, the period of storage, and the maximum true vapor pressure of the VOL during the respective storage period, calculated as described in 40 CFR Section 60.116b(e). | 40 CFR Section 60.116b(c); Minn. R. 7011.1520(C) |
| REPORTING REQUIREMENTS | hdr |
| After each inspection required by 40 CFR Section 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 40 CFR Section 60.113b(a)(3)(ii), a report shall be furnished to the Administrator within thirty (30) days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of 40 CFR Section 60.112b(a)(1) or 40 CFR Section 60.113b(a)(3)(ii) and list each repair made. | 40 CFR Section 60.115b(a)(4); Minn. R. 7011.1520 (C) |
| Notification - Notify the Commissioner in writing at least 30 days prior to the filling or refilling of each tank for which an inspection is required by 40 CFR Section 60.113b (a)(1) and (a)(4) to afford the Commissioner the opportunity to have an observer present. If the inspection required by 40 CFR 6.113b(a)(4) is not planned and the Permittee could not have known about the inspection 30 days in advance of refilling the tank, the Permittee shall notify the Administrator at least 7 days prior to the refilling of the tank. Notification shall be made by telephone followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Commissioner at least 7 days prior to the refilling. | 40 CFR Section 60.113b(a)(5); Minn. R. 7011.1520(C) |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Notification - Control Equipment Installation and Certification: After installing the internal floating roofs, furnish the Administrator with a report describing the control equipment (fixed roof/internal floating roof combination) and certifying that the control equipment meets the specifications of Sections 60.112b(a)(1) and 60.113b(a)(1). This report shall be attached to the initial startup notification required by Section 60.7(a)(3) and located in Table B of this permit. This requirement was completed on April 29, 2005. | 40 CFR Section 60.115b(a)(1); Minn. R. 7011.1520(C) |
| Reporting - Annual Inspection Results: If any of the conditions described in 40 CFR Section 60.113b(a)(2) are detected during the annual visual inspection required by 40 CFR Section 60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the tank, the nature of the defects, and the date the tank was emptied or the nature of and date the repair was made. | 40 CFR Section 60.115b(a)(3); Minn. R. 7011.1520(C) |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: GP 002 Flares**Associated Items:** CE 005 Flaring

CE 006 Flaring

| What to do | Why to do it |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The following requirements apply individually to each flare in GP 002. | hdr |
| EMISSION LIMITS | hdr |
| The Permittee shall operate and maintain control equipment such that it achieves an overall control efficiency for Volatile Organic Compounds: greater than or equal to 98 percent control efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21; 40 CFR Section 63.2; and Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 1 |
| Flares must be designed and operated with no visible emissions except for a period not to exceed a total of 5 minutes during any 2 consecutive hours. | Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J) |
| OPERATING REQUIREMENTS | hdr |
| The control equipment is considered listed control equipment under Minn. R. 7011.0060 to 7011.0080. The Permittee shall operate and maintain the flare at all times that any process equipment controlled by the flare is operating. The Permittee shall document periods of non-operation of the control equipment. | Title I Condition: to avoid major source classification under 40 CFR 52.21; under 40 CFR Section 63.2 and Minn. R. 7007.3000; Minn. R. 7011.0065, subp. 2(A) |
| Monitoring Equipment: The Permittee shall install and maintain thermocouples for measuring and recording as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when operation of the monitored control equipment is required. | Minn. R. 7011.0075, subp. 3 |
| The flare shall be operated with a flame present at all times. | Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J) |
| Flares shall be used only with the net heating value of the gas being combusted being 200 Btu/scf or greater if the flare is nonassisted. | Minn. R. 7007.0800, subp. 14 Minn. R. 7007.0800, subp. 16(J) |
| Operation Requirement: At all times, including periods of startup, shutdown, and malfunction, owners shall maintain and operate any affected facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating 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, opacity observations, review of operating and maintenance procedures, and inspection of the source. | Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J) |
| Operation Requirement: Flares shall be monitored to ensure that they are operated and maintained in conformance with their design. | Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J) |
| RECORDKEEPING | hdr |
| Records Requirement: Keep a record of any startup, shutdown, or malfunction in the affected facility or malfunction of the air pollution control equipment. | Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J) |
| Recordkeeping: Maintain a file of all measurements, CMS performance evaluations, calibration checks, adjustments and maintenance, and all other information required by this part in permanent form, suitable for inspection for at least two years following the date of such measurements, maintenance, and records. | Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J) |

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-7** 04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: GP 003 Fabric Filter Requirements**Associated Items:** CE 002 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

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

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

CE 009 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

| What to do | Why to do it |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The following requirements apply individually to each fabric filter in GP 003. Control Efficiencies and Hood Evaluation requirements specific to each fabric filter are located at CE002, CE003, CE007 and CE009. | hdr |
| OPERATING REQUIREMENTS | hdr |
| Pressure Drop: greater than or equal to 0.1 inches of water column and less than or equal to 10 inches of water column, unless a new range is set pursuant to Minn. R. 7017.0205, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. | Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. subps. 2 and 14; Minn. R. 7011.0080 |
| The Permittee shall operate and maintain the fabric filters (CE002, CE003, CE007, and CE009) at all times that any emission unit controlled by the fabric filter is in operation. The Permittee shall document periods of non-operation of the control equipment. | Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14 |
| MONITORING AND RECORDKEEPING | hdr |
| Visible Emissions: The Permittee shall check each fabric filter stack (SV 002, SV003, SV007, and SV009) for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall read and record the pressure drop across the fabric filter, once each day of operation. | Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14; 40 CFR Section 64.3; Minn. R. 7017.0200; Minn. R. 7011.0080 |
| Recordkeeping of Visible Emissions and Pressure Drop: The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, and whether or not any visible emissions were observed, and whether or not the observed pressure drop was within the range specified in this permit. | Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14 |
| The control equipment is considered listed control equipment under Minn. R. 7011.0060 to 7011.0080. The Permittee shall operate and maintain the fabric filter at all times that any process equipment controlled by the fabric filter is operating. The Permittee shall document periods of non-operation of the control equipment. | Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0075, subp. 1 |
| Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the required operating range; - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. | Minn. R. 7007.0800, subps. 4,5 and 14 |
| Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation. | Minn. R. 7007.0800, subp. 4; Minn. R. 7011.0075, subp. 3 |
| Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. | 40 CFR Section 64.3; Minn. R. 7017.0200 |
| 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. | Minn. R. 7007.0800, subp. 14 |
| The Permittee shall maintain each piece of control equipment according to the manufacturer's specification, shall conduct inspections, and maintain documentation of those actions as required by Minn. R. 7011.0075, subp. 2(A) to 2(I). | Minn. R. 7011.0075, subp. 2 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: GP 004 Dryers**Associated Items:** EU 001 Dryer A

EU 002 Dryer B

EU 003 Dryer C

EU 004 Dryer D

| What to do | Why to do it |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| The following requirements apply individually to each emission unit in GP 004. | hdr |
| EMISSION LIMITS | hdr |
| Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. NOTE: this limit is met by compliance with the PM limit at SV001. | Minn. R. 7011.0610, subp. 1(A)(1) and Minn. R. 7011.0715, subp. 3 |
| Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. | Minn. R. 7011.0610, subp. 1(A)(2) |
| OPERATIONAL REQUIREMENTS | hdr |
| The Permittee shall operate and maintain each dryer in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. | Minn. R. 7007.0800, subp. 14 |
| Fuel type: Limited to natural gas and methanator off-gases (as supplemental fuel). | Minn. R. 7005.0100, subp. 35a |
| POLLUTION CONTROL REQUIREMENTS | hdr |
| Vent all emissions to thermal oxidizer (CE 010 or CE 011). | Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000 |
| Thermal Oxidizer Breakdown: In the event of a breakdown of either thermal oxidizer, the Permittee shall stop feed to the controlled dryer(s) as soon as the breakdown is discovered. Dryer operation may continue only as long as necessary to empty the dryer. The Permittee shall also submit the notification required by Minn. R. 7019.1000, subp. 2 if required. | Minn. R. 7007.0800, subp. 14 Minn. R. 7007.0800, subp. 16(J) |

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-9** 04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: GP 005 Direct Flame Afterburners w/Heat Exchanger**Associated Items:** CE 010 Direct Flame Afterburner w/Heat Exchanger

CE 011 Direct Flame Afterburner w/Heat Exchanger

| What to do | Why to do it |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The following requirements apply individually to each item in GP 005. | hdr |
| EMISSION AND OPERATIONAL LIMITS | hdr |
| The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for Volatile Organic Compounds: greater than or equal to 98 percent destruction efficiency | Title I Condition: to avoid major source classification under 40 CFR 52.21; under 40 CFR Section 63.2 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14 |
| The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for Carbon Monoxide: greater than or equal to 85 percent destruction efficiency | Title I Condition: to avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14 |
| The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for Total Particulate Matter: greater than or equal to 50 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 10 micron: greater than or equal to 50 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 2.5 micron: greater than or equal to 50 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| Temperature: greater than or equal to 1500 degrees F as a 3-hour rolling average at the combustion chamber outlet, unless a new limit 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 limit shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The limit is final upon issuance of a permit amendment incorporating the change. If the 3-hour rolling average temperature is below the minimum temperature limit, the VOC used during that time shall be considered uncontrolled until the average temperature is above the minimum temperature limit. This shall be reported as a deviation. | Title I Condition: to avoid major source classification under 40 CFR 52.21; under 40 CFR Section 63.2 and Minn. R. 7007.3000 |
| The Permittee shall operate and maintain the thermal oxidizer any time that any process equipment controlled by the thermal oxidizer is in operation. The Permittee shall document periods of non-operation of the control equipment. | Title I Condition: to avoid major source classification under 40 CFR 52.21; under 40 CFR Section 63.2 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14 |
| MONITORING AND RECORDKEEPING | hdr |
| The Permittee shall maintain a continuous hard copy readout or computer disk file of the temperature readings and calculated three hour rolling average temperatures for the combustion chamber. | Title I Condition: to avoid major source classification under 40 CFR 52.21; under 40 CFR Section 63.2 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 and 5 |
| Daily Monitoring: The Permittee shall physically verify the operation of the temperature recording device at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. | Minn. R. 7007.0800, subp. 4 and 5 |
| Monitoring Equipment: The Permittee shall install and maintain thermocouples for measuring the temperatures as required by this permit. The monitoring equipment must be installed, in use, and properly maintained whenever the monitored control equipment is required to be operated. | Minn. R. 7007.0800, subp. 4 |
| Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer specifications, the Permittee shall inspect the control equipment external system components. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. | Minn. R. 7007.0800, subps. 4, 5, and 14 |
| Annual Inspections: During all planned shutdowns and no less than once per 365 days, the Permittee shall inspect the control equipment internal and external system components, including but not limited to the refractory, heat exchanger, and electrical systems. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. | Minn. R. 7007.0800, subp. 4, 5, and 14 |
| Annual Calibration: The Permittee shall calibrate the temperature monitor at least annually and shall maintain a written record of the calibration and any action resulting from the calibration. | Minn. R. 7007.0800, subp. 4, 5, and 14 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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| The Permittee shall operate and maintain the thermal oxidizer in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. | Minn. R. 7007.0800, subp. 14 |
| Corrective Actions: If the temperature is below the minimum specified by this permit or if the thermal oxidizer or any of its components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall return the temperature to at least the permitted minimum and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the thermal oxidizer. The Permittee shall keep a record of the type and date of any corrective action taken. | Minn. R. 7007.0800, subp. 4, 5, and 14 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: GP 006 Thermal Oxidizers with HRSG**Associated Items:** EU 005 Thermal Oxidizer with HRSG C10

EU 006 Thermal Oxidizer with HRSG C11

MR 001 NOx

SV 001 Dryers/TO Stack (CE010 and CE011)

| What to do | Why to do it |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| The following requirements apply individually to each emission unit in GP 006. | hdr |
| Fuel type: Limited to natural gas only, by design. | Minn. R. 7005.0100, subp. 35a |
| NSPS EMISSION LIMITS | hdr |
| Sulfur Dioxide: less than or equal to 0.20 lbs/million Btu heat input This limit applies at all times including startup, shutdown and malfunction. | 40 CFR Section 60.42b(k); Minn. R. 7011.0565 |
| Nitrogen Oxides: less than or equal to 0.10 lbs/million Btu heat input using 30-day Rolling Average This limit applies at all times including startup, shutdown and malfunction. | 40 CFR Section 60.44b(a), (h), and (i); Minn. R. 7011.0565 |
| NSPS RECORDKEEPING | hdr |
| The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor for natural gas. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. | 40 CFR Section 60.49b(d); Minn. R. 7011.0565 |
| The owner or operator of an affected facility subject to the nitrogen oxides standards under 60.44b shall maintain records of the following information for each steam generating unit operating day: (1) Calendar date. (2) The average hourly nitrogen oxides emission rates (expressed as NO ₂) (ng/J or lb/million Btu heat input) measured or predicted. (3) The 30-day average nitrogen oxides emission rates (ng/J or lb/million Btu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days. (4) Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken. | 40 CFR Section 60.49b(g); Minn. R. 7011.0565 |
| continued (5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken. (6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data. (7) Identification of <input type="checkbox"/> F <input type="checkbox"/> factor used for calculations, method of determination, and type of fuel combusted. (8) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system. (9) Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3. (10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1. | 40 CFR Section 60.49b(g); Minn. R. 7011.0565 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: GP 007 Uncaptured Grain Receiving/Handling/Storage**Associated Items:** EU 008 Truck Receiving Dump Pit and Conveyor #1

EU 009 Truck Receiving Dump Pit and Conveyor #2

EU 014 Rail Receiving Dump Pit and Conveyor

EU 015 Receiving Transfer Conveyor #2

EU 089 DDGS Loadout Conveyor #1

EU 091 DDGS Loadout Conveyor #2

EU 092 DDGS Loadout Conveyor #3

| What to do | Why to do it |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Opacity: less than or equal to 5 percent opacity at truck unloading station, railcar unloading station, railcar loading station, or handling operation. | Minn. R. 7011.1005, subp. 3(A) |
| The Permittee shall clean up commodities spilled on the driveway and other facility property as required to minimize fugitive emissions to a level consistent with RACT (reasonably available control technology). | Minn. R. 7011.1005, subp. 1(A) |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: SV 001 Dryers/TO Stack (CE010 and CE011)

Associated Items:

- EU 001 Dryer A
- EU 002 Dryer B
- EU 003 Dryer C
- EU 004 Dryer D
- EU 005 Thermal Oxidizer with HRSG C10
- EU 006 Thermal Oxidizer with HRSG C11
- EU 007 Process/Distillation Vents
- EU 032 Slurry Blender
- EU 033 Slurry Tank 1
- EU 034 Slurry Tank 2
- EU 035 Cook Tube
- EU 036 Flash Tank
- EU 038 Liquefaction Tank 1
- EU 039 Liquefaction Tank 2
- EU 042 Yeast Tank 1
- EU 043 Yeast Tank 2
- EU 044 Beer Column
- EU 045 Side Stripper
- EU 046 Rectifier Column
- EU 047 190 Proof Condenser
- EU 048 Molecular Sieve
- EU 049 200 Proof Condenser
- EU 050 Centrifuge 1
- EU 051 Centrifuge 2
- EU 052 Centrifuge 3
- EU 053 Centrifuge 4
- EU 054 Centrifuge 5
- EU 055 Centrifuge 6
- EU 056 Evaporators 1
- EU 057 Evaporators 2
- EU 058 Evaporators 3
- EU 059 Evaporators 4
- EU 060 Evaporators 5
- EU 061 Evaporators 6
- EU 062 Evaporators 7
- EU 063 Evaporators 8
- EU 064 Methanator 1
- EU 065 Methanator 2
- EU 066 Methanator 3
- EU 067 Methanator 4
- EU 077 Centrate Tank #1
- EU 078 Centrate Tank #2
- GP 006 Thermal Oxidizers with HRSG

What to do**Why to do it**

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-14** 04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| EMISSION LIMITS | hdr |
| Total Particulate Matter: less than or equal to 7.40 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000 |
| PM < 10 micron: less than or equal to 7.40 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000 |
| PM < 2.5 micron: less than or equal to 7.40 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000 |
| Sulfur Dioxide: less than or equal to 20.25 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000 |
| Volatile Organic Compounds: less than or equal to 7.72 lbs/hour as total mass of VOC | Title I Condition: to avoid major source classification under 40 CFR 52.21; under 40 CFR Section 63.2 and Minn. R. 7007.3000 |
| Carbon Monoxide: less than or equal to 22.71 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000 |
| Nitrogen Oxides: less than or equal to 0.10 lbs/million Btu heat input . This limit applies individually to EU 005 and EU 006 only. This limit appears at GP 006 and is repeated here for the purposes of showing all limits applicable to the emissions exhausted to this stack. | 40 CFR Section 60.44b(a), (h), and (i); Minn. R. 7011.0565 |
| Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. | Minn. R. 7011.0610, subp. 1(A)(2) |
| POLLUTION CONTROL EQUIPMENT | hdr |
| Vent all emissions through the thermal oxidizers (CE 010 and CE 011), except as allowed under GP 004. See GP 004 and GP 005 for requirements for thermal oxidizer operation. | Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000 |
| PERIODIC MONITORING for limits is found at GP 003 | hdr |
| PERFORMANCE TESTS | hdr |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM (total particulate matter) emissions. | Minn. R. 7017.2020, subp. 1 |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM10 emissions. | Minn. R. 7017.2020, subp. 1 |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM2.5 emissions. | Minn. R. 7017.2020, subp. 1 |
| Performance Test: due before end of each 60 months starting 04/08/2010 for total mass of VOC. | Minn. R. 7017.2020, subp. 1 |
| Performance Test: due before end of each 60 months starting 04/08/2010 for CO emissions. | Minn. R. 7017.2020, subp. 1 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: SV 002 Unloading Baghouse (CE002)

Associated Items: EU 008 Truck Receiving Dump Pit and Conveyor #1
 EU 009 Truck Receiving Dump Pit and Conveyor #2
 EU 010 Receiving Transfer Conveyor #1
 EU 011 Receiving Bucket Elevator #1
 EU 014 Rail Receiving Dump Pit and Conveyor
 EU 015 Receiving Transfer Conveyor #2
 EU 016 Reclaim Conveyor #3
 EU 017 Receiving Bucket Elevator #2
 EU 018 Scalping Bin
 EU 079 Upper Receiving Conveyor #1
 EU 080 Upper Receiving Conveyor #2
 EU 081 Silo Reclaim Conveyor #1
 EU 082 Silo Reclaim Conveyor #2

| What to do | Why to do it |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| EMISSION LIMITS | hdr |
| Total Particulate Matter: less than or equal to 2.06 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000 |
| PM < 10 micron: less than or equal to 2.06 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000 |
| PM < 2.5 micron: less than or equal to 2.06 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000 |
| Opacity: less than or equal to 10 percent opacity | Minn. R. 7011.1005, subp. 3(D) |
| PERIODIC MONITORING for limits is found at GP 003 | hdr |
| PERFORMANCE TESTING REQUIREMENTS | hdr |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM. | Minn. R. 7017.2020, subp. 1 |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM10. | Minn. R. 7017.2020, subp. 1 |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM2.5 emissions. | Minn. R. 7017.2020, subp. 1 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: SV 003 Milling Baghouse (CE003)

Associated Items: EU 012 Grain Silo Bin #1
 EU 013 Grain Silo Bin #2
 EU 019 Hammermill Feed Surge Bin
 EU 020 Hammermill 1
 EU 021 Hammermill 2
 EU 022 Hammermill 3
 EU 023 Hammermill 4

| What to do | Why to do it |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| EMISSION LIMITS | hdr |
| Total Particulate Matter: less than or equal to 1.20 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000 |
| PM < 10 micron: less than or equal to 1.20 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000 |
| PM < 2.5 micron: less than or equal to 1.20 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR 52.21 and Minn. R. 7007.3000 |
| Opacity: less than or equal to 10 percent opacity | Minn. R. 7011.1005, subp. 3(D) |
| PERIODIC MONITORING for limits is found at GP 003 | hdr |
| PERFORMANCE TESTING REQUIREMENTS | hdr |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM. | Minn. R. 7017.2020, subp. 1 |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM10. | Minn. R. 7017.2020, subp. 1 |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM2.5 emissions. | Minn. R. 7017.2020, subp. 1 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: SV 004 Fermentation (CO2) Scrubber (CE004)

Associated Items: EU 024 Fermenter 1
EU 025 Fermenter 2
EU 026 Fermenter 3
EU 027 Fermenter 4
EU 028 Fermenter 5
EU 029 Fermenter 6
EU 030 Fermenter 7
EU 031 Beerwell

| What to do | Why to do it |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| EMISSION LIMITS | hdr |
| Volatile Organic Compounds: less than or equal to 11.52 lbs/hour on the basis of total mass of VOC. | Title I Condition: To avoid major source classification under 40 CFR Section 52.21; under 40 CFR Section 63.2 and Minn. R. 7007.3000 |
| PERIODIC MONITORING for limits is found at CE 004 | hdr |
| PERFORMANCE TESTING REQUIREMENTS | hdr |
| Performance Test: due before end of each calendar 60 months starting 04/08/2010 for VOC emissions. | Minn. R. 7017.2020, subp. 1 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: SV 007 Cooling Drum Baghouse (CE007)**Associated Items:** EU 069 Cooling Drum

| What to do | Why to do it |
|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| EMISSION LIMITS | hdr |
| Total Particulate Matter: less than or equal to 0.67 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000 |
| PM < 10 micron: less than or equal to 0.67 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000 |
| PM < 2.5 micron: less than or equal to 0.67 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000 |
| Volatile Organic Compounds: less than or equal to 2.66 lbs/hour as total mass of VOC | Title I Condition: to avoid major source classification under 40 CFR Section 52.21; under 40 CFR Section 63.2 and Minn. R. 7007.3000 |
| PERIODIC MONITORING for limits is found at GP003 | hdr |
| PERFORMANCE TESTING REQUIREMENTS | hdr |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM. | Minn. R. 7017.2020, subp. 1 |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM10. | Minn. R. 7017.2020, subp. 1 |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM2.5 emissions. | Minn. R. 7017.2020, subp. 1 |
| Performance Test: due before end of each calendar 60 months starting 04/08/2010 for VOC emissions. | Minn. R. 7017.2020, subp. 1 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: SV 009 DDGS Storage & Loadout Baghouse (CE009)

Associated Items: EU 072 DDGS Transfer Incline Conveyor
 EU 073 DDGS Transfer Storage Conveyor
 EU 074 DDGS Pile Storage Conveyor
 EU 083 DDGS Reclaim Conveyor
 EU 084 DDGS Silo Bucker Elevator
 EU 085 DDGS Recycle Conveyor
 EU 086 DDGS Silo Storage Conveyor
 EU 087 DDGS Silo Bin #1
 EU 088 DDGS Silo Bin #2
 EU 089 DDGS Loadout Conveyor #1
 EU 090 DDGS Loadout Bucket Elevator
 EU 091 DDGS Loadout Conveyor #2
 EU 092 DDGS Loadout Conveyor #3

| What to do | Why to do it |
|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EMISSION LIMITS | hdr |
| Total Particulate Matter: less than or equal to 0.39 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000 |
| PM < 10 micron: less than or equal to 0.39 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200 |
| PM < 2.5 micron: less than or equal to 0.39 lbs/hour | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200 |
| Opacity: less than or equal to 20 percent opacity | Minn. R. 7011.0715, subp. 1(B) |
| PERIODIC MONITORING for particulate and opacity limits is found at GP 003 | hdr |
| PERFORMANCE TESTING REQUIREMENTS | hdr |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM. | Minn. R. 7017.2020, subp. 1 |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM10. | Minn. R. 7017.2020, subp. 1 |
| Performance Test: due before end of each 60 months starting 04/08/2010 for PM2.5 emissions. | Minn. R. 7017.2020, subp. 1 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: EU 070 Fuel Loadout**Associated Items:** CE 005 Flaring

SV 005 Loadout Flare (CE005)

| What to do | Why to do it |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Ethanol Loadout to Trucks: less than or equal to 42 million gallons per year as a 12-month rolling sum | Minn. R. ch. 7009.0020 for PM10 |
| Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain a record of the total quantity of ethanol loaded to trucks. | Minn. R. 7007.0800, subp. 4 and 5 |
| Monthly Recordkeeping By the 15th day of each month, the Permittee shall calculate and record the following: 1) The total amount of ethanol loaded to trucks for the previous calendar month using the daily records. 2) The 12 month rolling sum of ethanol loaded to trucks for the previous 12 month period by summing the monthly data for the previous 12 months. | Minn. R. 7007.0800, subp. 4 and 5 |
| The Permittee shall vent all emissions to the flare when loading ethanol. See GP 002 for requirements for the flare. | Title I Condition: to avoid major source classification under 40 CFR 52.21; under 40 CFR Section 63.2 and Minn. R. 7007.3000 |

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-21** 04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: EU 076 300 hp IC Engine**Associated Items:** SV 010 Diesel Lean Burn Engine (300 hp)

| What to do | Why to do it |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| EMISSION LIMITS | hdr |
| Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained. | Minn. R. 7011.2300, subp. 1 |
| Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input | Minn. R. 7011.2300, subp. 2 |
| OPERATING REQUIREMENTS | hdr |
| Fuel type: No. 2 fuel oil only | Minn. R. 7005.0100, subp. 35a |
| Operating Hours: less than or equal to 100 hours/year using 12-month Rolling Sum to be calculated by the 15th day of each month for maintenance and testing. | Title I Condition: To avoid classification as major source under 40 CFR Section 52.21 & Minn. R. 7007.3000; 40 CFR Section 60.4211(f); Minn. R. 7011.3520 |
| RECORDKEEPING REQUIREMENTS | hdr |
| Fuel Supplier Certification: The Permittee shall obtain and maintain a fuel supplier certification for each shipment of No. 2 fuel oil, certifying that the sulfur content does not exceed 0.5% by weight. | Minn. R. 7007.0800, subp. 4 & 5 |
| Fuel Use: The Permittee shall maintain fuel use records, documenting that only No. 2 fuel oil is used. | Minn. R. 7007.0800, subp. 4 & 5 |
| NEW SOURCE PERFORMANCE STANDARDS | hdr |
| Total Particulate Matter: less than or equal to 0.40 grams/horsepower-hour | 40 CFR Section 60.4205(c); Minn. R. 7011.3520 |
| NMHC+NOx: less than or equal to 7.8 grams/horsepower-hour | 40 CFR Section 60.4205(c); Minn. R. 7011.3520 |
| Carbon Monoxide: less than or equal to 2.6 grams/horsepower-hour | 40 CFR Section 60.4205(c); Minn. R. 7011.3520 |
| The Permittee shall operate and maintain the stationary CI ICE according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer, over the entire life of the engine. The Permittee may only change those settings that are permitted by the manufacturer. | 40 CFR Section 60.4206; 40 CFR Section 60.4211(a); Minn. R. 7011.3520 |
| Diesel fuel must meet the requirements of 40 CFR Section 80.510(a). All NRLM diesel fuel is subject to the following per-gallon standards: (1) Sulfur content: 500 parts per million (ppm) maximum; and (2) Cetane index or aromatic content: (i) a minimum cetane index of 40, or (ii) a maximum aromatic content of 35 volume percent. | 40 CFR Section 60.4207(b); Minn. R. 7011.3520 |
| Beginning October 1, 2010, diesel fuel must meet the requirements of 40 CFR Section 80.510(b). All NR and LM diesel fuel is subject to the following per-gallon standards: (1) Sulfur content: (i) 15 ppm maximum for NR diesel fuel and/or (ii) 500 ppm maximum for LM diesel fuel; and (2) Cetane index or aromatic content: (i) a minimum cetane index of 40, or (ii) a maximum aromatic content of 35 volume percent. | 40 CFR Section 60.4207(b); Minn. R. 7011.3520 |
| The Permittee must install a non-resettable hour meter prior to startup of the emergency engine. | 40 CFR Section 60.4209(a); Minn. R. 7011.3520 |
| NESHAP | hdr |
| EU 076 is a new affected source as defined under 40 CFR pt. 63, subp. ZZZZ, and the facility is an area source as defined at 40 CFR Section 63.2. The Permittee shall meet the requirements of 40 CFR pt. 63, subp. ZZZZ by meeting the requirements of 40 CFR pt. 60, subp. IIII. No further requirements of 40 CFR pt. 63, subp. ZZZZ apply to EU 076. | 40 CFR Section 63.6590(c); Minn. R. 7011.8150 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: CE 002 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 008 Truck Receiving Dump Pit and Conveyor #1

EU 009 Truck Receiving Dump Pit and Conveyor #2

EU 010 Receiving Transfer Conveyor #1

EU 011 Receiving Bucket Elevator #1

EU 014 Rail Receiving Dump Pit and Conveyor

EU 015 Receiving Transfer Conveyor #2

EU 016 Reclaim Conveyor #3

EU 017 Receiving Bucket Elevator #2

EU 018 Scalping Bin

EU 079 Upper Receiving Conveyor #1

EU 080 Upper Receiving Conveyor #2

EU 081 Silo Reclaim Conveyor #1

EU 082 Silo Reclaim Conveyor #2

GP 003 Fabric Filter Requirements

| What to do | Why to do it |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Operating, Monitoring, and Recordkeeping requirements common to all fabric filters are located at GP 003 | hdr |
| EMISSION AND OPERATIONAL LIMITS | hdr |
| The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for Total Particulate Matter: greater than or equal to 96.6 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 10 micron: greater than or equal to 94.1 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 2.5 micron: greater than or equal to 79.6 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| Annual Hood Evaluation: The Permittee shall measure and record at least once every 12 months the fan rotation speed, fan power draw, or face velocity of each hood, or other comparable air flow indication method. The Permittee shall maintain a copy of the annual evaluation on site. | Minn. R. 7007.0800, subps. 4, 5 and 14 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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

Associated Items: EU 012 Grain Silo Bin #1
EU 013 Grain Silo Bin #2
EU 019 Hammermill Feed Surge Bin
EU 020 Hammermill 1
EU 021 Hammermill 2
EU 022 Hammermill 3
EU 023 Hammermill 4
GP 003 Fabric Filter Requirements

| What to do | Why to do it |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Operating, Monitoring, and Recordkeeping requirements common to all fabric filters are located at GP 003 | hdr |
| EMISSION AND OPERATIONAL LIMITS | hdr |
| The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for Total Particulate Matter: greater than or equal to 99.4 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 10 micron: greater than or equal to 98.8 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 2.5 micron: greater than or equal to 98.8 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: CE 004 Packed-Gas Adsorption Column**Associated Items:** EU 024 Fermenter 1

EU 025 Fermenter 2

EU 026 Fermenter 3

EU 027 Fermenter 4

EU 028 Fermenter 5

EU 029 Fermenter 6

EU 030 Fermenter 7

EU 031 Beerwell

| What to do | Why to do it |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Volatile Organic Compounds: greater than or equal to 95 percent control efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| Pressure Drop: greater than or equal to 0.1 inches of water column and less than or equal to 15 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 new range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop once every 24 hours when in operation. | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| Water flow rate: greater than or equal to 95 gallons/minute absolute minimum, unless a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new limit shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The limit is final upon issuance of a permit amendment incorporating the change. If the flow rate is below the minimum, the VOC used during that time shall be considered uncontrolled until the flow rate is above the minimum. This shall be reported as a deviation. | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| Scrubber Additive Rate: greater than or equal to 200 milliliters per minute absolute minimum, unless a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new limit shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The limit is final upon issuance of a permit amendment incorporating the change. If the additive rate is below the minimum, the VOC used during that time shall be considered uncontrolled until the additive rate is above the minimum. This shall be reported as a deviation. | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| Daily Inspections: The Permittee shall do the following, once every 24 hours: 1. Read and record the water flow rate; 2. Read and record the scrubber additive rate; 3. Read and record the gas pressure drop across the scrubber. | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| Recordkeeping of Water Flow Rate, Scrubber Additive Rate, and Pressure Drop. The Permittee shall record the time and date of each water flow rate, scrubber additive rate, and pressure drop reading, and whether or not the observed flow rate, additive rate, or pressure drop was within the range specified in this permit | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| The Permittee shall operate and maintain the scrubber at all times that any emission unit controlled by the scrubber is in operation. The Permittee shall document periods of non-operation of the control equipment. | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop and water flow rate as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the scrubber is in operation. | Minn. R. 7007.0800, subp. 4 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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| <p>Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:</p> <ul style="list-style-type: none">- the water flow rate is below the minimum specified;- the recorded pressure drop is outside the required operating range; or- the scrubber or any of its components are found during the inspections to need repair. <p>Corrective actions shall return the water flow rate to the minimum value or more, return pressure drop to within the permitted range, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the scrubber. The Permittee shall keep a record of the type and date of any corrective action taken for the scrubber.</p> | Minn. R. 7007.0800, subp. 4, 5, and 14 |
| <p>Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.</p> | Minn. R. 7007.0800, subp. 4, 5 and 14 |
| <p>The Permittee shall operate and maintain the scrubber 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.</p> | Minn. R. 7007.0800, subp. 14 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: CE 007 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 069 Cooling Drum

GP 003 Fabric Filter Requirements

| What to do | Why to do it |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Operating, Monitoring, and Recordkeeping requirements common to all fabric filters are located at GP 003 | hdr |
| EMISSION AND OPERATIONAL LIMITS | hdr |
| The Permittee shall operate and maintain the control equipment such that it achieves an overall collection efficiency for Total Particulate Matter: greater than or equal to 99.3 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| The Permittee shall operate and maintain the control equipment such that it achieves an overall collection efficiency for PM < 10 micron: greater than or equal to 98.6 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| The Permittee shall operate and maintain the control equipment such that it achieves an overall collection efficiency for PM < 2.5 micron: greater than or equal to 98.6 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: CE 009 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

Associated Items: EU 072 DDGS Transfer Incline Conveyor
 EU 073 DDGS Transfer Storage Conveyor
 EU 074 DDGS Pile Storage Conveyor
 EU 083 DDGS Reclaim Conveyor
 EU 084 DDGS Silo Bucker Elevator
 EU 085 DDGS Recycle Conveyor
 EU 086 DDGS Silo Storage Conveyor
 EU 087 DDGS Silo Bin #1
 EU 088 DDGS Silo Bin #2
 EU 089 DDGS Loadout Conveyor #1
 EU 090 DDGS Loadout Bucket Elevator
 EU 091 DDGS Loadout Conveyor #2
 EU 092 DDGS Loadout Conveyor #3
 GP 003 Fabric Filter Requirements

| What to do | Why to do it |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Operating, Monitoring, and Recordkeeping requirements common to all fabric filters are located at GP 003 | hdr |
| EMISSION AND OPERATIONAL LIMITS | hdr |
| The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for Total Particulate Matter: greater than or equal to 98.8 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 10 micron: greater than or equal to 97.6 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| The Permittee shall operate and maintain the control equipment such that it achieves a collection efficiency for PM < 2.5 micron: greater than or equal to 86.1 percent collection efficiency | Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14 |
| Annual Hood Evaluation: The Permittee shall measure and record at least once every 12 months the fan rotation speed, fan power draw, or face velocity of each hood, or other comparable air flow indication method. The Permittee shall maintain a copy of the annual evaluation on site. | Minn. R. 7007.0800, subps. 4, 5 and 14 |

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-28****04/02/13**

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: FS 004 Equipment Leaks (LDAR)

| What to do | Why to do it |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| STANDARDS: GENERAL | hdr |
| Notification of any physical or operational change which increases emission rate: due 60 days (or as soon as practical) before the change is commenced. | 40 CFR Section 60.7(a)(4); Minn. R. 7019.0100, subp. 1 |
| Recordkeeping: Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility including; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. | 40 CFR Section 60.7(b), Minn. R. 7019.0100, subp. 1 |
| Recordkeeping: Maintain a file of all measurements, maintenance, reports and records for at least five years. 40 CFR Section 60.7(f) specifies two years. | Minn. R. 7007.0800, subp. 5(C); meets requirements of 40 CFR Section 60.7(f); Minn. R. 7019.0100, subp. 1 |
| No owner or operator shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. | 40 CFR Section 60.12; Minn. R. 7011.0050 |
| Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of 40 CFR Sections 60.482-1a through 60.482-10a or Section 60.480a(e) for all equipment within 180 days of initial startup. | 40 CFR Section 60.482-1a(a) |
| (g) If the storage vessel is shared with multiple process units, the process unit with the greatest annual amount of stored materials (predominant use) is the process unit the storage vessel is assigned to. If the storage vessel is shared equally among process units, and one of the process units has equipment subject to this subpart, the storage vessel is assigned to that process unit. If the storage vessel is shared equally among process units, none of which have equipment subject to this subpart of this part, the storage vessel is assigned to any process unit subject to subpart VVa of this part. If the predominant use of the storage vessel varies from year to year, then the owner or operator must estimate the predominant use initially and reassess every 3 years. The owner or operator must keep records of the information and supporting calculations that show how predominant use is determined. All equipment on the storage vessel must be monitored when in VOC service. | 40 CFR Section 60.482-1a(g) |
| STANDARDS: PUMPS | hdr |
| Pumps in light liquid service: (a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in Section 60.485a(b), except as provided in Section 60.482-1a(c) and (f) and paragraphs (d), (e), and (f) of this section. A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump and except as provided in Section 60.482-1a(c) and paragraphs (d), (e), and (f) of this section. (2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in Section 60.482-1a(f). | 40 CFR Section 60.482-2a |
| The instrument reading that defines a leak is specified in paragraphs (b)(1)(i) and (ii) of this section. (i) 5,000 parts per million (ppm) or greater for pumps handling polymerizing monomers; (ii) 2,000 ppm or greater for all other pumps. | 40 CFR Section 60.482-2a(b)(1) |
| If there are indications of liquids dripping from the pump seal, the owner or operator shall follow the procedure specified in either paragraph (b)(2)(i) or (ii) of this section. This requirement does not apply to a pump that was monitored after a previous weekly inspection and the instrument reading was less than the concentration specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable. (i) Monitor the pump within 5 days as specified in Section 60.485a(b). A leak is detected if the instrument reading measured during monitoring indicates a leak as specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable. The leak shall be repaired using the procedures in paragraph (c) of this section. (ii) Designate the visual indications of liquids dripping as a leak, and repair the leak using either the procedures in paragraph (c) of this section or by eliminating the visual indications of liquids dripping. | 40 CFR Section 60.482-2a(b)(2) |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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| (c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 60.482-9a. | 40 CFR Section 60.482-2a(c) |
| (2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the practices described in paragraphs (c)(2)(i) and (ii) of this section, where practicable. | |
| (d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided the requirements specified in paragraphs (d)(1) through (6) of this section are met. | 40 CFR Section 60.482-2a(d) |
| (e) Any pump that is designated, as described in Section 60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section if the pump: (1) Has no externally actuated shaft penetrating the pump housing; (2) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in Section 60.485a(c); and (3) Is tested for compliance with paragraph (e)(2) of this section initially upon designation, annually, and at other times requested by the Administrator. | 40 CFR Section 60.482-2a(e) |
| (f) If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of Section 60.482-10a, it is exempt from paragraphs (a) through (e) of this section. | 40 CFR Section 60.482-2a(f) |
| (g) Any pump that is designated, as described in Section 60.486a(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (a) and (d)(4) through (6) of this section if: (1) The owner or operator of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section; and (2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable 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 paragraph (c) of this section if a leak is detected. | 40 CFR Section 60.482-2a(g) |
| (h) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (a)(2) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly. | 40 CFR Section 60.482-2a(h) |
| STANDARDS: COMPRESSORS | hdr |
| Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in Section 60.482-1a(c) and paragraphs (h), (i), and (j). | 40 CFR Section 60.482-3a(a) |
| (b) Each compressor seal system shall be: (1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or (2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of Section 60.482-10a; or (3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere. | 40 CFR Section 60.482-3a(b) |
| (c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service. (d) Each barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. | 40 CFR Section 60.482-3a(c) and (d) |

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-30****04/02/13**

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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| (e)(1) Each sensor shall be checked daily or shall be equipped with an audible alarm. | 40 CFR Section 60.482-3a(e) |
| (2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. | |
| (f) If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (e)(2), a leak is detected. | 40 CFR Section 60.482-3a(f) |
| (g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected except as provided in 40 CFR Section 60.482-9a (Delay of Repair). | 40 CFR Section 60.482-3a(g) |
| (2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected, except as provided in 40 CFR Section 60.482-9a. | |
| (h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section, if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of Section 60.482-10a, except as provided in paragraph (i) of this section. | 40 CFR Section 60.482-3a(h) |
| (i) Any compressor that is designated, as described in Section 60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a) through (h) of this section if the compressor: | 40 CFR Section 60.482-3a(i) |
| (1) Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the methods specified in Section 60.485a(c); and | |
| (2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator. | |
| (j) Any existing reciprocating compressor in a process unit which becomes an affected facility under provisions of Section 60.14 or Section 60.15 is exempt from paragraphs (a) through (e) and (h) of this section, provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of paragraphs (a) through (e) and (h) of this section. | 40 CFR Section 60.482-3a(j) |
| STANDARDS: PRESSURE RELIEF DEVICES IN GAS/VAPOR SERVICE | hdr |
| (a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background as determined by the methods specified in 40 CFR Section 60.485a(c). | 40 CFR Section 60.482-4a(a) |
| (b)(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in 40 CFR Section 60.482-9a (Delay of Repair). | 40 CFR Section 60.482-4a(b) |
| (b)(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in 40 CFR Section 60.485a(c). | |
| (c) 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 through the pressure relief device to a control device as described in Section 60.482-10a is exempted from the requirements of paragraphs (a) and (b) of this section. | 40 CFR Section 60.482-4a(c) and (d) |
| (d)(1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section. | |
| (2) After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in Section 60.482-9a. | |
| STANDARDS: SAMPLING CONNECTION SYSTEMS | hdr |

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-31****04/02/13**

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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| (a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in Section 60.482-1a(c) and paragraph (c) of this section. | 40 CFR Section 60.482-5a(a) |
| (b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall comply with the requirements specified in paragraphs (b)(1) through (4). (1) Gases displaced during filling of the sample container are not required to be collected or captured. (2) Containers that are part of a closed-purge system must be covered or closed when not being filled or emptied. (3) Gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valve(s) after the valves are closed and the sample container is disconnected are not required to be collected or captured. (4) Each closed-purge, closed-loop, or closed-vent system shall be designed and operated to meet requirements in either paragraph (b)(4)(i), (ii), (iii), or (iv). | 40 CFR Section 60.482-5a(b) |
| (c) In-situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section. | 40 CFR Section 60.482-5a(c) |
| STANDARDS: VALVES | hdr |
| (a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided Section 60.482-1a(c) and paragraphs (d) and (e) of this section. (2) 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. | 40 CFR Section 60.482-6a(a) |
| (b) 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. (c) 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 paragraph (a) of this section at all other times. | 40 CFR Section 60.482-6a(b) and (c) |
| (d) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a), (b), and (c) of this section. (e) Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section. | 40 CFR Section 60.482-6a(d) and (e) |
| (a)(1) Each valve shall be monitored monthly to detect leaks by the methods specified in Section 60.485a(b) and shall comply with paragraphs (b) through (e) of this section, except as provided in paragraphs (f), (g), and (h) of this section, Section 60.482-1a(c) and (f), and Sections 60.483-1a and 60.483-2a. | 40 CFR Section 60.482-7a(a) |
| (b) If an instrument reading of 500 ppm or greater is measured, a leak is detected. (c)(1)(i) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. (ii) As an alternative to monitoring all of the valves in the first month of a quarter, an owner or operator may elect to subdivide the process unit into two or three subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner or operator must keep records of the valves assigned to each subgroup. (2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months. | 40 CFR Section 60.482-7a(b) and (c) |
| (d)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in Section 60.482-9a. (2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. | 40 CFR Section 60.482-7a(d) |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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| (e) First attempts at repair include, but are not limited to, the following best practices where practicable: (1) Tightening of bonnet bolts; (2) Replacement of bonnet bolts; (3) Tightening of packing gland nuts; (4) Injection of lubricant into lubricated packing. | 40 CFR Section 60.482-7a(e) |
| (f) Any valve that is designated, as described in Section 60.486a(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) of this section if the valve: (1) Has no external actuating mechanism in contact with the process fluid, (2) Is operated with emissions less than 500 ppm above background as determined by the method specified in Section 60.485a(c), and (3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator. | 40 CFR Section 60.482-7a(f) |
| (g) Any valve that is designated, as described in Section 60.486a(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) of this section if: (1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section, and (2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times. | 40 CFR Section 60.482-7a(g) |
| (h) Any valve that is designated, as described in Section 60.486a(f)(2), as described in Section 60.486a(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) f: (1) The Permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface. (2) The process unit within which the valve is located: (i) Becomes an affected facility through Section 60.14 or 60.15 and was constructed on or before January 5, 1981; or (ii) Has less than 3.0 percent of its valves designated as difficult-to-monitor by the owner or operator. (3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year | 40 CFR Section 60.482-7a(h) |
| STANDARDS: PUMPS AND VALVES IN HEAVY LIQUID SERVICE, PRESSURE RELIEF DEVICES IN LIGHT LIQUID OR HEAVY LIQUID SERVICE, AND FLANGES AND OTHER CONNECTORS | hdr |
| (a) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service, the owner or operator shall follow either one of the following procedures: (1) The owner or operator shall monitor the equipment within 5 days by the method specified in Section 60.485a(b) and shall comply with the requirements of paragraphs (b) through (d) of this section. (2) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection. | 40 CFR Section 60.482-8a(a) |
| (b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. (c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR Section 60.482-9a (delay of repair). (2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. | 40 CFR Section 60.482-8a(b) and (c) |
| (d) First attempts at repair include, but are not limited to, the best practices described under Sections 60.482-2a(c)(2) and 60.482-7a(e). | 40 CFR Section 60.482-8a(d) |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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| DELAY OF REPAIR | hdr |
| <p>(a) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit.</p> <p>(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.</p> | 40 CFR Section 60.482-9a(a) and (b) |
| <p>(c) Delay of repair for valves and connectors will be allowed if:</p> <p>(1) The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and</p> <p>(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with Section 60.482-10a.</p> | 40 CFR Section 60.482-9a(c) |
| <p>(d) Delay of repair for pumps will be allowed if:</p> <p>(1) Repair required the use of a dual mechanical seal system that includes a barrier fluid system, and</p> <p>(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.</p> | 40 CFR Section 60.482-9a(d) |
| <p>(e) Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.</p> <p>(f) When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.</p> | 40 CFR Section 60.482-9a(e) and (f) |
| STANDARDS: CLOSED VENT SYSTEMS AND CONTROL DEVICES | hdr |
| <p>(a) Owners or operators of closed vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section.</p> <p>(b) Vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume (ppmv), whichever is less stringent.</p> | 40 CFR Section 60.482-10a(a) and (b) |
| <p>(c) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppmv, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C.</p> <p>(d) Flares used to comply with this subpart shall comply with the requirements of Section 60.18.</p> <p>(e) Owners or operators of control devices used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.</p> | 40 CFR Section 60.482-10a(c), (d) and (e) |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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| <p>(f) Except as provided in paragraphs (i) through (k), each closed vent system shall be inspected according to the procedures and schedule specified in paragraphs (f)(1) and (2).</p> <p>(1) If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in paragraphs (f)(1)(i) and (ii):</p> <p>(i) Conduct an initial inspection according to the procedures in Section 60.485a(b); and</p> <p>(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.</p> <p>(2) If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall:</p> <p>(i) Conduct an initial inspection according to the procedures in Section 60.485a(b); and</p> <p>(ii) Conduct annual inspections according to the procedures in Section 60.485a(b).</p> | 40 CFR Section 60.482-10a(f) |
| <p>(g) Leaks, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, shall be repaired as soon as practicable except as provided in paragraph (h) of this section.</p> <p>(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.</p> <p>(2) Repair shall be completed no later than 15 calendar days after the leak is detected.</p> | 40 CFR Section 60.482-10a(g) |
| <p>(h) Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.</p> <p>(i) If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section.</p> | 40 CFR Section 60.482-10a(h) and (i) |
| <p>(j) Any parts of the closed vent system that are designated, as described in paragraph (l)(1) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (j)(1) and (2) of this section:</p> <p>(1) The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (f)(1)(i) or (f)(2) of this section; and</p> <p>(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.</p> | 40 CFR Section 60.482-10a(j) |
| <p>(k) Any parts of the closed vent system that are designated, as described in paragraph (l)(2) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (k)(1) through (3) of this section:</p> <p>(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and</p> <p>(2) The process unit within which the closed vent system is located becomes an affected facility through Sections 60.14 or 60.15, or the owner or operator designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and</p> <p>(3) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.</p> | 40 CFR Section 60.482-10a(k) |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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| <p>(l) The Permittee shall record the information specified below:</p> <p>(1) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspection.</p> <p>(2) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspection.</p> <p>(3) For each inspection during which a leak is detected, a record of the information specified in Section 60.486a(c).</p> <p>(4) For each inspection during which no leaks are detected, a record of the inspection, the inspection date, and a statement that no leaks were detected.</p> <p>(5) For each visual inspection conducted in accordance with paragraph (f)(1)(ii) of this section during which no leaks are detected, a record of the inspection, the inspection date, and a statement that no leaks were detected.</p> | 40 CFR Section 60.482-10a(l) |
| (m) Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them. | 40 CFR Section 60.482-10a(m) |
| STANDARDS: CONNECTORS IN GAS/VAPOR SERVICE AND IN LIGHT LIQUID SERVICE | hdr |
| (a) The permittee shall initially monitor all connectors in the process unit for leaks by the later of either 12 months after the compliance date or 12 months after initial startup. If all connectors in the process unit have been monitored for leaks prior to the compliance date, no initial monitoring is required provided either no process changes have been made since the monitoring or the owner or operator 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 owner or operator is required to monitor only those connectors involved in the process change. | 40 CFR Section 60.482-11a(a) |
| <p>(b) Except as allowed in Section 60.482-1a(c), Section 60.482-10a, or as specified in paragraph (e) of this section, the owner or operator shall monitor all connectors in gas and vapor and light liquid service as specified in paragraphs (a) and (b)(3) of this section.</p> <p>(1) The connectors shall be monitored to detect leaks by the method specified in Section 60.485a(b) and, as applicable, Section 60.485a(c).</p> <p>(2) If an instrument reading greater than or equal to 500 ppm is measured, a leak is detected.</p> | 40 CFR Section 60.482-11a(b)(1) and (2) |
| (3) The owner or operator shall perform monitoring, subsequent to the initial monitoring required in paragraph (a) of this section, as specified in paragraphs (b)(3)(i) through (iii) of this section, and shall comply with the requirements of paragraphs (b)(3)(iv) and (v) of this section. The required period in which monitoring must be conducted shall be determined from paragraphs (b)(3)(i) through (iii) of this section using the monitoring results from the preceding monitoring period. The percent leaking connectors shall be calculated as specified in paragraph (c) of this section. | 40 CFR Section 60.482-11a(b)(3) |
| <p>(c) For use in determining the monitoring frequency, as specified in paragraphs (a) and (b)(3) of this section, the percent leaking connectors as used in paragraphs (a) and (b)(3) of this section shall be calculated by using the following equation:</p> $\%CL = CL / Ct * 100$ <p>Where:</p> <p>%CL= Percent of leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b)(3)(i) through (iii) of this section.</p> <p>CL= Number of connectors measured at 500 ppm or greater, by the method specified in Section 60.485a(b).</p> <p>Ct= Total number of monitored connectors in the process unit or affected facility.</p> | 40 CFR Section 60.482-11a(c) |
| (d) When a leak is detected pursuant to paragraphs (a) and (b) of this section, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 60.482-9a. A first attempt at repair as defined in this subpart shall be made no later than 5 calendar days after the leak is detected. | 40 CFR Section 60.482-11a(d) |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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| <p>(e) Any connector that is designated, as described in Section 60.486a(f)(1), as an unsafe-to-monitor connector is exempt from the requirements of paragraphs (a) and (b) of this section if:</p> <p>(1) The owner or operator of the connector demonstrates that the connector is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (a) and (b) of this section; and</p> <p>(2) The owner or operator of the connector has a written plan that requires monitoring of the connector as frequently as practicable 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 paragraph (d) of this section if a leak is detected.</p> | 40 CFR Section 60.482-11a(e) |
| <p>(f) Inaccessible, ceramic, or ceramic-lined connectors . (1) 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 paragraphs (a) and (b) of this section, from the leak repair requirements of paragraph (d) of this section, and from the recordkeeping and reporting requirements of Sections 63.1038 and 63.1039. An inaccessible connector is one that meets any of the provisions specified in paragraphs (f)(1)(i) through (vi) of this section, as applicable.</p> | 40 CFR Section 60.482-11a(f) |
| <p>(g) Except for instrumentation systems and inaccessible, ceramic, or ceramic-lined connectors meeting the provisions of paragraph (f) of this section, identify the connectors subject to the requirements of this subpart. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this subpart are identified as a group, and the number of connectors subject is indicated.</p> | 40 CFR Section 60.482-11a(g) |
| TESTING PROCEDURES | hdr |
| Compliance shall be determined by the methods specified in 40 CFR Section 60.485a. | 40 CFR Section 60.485a(b) |
| RECORDKEEPING | hdr |
| <p>(b) When each leak is detected, the following requirements apply:</p> <p>(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.</p> <p>(2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR Section 60.482-7a(c) and no leak has been detected during those 2 months.</p> <p>(3) The identification on a connector may be removed after it has been monitored as specified in Section 60.482-11a(b)(3)(iv) and no leak has been detected during that monitoring.</p> <p>(4) The identification on equipment, except on a valve or connector, may be removed after it has been repaired.</p> | 40 CFR Section 60.486a(b) |
| <p>(c) When each leak is detected the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:</p> <p>(1) The instrument and operator identification numbers and the equipment identification number.</p> <p>(2) The date the leak was detected and the dates of each attempt to repair the leak.</p> <p>(3) Repair methods applied in each attempt to repair the leak.</p> <p>(4) Maximum instrument reading measured by Method 21 of appendix A-7 of this part at the time the leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping.</p> | 40 CFR Section 60.486a(c)(1)-(4) |
| <p>(5) Repair delayed and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.</p> <p>(6) The signature of the owner or operator whose decision it was that the repair could not be effected without a process shutdown.</p> <p>(7) The expected date of successful repair of the leak if a leak is not repaired within 15 days.</p> <p>(8) Dates of process unit shutdown that occur while the equipment is unrepaired.</p> <p>(9) The date of successful repair of the leak.</p> | 40 CFR Section 60.486a(c)(5)-(9) |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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| <p>(d) The information pertaining to the design requirements for closed vent systems and required control devices described in Section 60.482-10a shall be recorded and kept in a readily accessible location:</p> <p>(1) Detailed schematics, design specifications, and piping and instrumentation diagrams.</p> <p>(2) The dates and descriptions of any changes in the design specifications.</p> <p>(3) A description of the parameter(s) monitored per Section 60.482-10a(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter(s) was selected.</p> <p>(4) Periods when the closed vent systems and required control devices are not operated as designed, including periods when a flare pilot light does not have a flame.</p> <p>(5) Dates of startups and shutdowns of the closed vent systems and required control devices.</p> | 40 CFR Section 60.486a(d) |
| <p>(e) Information pertaining to all equipment subject to the requirements in Section 60.482-1a to 60.482-11a shall be recorded in a log that is kept in a readily accessible location and contain the information specified in 40 CFR Section 486a(e)(1) through (10).</p> | 40 CFR Section 60.486a(e) |
| <p>(f) The following information pertaining to all valves subject to the requirements of Section 60.482-7a(g) and (h), all pumps subject to the requirements of Section 60.482-2a(g), and all connectors subject to the requirements of Section 60.482-11a(e) shall be recorded in a log that is kept in a readily accessible location:</p> <p>(1) A list of identification numbers for valves, pumps, and connectors that are designated as unsafe-to-monitor, an explanation for each valve, pump, or connector stating why the valve, pump, or connector is unsafe-to-monitor, and the plan for monitoring each valve, pump, or connector.</p> <p>(2) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.</p> | 40 CFR Section 60.486a(f) |
| <p>(g) The following information shall be recorded for valves complying with Section 60.483-2a:</p> <p>(1) A schedule of monitoring.</p> <p>(2) The percent of valves found leaking during each monitoring period.</p> | 40 CFR Section 60.486a(g) |
| <p>(h) The following information shall be recorded in a log that is kept in a readily accessible location:</p> <p>(1) Design criterion required in Sections 60.482-2a(d)(5) and 60.482-3a(e)(2) and explanation of the design criterion; and</p> <p>(2) Any changes to this criterion and the reasons for the changes.</p> | 40 CFR Section 60.486a(h) |
| <p>(i) The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in Section 60.480a(d):</p> <p>(1) An analysis demonstrating the design capacity of the affected facility,</p> <p>(2) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and</p> <p>(3) An analysis demonstrating that equipment is not in VOC service.</p> | 40 CFR Section 60.486a(i) |
| <p>(j) Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.</p> <p>(k) The provisions of Section 60.7(b) and (d) do not apply to affected facilities subject to this subpart.</p> | 40 CFR Section 60.486a(j) and (k) |
| REPORTING REQUIREMENTS | hdr |
| <p>(a) Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning six months after the initial startup date.</p> | 40 CFR Section 60.487a(a) |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

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| <p>(b) The initial semiannual report to the Administrator shall include the following information:</p> <p>(1) Process unit identification,</p> <p>(2) Number of valves subject to the requirements of 40 CFR Section 60.482-7a,</p> <p>(3) Number of pumps subject to the requirements of 40 CFR Section 60.482-2a,</p> <p>(4) Number of compressors subject to the requirements of 40 CFR Section 60.482-3a</p> <p>(5) Number of connectors subject to the requirements of 40 CFR Section 60.482-11a</p> | 40 CFR Section 60.487a(b) |
| <p>(c) All semiannual reports to the Administrator shall include the following information, summarized from the information in 40 CFR Section 60.486a;</p> <p>(1) Process unit identification.</p> <p>(2) For each month during the semiannual reporting period,</p> <p>(i) Number of valves for which leaks were detected as described in 40 CFR Section 60.482(7a)(b) or 40 CFR 60.483-2a</p> <p>(ii) Number of valves for which leaks were not repaired as required in 40 CFR Section 60.482-7a(d)(1),</p> <p>(iii) Number of pumps for which leaks were detected as described in Section 60.482-2a(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii),</p> <p>(iv) Number of pumps for which leaks were not repaired as required in Section 60.482-2a(c)(1) and (d)(6),</p> | 40 CFR Section 60.487a(c)(1) and (2)(i)-(2)(iv) |
| <p>continued....</p> <p>(c) All semiannual reports to the Administrator shall include the following information, summarized from the information in 40 CFR Section 60.486a;</p> <p>(2) For each month during the semiannual reporting period,</p> <p>(v) Number of compressors for which leaks were detected as described in Section 60.482-3a(f),</p> <p>(vi) Number of compressors for which leaks were not repaired as required in Section 60.482-3a(g)(1),</p> <p>(vii) Number of connectors for which leaks were detected as described in Section 60.482-11a(b), and</p> <p>(viii) Number of connectors for which leaks were not repaired as required in Section 60.482-11a(d).</p> | 40 CFR Section 60.487a(c)(2)(v)-(viii) |
| <p>(3) Dates of process unit shutdowns which occurred within the semiannual reporting period.</p> <p>(4) Revisions to items reported according to paragraph (b) if changes have occurred since the initial report or subsequent revisions to the initial report.</p> | 40 CFR Section 60.487a(c)(3) and (4) |
| <p>(e) Report the results of all performance tests in accordance with 40 CFR Section 60.8. The provisions of 40 CFR Section 60.8(d) do not apply to affected facilities subject to the provisions of this subpart except than an owner or operator must notify the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests.</p> | 40 CFR Section 60.487a(e) |
| <p>(f) The requirements of paragraphs (a) through (c) of this section remain in force until and unless EPA, in delegating enforcement authority to a state under section 111(c) of the CAA, approves reporting requirements or an alternative means of compliance surveillance adopted by such state. In that event, affected sources within the state will be relieved of the obligation to comply with the requirements of paragraphs (a) through (c) of this section, provided that they comply with the requirements established by the state.</p> | 40 CFR Section 60.487a(f) |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: FS 006 Wetcake storage

| What to do | Why to do it |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Wet Cake Production and Storage: When wet cake byproduct is produced, it may be stored for no more than 72 hours onsite. The wet cake will be moved offsite as soon as possible. This limit does not apply to modified distillers grains with solubles, defined as having a moisture content of less than 50 %. | Minn. R. 7007.0800, subp. 14 Minn. R. 7007.0800, subp. 16(J) |
| Records Requirement: Keep a record of the date of wet cake production, storage, and shipment offsite. | Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J) |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: FS 009 Truck Traffic on Paved Roads

| What to do | Why to do it |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <p>Haul Road (roads used by trucks transporting grain, DDGS, ethanol or denaturant) requirements</p> <ul style="list-style-type: none">- All haul roads must be paved with hot mix asphalt or concrete.- The Permittee shall use only salt (not sand) for wintertime ice abatement on haul roads.- The Permittee shall inspect all haul roads daily for visible silt accumulation, and keep a record on site of inspection.- The Permittee shall sweep/clean all haul roads daily or when silt has accumulated to a visible level on the road, and keep a record on site of each day sweeping/cleaning is conducted- The Permittee shall install signs limiting vehicle speed to 10 mph plant-wide. | Minn. R. ch. 7009 |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: MR 001 NOx**Associated Items:** EU 005 Thermal Oxidizer with HRSG C10

EU 006 Thermal Oxidizer with HRSG C11

GP 006 Thermal Oxidizers with HRSG

| What to do | Why to do it |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| The CEMS/COMS requirements listed below outline the typical standards of 40 CFR pt. 60 when combined with Minn. R. Additional monitoring requirements may also apply to the Facility based on this combination of standards and it is the responsibility of the Facility to meet all applicable requirements. | hdr |
| CEMS Monitor Design: Each CEMS shall be designed to complete a minimum of one cycle of sampling, analyzing, and data recording in each 15-minute period. | 40 CFR Section 60.13(e)(2) |
| CEMS Certification Test Plan: due 30 days before CEMS Certification Test. | 40 CFR Section 60.7(a)(5); Minn. R. 7017.1060, subp. 1 & 2 |
| CEMS Certification Test Pretest Meeting: due 7 days before CEMS Certification Test. | Minn. R. 7017.1060, subp. 3 |
| CEMS Certification Test Report: due 45 days after CEMS Certification Test | Minn. R. 7017.1080, subp. 1, 2, & 4; 40CFR 60.13(c)(2) |
| CEMS Certification Test Report - Microfiche or CD Copy: due 105 days after CEMS Certification Test. | Minn. R. 7017.1080, subp. 3 |
| Continuous Operation: CEMS must be operated and data recorded during all periods of emission unit operation including periods of emission unit start-up, shutdown, or malfunction except for periods of acceptable monitor downtime. This requirement applies whether or not a numerical emission limit applies during these periods. A CEMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment. | 40 CFR Section 60.13(e), Minn. R. 7017.1090, subp. 1 |
| QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan shall be on site and available for inspection within 30 days after monitor certification. The plan shall contain all of the information required by 40 CFR pt. 60, Appendix F, Section 3. | Minn. R. 7017.1170, subp. 2; 40 CFR pt. 60, App. F; section 3 |
| CEMS QA/QC: The owner or operator of an affected facility is subject to the performance specifications listed in 40 CFR pt. 60, Appendix B and shall operate, calibrate, and maintain each CEMS according to the QA/QC procedures in 40 CFR pt. 60, Appendix F as amended and maintain a written QA/QC program available in a form suitable for inspection. | 40 CFR pt. 60, Appendix F; 40 CFR Section 60.13(a) |
| CEMS Daily Calibration Drift Check: Permittees must automatically check the zero (low level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily. The zero and span must, at a minimum, be adjusted whenever the drift exceeds two times the limit specified in 40 CFR pt. 60, Appendix B. 40 CFR pt. 60, Appendix F shall be used to determine out-of-control periods for CEMS. | 40 CFR pt. 60, Appendix F, section 4.1; 40 CFR Section 60.13(d)(1) regarding CEMS; Minn. R. 7017.1170, subp. 3 |
| Cylinder Gas Audit (CGA): due before end of each calendar half-year following CEMS certification test, except that a CGA is not required during any calendar half year in which a RATA was performed. The initial CGA must be performed within 180 days following certification of the CEMS. The CGAs shall be conducted at least three months apart but no more than eight months apart. A CGA shall be conducted according to the procedures in 40 CFR pt. 60, Appendix F, section 5.1.2. If the monitored emission unit was operated for less than 24 hours during the calendar half year, a CGA is not required for that calendar half year. | 40 CFR pt. 60, Appendix F, section 5.1.2; Minn. R. 7017.1170, subp. 4 |
| CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year following CEMS Certification Test. Follow the procedures in 40 CFR pt. 60, Appendix F. | 40 CFR pt. 60, Appendix F, section 5.1.1; Minn. R. 7017.1170, subp. 5 |
| Relative Accuracy Test Audit (RATA) Notification: due 30 days before CEMS Relative Accuracy Test Audit (RATA) . | Minn. R. 7017.1180, subp. 2 |
| Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source. | Minn. R. 7017.1130; 40 CFR Section 60.7(f) |
| Monitoring Data: Reduce all NOx data to 1-hour averages, in accordance with 40 CFR Section 60.13(h). 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. | 40 CFR Section 60.13(h) regarding continuous monitoring systems other than COMS. |

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Guardian Energy LLC
Permit Number: 16100035 - 004

Subject Item: BG 008 Grain Silos

| What to do | Why to do it |
|---------------------------------------------------|--------------|
| PERIODIC MONITORING for limits is found at GP 003 | hdr |

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

04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

Subject Item: BG 011 Ethanol Rail Loadout Shelter

| What to do | Why to do it |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Opacity: less than or equal to 5 percent opacity from truck unloading stations and handling operation fugitive emissions. | Minn. R. 7011.1005, subp. 3(A) |
| The Permittee shall clean up commodities spilled on the driveway and other facility property as required to minimize fugitive emissions to a level consistent with RACT (reasonably available control technology). | Minn. R. 7011.1005, subp. 1(A) |

TABLE B: SUBMITTALS

B-1 04/02/13

Facility Name: Guardian Energy LLC
Permit Number: 16100035 - 004

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

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

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

Chief Air Enforcement
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

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

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

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

Send any application for a permit or permit amendment to:

Fiscal Services
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

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.

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**B-2** 04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

| What to send | When to send | Portion of Facility Affected |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Application for Permit Reissuance | due 180 days before expiration of Existing Permit | Total Facility |
| Notification of the Actual Date of Initial Startup | due 15 days after Initial Startup | FS004 |
| Notification of the Date Construction Began | due 30 days after Start Of Construction Submit the name and number of each unit and the date construction of each unit began. | FS004 |

TABLE B: RECURRENT SUBMITTALS**B-3** 04/02/13

Facility Name: Guardian Energy LLC

Permit Number: 16100035 - 004

| What to send | When to send | Portion of Facility Affected |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Excess Emissions/Downtime Reports (EER's) | due 30 days after end of each calendar quarter following Initial Startup of the Monitor The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions. | MR001 |
| Cylinder Gas Audit (CGA) Results Summary | due 30 days after end of each calendar half-year starting 09/09/2009 | MR001 |
| Report | due 31 days after end of each calendar half-year following Initial Startup that includes the information specified in 40 CFR 60.487. The required information is summarized on pages A-27 and A-28 of this permit. | FS004 |
| 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 |
| Relative Accuracy Test Audit (RATA) Results Summary | due 45 days after end of each calendar year starting 09/09/2009 | MR001 |

APPENDIX MATERIAL

Facility Name: Guardian Energy LLC

Permit Number: 16100035-004

Appendix I Modeling Parameters

Predicted PM10 impact

| Pollutant | Averaging Period | MAAQS Primary Standard (ug/m3) | Background (ug/m3) | Maximum Facility Impact (ug/m3) | MAAQS Result (ug/m3) |
|-----------|------------------|--------------------------------|--------------------|---------------------------------|----------------------|
| PM10 | 24-hour | 150 | 33 | 46.7 | 79.7 |



Microsoft Excel
Worksheet

US Bioenergy

PM10 Modeling Input Data - Point Sources

| Source ID | Description | Stack Height | | Temperature | | Flow Rate | | Diameter | | Emission Rate | |
|-----------|--------------------------|--------------|-------|-------------|-----|-----------|----------|----------|------|---------------|---------|
| | | (m) | (ft) | (K) | (F) | (m/s) | (acfm) | (m) | (ft) | (g/s) | (lb/hr) |
| S10 | Dryers/TO | 38.1 | 125.0 | 422 | 300 | 14.005 | 219948.9 | 3.072 | 10.1 | 0.560086 | 4.45 |
| S20 | Grain Unloading Baghouse | 48.768 | 160.0 | 291.5 | 65 | 19.404 | 47983.8 | 1.219 | 4.0 | 0.259187 | 2.06 |
| S30 | Hammermilling Baghouse | 48.768 | 160.0 | 291.5 | 65 | 31.009 | 28029.7 | 0.737 | 2.4 | 0.151313 | 1.20 |
| S40 | CO2 Scrubber | 22.86 | 75.0 | 291.5 | 65 | 14.054 | 11006.4 | 0.686 | 2.3 | 0.058967 | 0.47 |
| F80_1 | Cooling Tower Cell 1 | 12.192 | 40.0 | 302.6 | 85 | 7.863 | | 7.721 | 25.3 | 0.098526 | 0.78 |
| F80_2 | Cooling Tower Cell 2 | 12.192 | 40.0 | 302.6 | 85 | 7.863 | | 7.721 | 25.3 | 0.098526 | 0.78 |
| F80_3 | Cooling Tower Cell 3 | 12.192 | 40.0 | 302.6 | 85 | 7.863 | | 7.721 | 25.3 | 0.098526 | 0.78 |
| F80_4 | Cooling Tower Cell 4 | 12.192 | 40.0 | 302.6 | 85 | 7.863 | | 7.721 | 25.3 | 0.098526 | 0.78 |
| S70 | Cooling Drum Baghouse | 30.48 | 100.0 | 316.5 | 110 | 5.255 | 12995.0 | 1.219 | 4.0 | 0.070191 | 0.56 |
| S90 | DDGS Loadout Baghouse | 12.192 | 40.0 | 291.5 | 65 | 12.501 | 9089.6 | 0.661 | 2.2 | 0.049191 | 0.39 |

Appendix I Modeling Parameters

US Bioenergy PM10 Modeling Input Data - Area Sources

| Source ID | Description | Release Height | | Easterly Length | | Northerly Length | | Angle | Z-Dim (m) | 24-Hr Emission Rate | |
|-----------|--------------|----------------|------|-----------------|------|------------------|--------|-------|-----------|---------------------|---------|
| | | (m) | (ft) | (m) | (ft) | (m) | (ft) | | | (g/s) | (lb/hr) |
| RD_1 | Road Segment | 1 | 3.3 | 18.3 | 60.0 | 226.1 | 741.8 | 0 | 0 | 5.72E-02 | 0.454 |
| RD_2 | Road Segment | 1 | 3.3 | 22.6 | 74.1 | 333 | 1092.5 | 285 | 0 | 6.97E-02 | 0.553 |
| RD_3 | Road Segment | 1 | 3.3 | 9.75 | 32.0 | 228.9 | 751.0 | 15 | 0 | 2.90E-02 | 0.230 |
| RD_4 | Road Segment | 1 | 3.3 | 14.63 | 48.0 | 165.3 | 542.3 | 285 | 0 | 2.09E-02 | 0.166 |
| RD_5 | Road Segment | 1 | 3.3 | 9.75 | 32.0 | 124.7 | 409.1 | 285 | 0 | 1.86E-02 | 0.148 |
| RD_6 | Road Segment | 1 | 3.3 | 12.83 | 42.1 | 154.1 | 505.6 | 15 | 0 | 1.86E-02 | 0.148 |
| RD_7 | Road Segment | 1 | 3.3 | 22.9 | 75.1 | 47.1 | 154.5 | 15 | 0 | 5.92E-03 | 0.047 |
| RD_8 | Road Segment | 1 | 3.3 | 17.68 | 58.0 | 293.7 | 963.6 | 285 | 0 | 3.72E-02 | 0.295 |

US Bioenergy PM10 Modeling Input Data - Volume Sources

| Source ID | Description | Release Height | | Horizontal Dimension | | Vertical Dimension | | 24-Hr Emission Rate | |
|-----------|----------------------------|----------------|------|----------------------|------|--------------------|------|---------------------|---------|
| | | (m) | (ft) | (m) | (ft) | (m) | (ft) | (g/s) | (lb/hr) |
| FUG1 | Grain Receiving & Handling | 1.83 | 6.0 | 1.13 | 3.7 | 1.7 | 5.6 | 0.062117 | 0.49 |
| FUG2 | DDGS Handling / Storage | 1.83 | 6.0 | 0.85 | 2.8 | 1.7 | 5.6 | 0.01512 | 0.12 |
| FUG3 | Grain Milling Fugitives | 22.86 | 75.0 | 0.54 | 1.8 | 10.63 | 34.9 | 0.00252 | 0.02 |

APPENDIX MATERIAL

Facility Name: Guardian Energy LLC

Permit Number: 16100035-004

Appendix II Odor Plan

Odor Prevention and Response Plan

Appendix II Odor Plan

I. Sources of Odors

Batch Fermentation. Fermentation of sugar produces ethanol and also carbon dioxide (CO₂) as a major by-product. Fermentation occurs in three batch fermentation tanks. The vents of the fermenters, as well as the vents from other atmospheric vessels in the fermentation and mash cooling areas, are all tied into the inlet of one direct contact water scrubber. The gas coming off the fermenters and other vessels flows up through a bed of nylon packing. Water flows down through the bed. A continuous blow-down of this water flows back into the process stream. CO₂ and other non-condensing gases leaving the scrubber are vented to the atmosphere. The water absorbs a high percentage of volatile organic compounds (VOC) which are the primary source of odors at this type of facility.

Distillation/Dehydration. The beer resulting from fermentation runs through a continuous vacuum distillation system to remove and rectify the ethanol. The vapor outlet of the distillation column is piped directly to a set of condensers that discharge liquid ethanol to the 190-proof reservoir. Any CO₂ and other non-condensable gases, which are contained in the beer, end up in the 190-proof reservoir and must be expelled to maintain a vacuum in the system. The exhaust gases are directed to a thermal oxidizer prior to venting to the atmosphere. Thermal oxidizers destroy VOC by combustion, eliminating most of the odor from this part of the plant.

Dried Distillers Grain Drying and Handling. Distillers grain is dried in a rotary dryer system. The current system features recycling of 50 percent of the exhaust gases to the dryer inlet to partially replace the air input and to recover energy. This process results in an inlet air temperature of 200 to 300 degrees F lower than a standard high-excess air dryer system. The forced air and solids exiting the dryer are conveyed to cyclones used to separate and cool the dried grain. Exhaust gases not recycled to the dryer inlet are vented to the thermal oxidizer to destroy VOC and odor.

Ethanol Storage Tanks. The product is pumped daily from the 200,000-gallon 190-proof tank to the 200,000-gallon 200-proof shift tank after the water has been removed from the 190-proof tank by the mole sieve process. Each time ethanol is transferred from shift to storage, a smaller amount of natural gasoline (denaturant) is pumped from a 200,000-gallon denaturant storage tank to one of the 1,500,000-gallon denatured ethanol storage tank involved. This amount is equal to five percent of the amount of ethanol transferred. All storage tanks will be located above ground in a lined, secondary containment area. Each tank has a floating roof to reduce evaporative loss from the tank, which in turn reduces odors.

Fugitive & Miscellaneous Emissions. Potential fugitive emissions have been considered for all applicable processes, including but not limited to grain handling and milling, feed transfers, piping components, product loading, and on-site roads. Additional emissions (summarized here as miscellaneous) have also been quantified in the air permit application package. Such emissions include the cooling tower, emergency fire water pump, and industrial flares.

Appendix II Odor Plan

Wet Cake (Distillers Grains) – Wet cake will be sold and shipped as quickly as possible to avoid the potential for odor impacts near the facility. Wet cake will not be stored for more than 72 hours unless the outside temperature is less than 55 °F. Wetcake is a fast-turnaround product that is not typically produced unless there is an immediate plan to ship it out to a customer.

Other emissions sources – All other emission sources planned for the facility were evaluated as having insignificant odor potential. These include: corn unloading and DDGS loading, corn milling, DDGS cooling, maintenance activities, warehousing and transport engines, fire control equipment, office and janitorial activities, heating, small engine fuel storage, water for boilers, and sewer plumbing.

II. Operation and Maintenance Requirements

The permit requires an Operation and Maintenance Plan for each air pollution control device. O and M Plans at a minimum must include a list of all air pollution control equipment and control practices, 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.

The permit also requires a daily visual check of each air pollution control device and daily records of at least one operational parameter for each, indicative of proper operation.

III. Notification

The MPCA must be notified within 24 hours of a breakdown of more than one hour as specified in MN Rules 7019.1000. Deviations from operating conditions specified in the permit must be recorded and reported with a semiannual deviations report.

APPENDIX MATERIAL

Facility Name: Guardian Energy LLC

Permit Number: 16100035-004

Appendix III Insignificant Activities

| Insignificant Activity | General Applicable Emission Limit | Discussion |
|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fuel use: space heaters fueled by, kerosene, natural gas, or propane | PM \leq 0.4 lb/MMBtu, Opacity \leq 20% with exceptions (Minn. R. 7011.0515) | For this unit, based on the fuels used and EPA published emissions factors, it is highly unlikely that it could violate the applicable requirement. |
| Fuel burning equipment with a capacity less than 500,000 Btu/hour | PM \leq 0.4 lb/MMBtu, Opacity \leq 20% with exceptions (Minn. R. 7011.0515) | For these units, based on the fuels used and EPA published emissions factors, it is highly unlikely that they could violate the applicable requirements. |
| Emissions from a laboratory, as defined in Minn. R. 7007.1300, subp. 3(G) | PM, variable depending on airflow Opacity \leq 20% (Minn. R. 7011.0515) | These are very small, intermittent, bench-top operations that typically do not have emissions. It is highly unlikely that they could violate the applicable requirement. |
| Equipment used for hydraulic or hydrostatic testing | PM, variable depending on airflow Opacity \leq 20% (Minn. R. 7011.0515) | While no known emissions estimation method exists for these units, based on general knowledge of how they operate, it is highly unlikely that they could generate particulate matter. In addition, these units would be operated and vented directly into a building, so testing is not feasible. |
| Brazing, soldering or welding equipment | PM, variable depending on airflow Opacity \leq 20% (Minn. R. 7011.0515) | For these units, based on EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, these units are typically operated and vented inside a building, so testing for PM or opacity is not feasible. |
| Blueprint copiers and photographic processes | Opacity \leq 20% (Minn. R. 7011.0105 or 7011.0110) | While no known emissions estimation method exists for these units, based on general knowledge of how they operate, it is highly unlikely that they could generate visible emissions. In addition, these units would be operated and vented directly into an office area, so monitoring or testing is not feasible. |

| Insignificant Activity | General Applicable Emission Limit | Discussion |
|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cleaning operations: alkaline/phosphate cleaners and associated burners | PM, variable depending on airflow Opacity $\leq 20\%$ (Minn. R. 7011.0610 and Minn. R. 7011.0715) | For these units, there are some factors available for the burners, but very little information regarding the cleaning operation itself. However, based on general knowledge of how they operate, it is highly unlikely that they could violate the applicable requirement or that testing would be feasible. |
| Individual units with actual emissions less than 2000 lb/year of certain pollutants | PM, variable with airflow Opacity $\leq 20\%$ (with exceptions) (Minn. R. 7011.0715 and Minn. R. 7011.610) $SO_2 \leq 0.5$ lb/MMBtu Opacity $\leq 20\%$ (Minn. R. 7011.2300) | Examples are natural gas combustion units and emergency generators. 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. Frequently, units with low emissions are operated and vented inside a building, so testing for PM or opacity is not feasible. |
| Infrequent use of spray paint for routine housekeeping or plant upkeep activities not associated with primary production processes | PM, variable depending on airflow or process weight rate Opacity $\leq 20\%$ (Minn. R. 7011.0715) | While spray equipment will have the potential to emit particulate matter, these particular activities are those not associated with production, so they would be infrequent and usually occur outdoors. Testing or monitoring is not feasible. |