



INTERMEDIATE STATE PERMIT TO OPERATE

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to operate the air contaminant source(s) described below, in accordance with the laws, rules, and conditions set forth here in.

Intermediate Operating Permit Number: OP2008-043

Expiration Date: SEP 17 2013

Installation ID: 007-0054

Project Number: 2006-12-076

Installation Name and Address

Poet Biorefining - Laddonia
809 North Pine Street
Laddonia, MO 63352
Audrain County

Parent Company's Name and Address

Poet Biorefining - Laddonia
809 North Pine Street
Laddonia, MO 63352

Installation Description:

Poet Biorefining, LLC, is a dry mill ethanol plant. The installation's processes include the receiving of corn; substrate conditioning; batch fermentation; distillation/dehydration; dried distiller's grain & solubles (DDGS) processing; storage and loading of denatured ethanol (five percent gasoline) and loading of DDGS. The installation has accepted federally enforceable emission limits of less than one hundred tons of Volatile Organic Compounds (VOC) and Carbon Monoxide (CO) per year, fifty tons of Particulate Matter less than ten microns (PM₁₀) per year, ten tons of any individual Hazardous Air Pollutant (HAP) per year and twenty-five tons of combined HAP per year to qualify for an Intermediate State Operating Permit.

SEP 18 2008

Effective Date


Director or Designee
Department of Natural Resources

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I. Installation Description and Equipment Listing

INSTALLATION DESCRIPTION

Poet Biorefining, LLC, is a dry mill ethanol plant. The installation's processes include the receiving of corn; substrate conditioning; batch fermentation; distillation/dehydration; dried distiller's grain & solubles (DDGS) processing; storage and loading of denatured ethanol (five percent gasoline) and loading of DDGS. The installation has accepted federally enforceable emission limits of less than one hundred tons of Volatile Organic Compounds (VOC) and Carbon Monoxide (CO) per year, fifty tons of Particulate Matter less than ten microns (PM₁₀) per year, ten tons of any individual Hazardous Air Pollutant (HAP) per year and twenty-five tons of combined HAP per year to qualify for an Intermediate State Operating Permit.

Reported Air Pollutant Emissions, tons per year							
Year	Particulate Matter ≤ Ten Microns (PM-10)	Sulfur Oxides (SO _x)	Nitrogen Oxides (NO _x)	Volatile Organic Compounds (VOC)	Carbon Monoxide (CO)	Lead (Pb)	Hazardous Air Pollutants (HAPs)
2007	36.92	2.37	81.34	62.04	53.32	--	6.81
2006	5.39	0.36	12.41	9.60	24.00	--	2.21

EMISSION UNITS WITH LIMITATIONS

The following list provides a description of the equipment at this installation which emits air pollutants and identified as having unit-specific emission limitations.

Emission Unit Number	Description of Emission Unit	2006 EIQ EP Number
EU0010	Corn Receiving	EP-01
EU0020	Corn Transfer	EP-01
EU0030	Corn Storage	EP-01
EU0040	DDGS Transfer & Loading	EP-01
EU0050	Corn Scalper	EP-02
EU0060	Corn Conveyors	EP-02
EU0070	Corn Surge Bin	EP-02
EU0080	Hammermill 1	EP-03
EU0090	Hammermill 2	EP-04
EU0100	Hammermill 3	EP-05
EU0110	Hammermill 4	EP-06
EU0120	Pneumatic Flour Receiver	EP-07
EU0130	Fermentation Tanks	EP-08
EU0140	Beer Well	EP-08
EU0150	Distillation	EP-08
EU0160	Centrifuges	EP-09
EU0170	DDGS Dryer 1	EP-09
EU0180	DDGS Dryer 2	EP-09
EU0190	DDGS Fluid Bed Cooler	EP-10
EU0200	DDGS Storage Silo	EP-11
EU0210	DDGS Storage Silo Bypass	EP-12

<u>Emission Unit Number</u>	<u>Description of Emission Unit</u>	<u>2006 EIQ EP Number</u>
EU0220	Boiler 1	EP-13
EU0230	Boiler 2	EP-14
EU0240	Denatured Ethanol Truck Loadout	EP-15
EU0250	Denatured Ethanol Railcar Loadout	EP-16
EU0260	Haul Roads	EP-FS-02
EU0270	VOC Equipment Leaks	EP-FS-03
EU0280	Denaturant (Natural Gasoline) Storage Tank	EP-TK-01
EU0290	190 Proof Ethanol Storage Tank	EP-TK-02
EU0300	200 Proof Ethanol Storage Tank	EP-TK-03
EU0310	Denatured Ethanol Storage Tank 1	EP-TK-04
EU0320	Denatured Ethanol Storage Tank 2	EP-TK-05

EMISSION UNITS WITHOUT LIMITATIONS

The following list provides a description of the equipment, which does not have unit specific limitations at the time of permit issuance.

Description of Emission Source

Grain Building Fugitive Particulates	EP-FS-01
Corrosion Inhibitor Storage Tank, 1000-gallons	EP-TK-06
Cooling Tower	EP-CWT
Three 505,000 Bushel Storage Bins	NA

DOCUMENTS INCORPORATED BY REFERENCE

This permit incorporates the following documents by reference:

- 1) Air Pollution Control Program Construction Permit 102005-015, issued October 20, 2005

II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect on the date of permit issuance.

PERMIT CONDITION PW001

10 CSR 10-6.060 Construction Permits Required
Construction Permit 102005-015, Issued October 20, 2005

Emission Limitations:

- 1) Poet Biorefining shall emit less than fifty (50) tons of particulate matter less than ten microns in diameter (PM₁₀) from this installation in any consecutive twelve-month period.
[Construction Permit 102005-015, Special Condition 2.A]
- 2) Poet Biorefining shall emit less than 100 tons of Volatile Organic Compounds (VOCs) from this installation in any consecutive twelve-month period.
[Construction Permit 102005-015, Special Condition 2.B]
- 3) Poet Biorefining shall emit less than 100 tons of Carbon Monoxide (CO) from this installation in any consecutive twelve-month period. [Construction Permit 102005-015, Special Condition 2.C]
- 4) Poet Biorefining shall emit less than ten (10) tons of any individual Hazardous Air Pollutants (HAPs), specifically acetaldehyde, and twenty-five (25) tons of combined HAP from this installation in any consecutive twelve-month period. The remaining HAPs of concern shall be below their respective Screen Modeling Action Level (SMAL) as indicated in Attachment F.
[Construction Permit 102005-015, Special Condition 2.D]

Monitoring/Recordkeeping:

- 1) Poet Biorefining shall record the monthly and the sum of the most recent consecutive twelve (12) months PM₁₀ emissions in tons from this installation. These records shall be kept on-site for five (5) years and shall be made immediately available for inspection to Department of Natural Resources' personnel upon request. Attachment A, Monthly PM₁₀ Emission Tracking Record, or an equivalent form shall be used for this purpose. The emission rates shall be verified through performance testing, as detailed below under Testing. [Construction Permit 102005-015, Special Condition 2.A(1)]
- 2) Poet Biorefining shall record the monthly and the sum of the most recent consecutive twelve (12) months VOC emissions in tons from this installation. These records shall be kept on-site for five (5) years and shall be made immediately available for inspection to Department of Natural Resources' personnel upon request. Attachment B, Monthly VOC Emission Tracking Record, or an equivalent form shall be used for this purpose. The emission rates shall be verified through performance testing, as detailed below under Testing. [Construction Permit 102005-015, Special Condition 2.B(1)]
- 3) Poet Biorefining shall record the monthly and the sum of the most recent consecutive twelve (12) months CO emissions in tons from this installation. These records shall be kept on-site for five (5) years and shall be made immediately available for inspection to Department of Natural Resources' personnel upon request. Attachment C, Monthly CO Emission Tracking Record, or an equivalent form shall be used for this purpose. The emission rates shall be verified through performance testing, as detailed below under Testing. [Construction Permit 102005-015, Special Condition 2.C(1)]

- 4) Poet Biorefining shall record the monthly and the sum of the most recent consecutive twelve (12) months HAP emissions in tons from this installation. These records shall be kept on-site for five (5) years and shall be made immediately available for inspection to Department of Natural Resources' personnel upon request. Attachment D, Monthly Individual HAP Emission Tracking Record, Attachment E, Monthly Combined HAP Emission Tracking Record or an equivalent form shall be used for this purpose. The emission rates shall be verified through performance testing, as detailed below under Testing. [Construction Permit 102005-015, Special Condition 2.D(1)]

Testing:

Poet Biorefining shall conduct performance tests to verify the emission rates as follows:

- 1) The wet scrubbers (CE-08), the thermal oxidizer (CE-11), and the fluid bed cooler (CE-12) shall be tested to determine the VOC and aggregate HAP emission rates when all the processes controlled by these devices are in operation. These emission rates shall be used in Attachments B and E for compliance with Emission Limitations number 2 and number 4 (Special Condition 2.B. and 2.D). [Construction Permit 102005-015, Special Condition 8.A(1)]
- 2) The wet scrubbers (CE-08), the thermal oxidizer (CE-11), and the fluid bed cooler (CE-12) shall be tested to determine the emission rates of the following HAPs: acetaldehyde, acrolein, formaldehyde and methanol. These emission rates shall be used in Attachment D for compliance with Emission Limitation number 4 (Special Condition 2.D). [Construction Permit 102005-015, Special Condition 8.A(2)]
- 3) The thermal oxidizer (CE-11) shall be tested to determine the CO emission rate when in operation. This emission rate shall be used in Attachment C for compliance with Emission Limitation 3 (Special Condition 2.C). [Construction Permit 102005-015, Special Condition 8.A(3)]
- 4) The stacks associated EU0010 through EU0120 and EU0160 through EU0210 (Special Condition 2.E) shall be tested to determine the PM₁₀ emission rates. These emission rates shall not exceed the amounts listed in Permit Conditions EU0010 through EU0120-001 and EU0160 through EU0210-001 (Special Condition 2.E). In addition, these emission rates shall be used in Attachment A for compliance with Emission Limitation 1 (Special Condition 2.A). [Construction Permit 102005-015, Special Condition 8.A(4)]
- 5) Boiler number 1 and Boiler number 2 (EU0220 and EU0230), shall be tested to determine the NO_x emission rate when in operation. This emission rate shall not exceed the amount listed in Permit Conditions EU0220 and EU0230-001 (Special Condition 2.F). [Construction Permit 102005-015, Special Condition 8.A(5)]
- 6) The denatured ethanol truck loadout (EU0240) shall be tested to determine the control efficiency of the flare and the VOC emission rate prior to and post flare combustion during loadout operations. These emission rates and/or control efficiency shall be used in Attachment B for compliance with Emission Limitation 2 (Special Condition 2.B). [Construction Permit 102005-015, Special Condition 8.A(6)]
- 7) The testing required above under Testing 4 and 5 (Special Condition 8.A(4) and 8.A(5)) may be limited to conducting tests on a representative piece(s) of each type of equipment upon approval by the director. In addition, an alternate method(s) of quantifying the emission rates of criteria air pollutants (e.g. PM₁₀ and NO_x) from these sources may be used in place of the above testing requirement if requested by Poet Biorefining and approved by the director. [Construction Permit 102005-015, Special Condition 8.B]
- 8) These tests shall be performed within sixty (60) days after achieving the maximum production rate of the installation, but not later than 180 days after initial start-up for commercial operation and shall

- be conducted in accordance with the stack test procedures outlined below in Proposed Test Plan (Special Condition 9). [Construction Permit 102005-015, Special Condition 8.C]
- 9) Poet Biorefining shall conduct performance tests to verify the emission rates as indicated in Testing 1 (Special Condition 8.A) once every five (5) years from the date of the most recent performance tests. [Construction Permit 102005-015, Special Condition 8.D]
 - 10) Proposed Test Plan - A completed Proposed Test Plan Form must be submitted to the Air Pollution Control Program thirty (30) days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The Proposed Test Plan may serve the purpose of notification and must be approved by the director prior to conducting the required emission testing. [Construction Permit 102005-015, Special Condition 9.A]
 - 11) Two (2) copies of a written report of the performance test results shall be submitted to the director within thirty (30) days of completion of any required testing. The report must include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one (1) sample run. [Construction Permit 102005-015, Special Condition 9.B]
 - 12) The test report is to fully account for all operational and emission parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations. [Construction Permit 102005-015, Special Condition 9.C]
 - 13) If the performance testing required by this permit (as established in Construction Permit 102005-015) indicates that any of the emission limits are being exceeded, Poet Biorefining must propose a plan to the Air Pollution Control Program within thirty (30) days of submitting the performance test results. This plan must demonstrate how Poet Biorefining will reduce the emission rates below those stated in Emission Limitations (Special Condition 2). Poet Biorefining shall implement any such plan immediately upon its approval by the director. [Construction Permit 102005-015, Special Condition 9.D]

Reporting:

- 1) Poet Biorefining shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten (10) days after the end of the month during which the records required by Recordkeeping 1 (Special Condition 2.A(1)) show that the emission limitation has been exceeded. [Construction Permit 102005-015, Special Condition 2.A(2)]
- 2) Poet Biorefining shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten (10) days after the end of the month during which the records required by Recordkeeping 2 (Special Condition 2.B(1)) show that the emission limitation has been exceeded. [Construction Permit 102005-015, Special Condition 2.B(2)]
- 3) Poet Biorefining shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten (10) days after the end of the month during which the records required by Recordkeeping 3 (Special Condition 2.C(1)) show that the emission limitation has been exceeded. [Construction Permit 102005-015, Special Condition 2.C(2)]
- 4) Poet Biorefining shall report to the department's Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten (10) days after the end of the month during which the records required by Recordkeeping 4 (Special Condition 2.D(1)) show that the emission limitation has been exceeded. [Construction Permit 102005-015, Special Condition 2.D(2)]

- 5) If a situation arises such that Poet Biorefining wishes to alter Emission Limitation Number 1 of this Permit Condition (Special Condition 2.A) in order to allow the existing installation to emit more than fifty (50) tons per year of PM₁₀, Poet Biorefining will be required to conduct an ambient air quality evaluation of the area to demonstrate compliance with the National Ambient Air Quality Standard (NAAQS) in accordance with 10 CSR 10-6.060(6). This evaluation will include a refined modeling analysis of emissions from Poet Biorefining in addition to existing installations in the area. A complete application with approved analysis must be submitted to the Air Pollution Control Program at least 180 days prior to desired production increase.
[Construction Permit 102005-015, Special Condition 11.A]
- 6) If a situation arises such that Poet Biorefining wishes to alter Emission Limitations 2 or 3 of this Permit Condition (Special Condition 2.B. and/or 2.C) in order to allow the existing installation to emit more than 100 tons per year of VOC and/or CO, Poet Biorefining will be required to conduct a New Source Review in accordance with 10 CSR 10-6.060(8). Such a review will include a Best Available Control Technology (BACT) analysis utilizing current technologies and any other requirements that the director deems necessary pursuant to 10 CSR 10-6.060(8).
[Construction Permit 102005-015, Special Condition 11.B]
- 7) If a subsequent NAAQS evaluation for this area should reveal a violation(s) of the NAAQS in the immediate area of the new source and if it is further demonstrated that the new source is either the cause or is contributing to the violation(s), the director may require Poet Biorefining to submit a corrective action plan to address the NAAQS violation(s) or the portion of the NAAQS violation(s) that is caused by the new source. This corrective action plan, if requested, shall be submitted within thirty (30) days and shall be adequate to timely and significantly mitigate the emission of PM₁₀ to address the situation causing the NAAQS violation(s). Poet Biorefining shall implement any such corrective action plan immediately upon its approval by the director. Failure to either submit or implement such a plan shall be a violation of the permit.
[Construction Permit 102005-015, Special Condition 12]

III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect on the date of permit issuance.

EU0010 – CORN RECEIVING EU0020 – CORN TRANSFER EU0030 – CORN STORAGE EU0040 – DDGS TRANSFER & LOADING			
Emission Unit	Description	Manufacturer/ Model #	2006 EIQ Reference #
EU0010	Corn Receiving: truck and railcar unloading of corn into receiving pits; vented to baghouse (CE-01); MHDR 840 tons corn/hr; construction date 2005	Schalgel/ Custom	EP-01
EU0020	Corn Transfer: corn elevators and conveyor belts to storage bins; equipment enclosed and vented to baghouse (CE-01); MHDR 840 tons corn/hr; construction date 2005	Schalgel/ Custom	EP-01
EU0030	Corn Storage: storage bin vents; vented to baghouse (CE-01); MHDR 840 tons corn/hr; construction date 2005	Schalgel/ Custom	EP-01
EU0040	DDGS Transfer & Loading: distilled dried grain & solubles (DDGS) are pneumatically transferred to storage silos for loadout; emissions vented to baghouse (CE-01); MHDR 200 tons DDGS/hr; construction date 2005	Schalgel/ Custom	EP-01

<p>PERMIT CONDITION (EU0010 through EU0040)-001 10 CSR 10-6.060 Construction Permits Required Construction Permit 102005-015, Issued October 20, 2005 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants 10 CSR 10-6.400 Restriction of Emission of Particulate Matter from Industrial Processes</p>
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Emission Limitation:

Poet Biorefining shall not discharge PM₁₀ into the atmosphere from the stack (SV-01) associated with Corn Receiving, Corn Transfer, Corn Storage and DDGS Transfer & Loading (EU0010 through EU0040) in excess of 1.00 lb/hr. This emission rate shall be verified through performance testing, as detailed in Permit Condition PW001. [Construction Permit 102005-015, Special Condition 2.E]

Operational Specifications:

- 1) The baghouse (CE-01) must be in use at all times when the associated equipment is in operation. [Construction Permit 102005-015, Special Condition 3.A]
- 2) The baghouse(s) and any related instrumentation or equipment shall be operated and maintained in accordance with the manufacturer’s specifications. The baghouse(s) shall be equipped with a gauge or meter that indicates the pressure drop across each baghouse. This gauge or meter shall be located in such a way it may be easily observed by Department of Natural Resources’ employees. [Construction Permit 102005-015, Special Condition 3.B]

- 3) Replacement bags for all baghouse(s) shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance). [Construction Permit 102005-015, Special Condition 3.C]

Monitoring/Recordkeeping:

- 1) Visible emissions will be used as an indicator of the proper operation of the control device. During proper operation, no visible emissions are expected from this emission unit. The existence of visible emissions will indicate a decrease in the efficiency of the control device and corrective actions will be implemented: [Construction Permit 102005-015, Special Condition 3.D]
 - a) Visible emissions from the exhaust shall be monitored on a daily basis when the process is in operation.
 - b) The duration of the observation shall be for a two minute time period.
 - c) The condition of no visible emissions is considered normal for this emission unit. When visible emissions are noted from the emission unit, it shall be documented and corrective actions taken.
- 2) The permittee shall conduct opacity readings on the emission unit(s) using the procedures contained in U.S. EPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow.
- 3) The observation of visible emissions from this emission unit will be considered an excursion and corrective actions shall be implemented within a reasonable period. An excursion does not necessarily indicate a violation of the applicable requirement. When the level of excursions exceed three percent of the total number of observations in a six month period and corrective actions fail to return the emission unit to a no visible emission condition, then the permittee shall conduct source testing within ninety days of the last excursion to demonstrate compliance with 10 CSR 10-6.400. If the test demonstrates noncompliance with the above emission limitation, the permittee shall propose a schedule to implement further corrective actions to bring the source into compliance and demonstrate that compliance. [Construction Permit 102005-015, Special Condition 3.E]
- 4) Poet Biorefining shall monitor and record the operating pressure drop across the baghouse(s) at least once in every twenty-four hour period when the associated equipment is operated. The operating pressure drop shall be maintained within the normal operating range specified by the manufacturer's performance warranty. If the pressure drop reading should fall outside of this normal operating range, then the associated equipment shall be shut down as quickly as is reasonably practical. Corrective actions shall be taken to address the cause of the non-normal pressure drop and the baghouse(s) shall be returned to normal operation before restarting the equipment. [Construction Permit 102005-015, Special Condition 3.F]
- 5) Poet Biorefining shall inspect the baghouse(s) at least once every six months and at a minimum, conduct the following activities: [Construction Permit 102005-015, Special Condition 3.G]
 - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
- 6) The permittee shall maintain records of all visible emissions observation results (see Attachment G-1 or G-2), noting:
 - a) Whether any air emissions (except for water vapor) were visible from the emission units,
 - b) All emission units from which visible emissions occurred, and
 - c) Whether the visible emissions were normal for the process.
- 7) The permittee shall maintain records of any equipment malfunctions. (see Attachment H)

- 8) Attachments G-1, G-2 and H contain logs including these recordkeeping requirements. These logs, or equivalent forms created by the permittee, must be used to certify compliance with this requirement.
- 9) All records shall be maintained for five years.
- 10) These records shall be made available immediately for inspection to the Department of Natural Resources' personnel upon their verbal request and presentation of identification.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri, 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded this permit condition and/or normal pressure drop range.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

EU0050 – CORN SCALPER EU0060 – CORN CONVEYORS EU0070 – CORN SURGE BIN			
Emission Unit	Description	Manufacturer/ Model #	2006 EIQ Reference #
EU0050	Corn Scalper: corn cleaning; vented to baghouse (CE-02); MHDR 140 tons corn/hr; construction date 2005	Law Marot/ C4-1260	EP-02
EU0060	Corn Conveyors: corn elevator and conveyor belts; vented to baghouse (CE-02); MHDR 140 tons corn/hr; construction date 2005	Law Marot/ C4-1260	EP-02
EU0070	Corn Surge Bin: corn surge bin loading; vented to baghouse (CE-02); MHDR 140 tons corn/hr; construction date 2005	Law Marot/ C4-1260	EP-02

PERMIT CONDITION (EU0050 through EU0070)-001 10 CSR 10-6.060 Construction Permits Required Construction Permit 102005-015, Issued October 20, 2005 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants 10 CSR 10-6.400 Restriction of Emission of Particulate Matter from Industrial Processes

Emission Limitation:

Poet Biorefining shall not discharge PM₁₀ into the atmosphere from the stack (SV-02) associated with Corn Scalper, Corn Conveyors and Corn Surge Bin (EU0050 through EU0070) in excess of 0.11 lbs/hr. This emission rate shall be verified through performance testing, as detailed in Permit Condition PW001. [Construction Permit 102005-015, Special Condition 2.E]

Operational Specifications:

- 1) The baghouse (CE-02) must be in use at all times when the associated equipment is in operation. [Construction Permit 102005-015, Special Condition 3.A]
- 2) The baghouse(s) and any related instrumentation or equipment shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse(s) shall be equipped with a gauge or meter that indicates the pressure drop across each baghouse. This gauge or meter shall be located in such a way it may be easily observed by Department of Natural Resources' employees. [Construction Permit 102005-015, Special Condition 3.B]

- 3) Replacement bags for all baghouse(s) shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance). [Construction Permit 102005-015, Special Condition 3.C]

Monitoring/Recordkeeping:

- 1) Visible emissions will be used as an indicator of the proper operation of the control device. During proper operation, no visible emissions are expected from this emission unit. The existence of visible emissions will indicate a decrease in the efficiency of the control device and corrective actions will be implemented: [Construction Permit 102005-015, Special Condition 3.D]
 - a) Visible emissions from the exhaust shall be monitored on a daily basis when the process is in operation.
 - b) The duration of the observation shall be for a two minute time period.
 - c) The condition of no visible emissions is considered normal for this emission unit. When visible emissions are noted from the emission unit, it shall be documented and corrective actions taken.
- 2) The permittee shall conduct opacity readings on the emission unit(s) using the procedures contained in U.S. EPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow.
- 3) The observation of visible emissions from this emission unit will be considered an excursion and corrective actions shall be implemented within a reasonable period. An excursion does not necessarily indicate a violation of the applicable requirement. When the level of excursions exceed three percent of the total number of observations in a six month period and corrective actions fail to return the emission unit to a no visible emission condition, then the permittee shall conduct source testing within ninety days of the last excursion to demonstrate compliance with 10 CSR 10-6.400. If the test demonstrates noncompliance with the above emission limitation, the permittee shall propose a schedule to implement further corrective actions to bring the source into compliance and demonstrate that compliance. [Construction Permit 102005-015, Special Condition 3.E]
- 4) Poet Biorefining shall monitor and record the operating pressure drop across the baghouse(s) at least once in every twenty-four hour period when the associated equipment is operated. The operating pressure drop shall be maintained within the normal operating range specified by the manufacturer's performance warranty. If the pressure drop reading should fall outside of this normal operating range, then the associated equipment shall be shut down as quickly as is reasonably practical. Corrective actions shall be taken to address the cause of the non-normal pressure drop and the baghouse(s) shall be returned to normal operation before restarting the equipment. [Construction Permit 102005-015, Special Condition 3.F]
- 5) Poet Biorefining shall inspect the baghouse(s) at least once every six months and at a minimum, conduct the following activities: [Construction Permit 102005-015, Special Condition 3.G]
 - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
- 6) The permittee shall maintain records of all visible emissions observation results (see Attachment G-1 or G-2), noting:
 - a) Whether any air emissions (except for water vapor) were visible from the emission units,
 - b) All emission units from which visible emissions occurred, and
 - c) Whether the visible emissions were normal for the process.
- 7) The permittee shall maintain records of any equipment malfunctions. (see Attachment H)

- 8) Attachments G-1, G-2, and H contain logs including these recordkeeping requirements. These logs, or equivalent forms created by the permittee, must be used to certify compliance with this requirement.
- 9) All records shall be maintained for five years.
- 10) These records shall be made available immediately for inspection to the Department of Natural Resources' personnel upon their verbal request and presentation of identification.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri, 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded this permit condition and/or normal pressure drop range.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

EU0080 THROUGH EU0110 – HAMMERMILLS #1, #2, #3 AND #4			
Emission Unit	Description	Manufacturer/Model #	2006 EIQ Reference #
EU0080	Hammermill #1: grain grinding; vented to baghouse (CE-03); MHDR 22 tons corn/hr; construction date 2005	Roskamp-Champion/HM54-48	EP-03
EU0090	Hammermill #2: grain grinding; vented to baghouse (CE-04); MHDR 22 tons corn/hr; construction date 2005	Roskamp-Champion/HM54-48	EP-04
EU0100	Hammermill #3: grain grinding; vented to baghouse (CE-05); MHDR 22 tons corn/hr; construction date 2005	Roskamp-Champion/HM54-48	EP-05
EU0110	Hammermill #4: grain grinding; vented to baghouse (CE-06); MHDR 22 tons corn/hr; construction date 2005	Roskamp-Champion/HM54-48	EP-06

<p>PERMIT CONDITION (EU0080 through EU0110)-001 10 CSR 10-6.060 Construction Permits Required Construction Permit 102005-015, Issued October 20, 2005 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants 10 CSR 10-6.400 Restriction of Emission of Particulate Matter from Industrial Processes</p>
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Emission Limitations:

Poet Biorefining shall not discharge PM₁₀ into the atmosphere from the following stacks in excess of the listed amounts. These emission rates shall be verified through performance testing, as detailed in Permit Condition PW001. [Construction Permit 102005-015, Special Condition 2.E]

Emission Unit	Stack #	Control ID	Emission Point	Description	PM ₁₀ Lbs/hr
EU0080	SV-03	CE-03	EP-03	Hammermill #1	0.51
EU0090	SV-04	CE-04	EP-04	Hammermill #2	0.51
EU0100	SV-05	CE-05	EP-05	Hammermill #3	0.51
EU0110	SV-06	CE-06	EP-06	Hammermill #4	0.51

Operational Specifications:

- 1) The baghouses listed below must be in use at all times when the associated equipment is in operation: [Construction Permit 102005-015, Special Condition 3.A]

Emission Unit	Control ID No.	Emission Point	Emission Unit Controlled
EU0080	CE-03	EP-03	Hammermill #1
EU0090	CE-04	EP-04	Hammermill #2
EU0100	CE-05	EP-05	Hammermill #3
EU0110	CE-06	EP-06	Hammermill #4

- 2) The baghouse(s) and any related instrumentation or equipment shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse(s) shall be equipped with a gauge or meter that indicates the pressure drop across each baghouse. This gauge or meter shall be located in such a way it may be easily observed by Department of Natural Resources' employees. [Construction Permit 102005-015, Special Condition 3.B]
- 3) Replacement bags for all baghouse(s) shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance). [Construction Permit 102005-015, Special Condition 3.C]

Monitoring/Recordkeeping:

- 1) Visible emissions will be used as an indicator of the proper operation of the control device. During proper operation, no visible emissions are expected from this emission unit. The existence of visible emissions will indicate a decrease in the efficiency of the control device and corrective actions will be implemented: [Construction Permit 102005-015, Special Condition 3.D]
- a) Visible emissions from the exhaust shall be monitored on a daily basis when the process is in operation.
 - b) The duration of the observation shall be for a two minute time period.
 - c) The condition of no visible emissions is considered normal for this emission unit. When visible emissions are noted from the emission unit, it shall be documented and corrective actions taken.
- 2) The permittee shall conduct opacity readings on the emission unit(s) using the procedures contained in U.S. EPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow.
- 3) The observation of visible emissions from this emission unit will be considered an excursion and corrective actions shall be implemented within a reasonable period. An excursion does not necessarily indicate a violation of the applicable requirement. When the level of excursions exceed three percent of the total number of observations in a six month period and corrective actions fail to return the emission unit to a no visible emission condition, then the permittee shall conduct source testing within ninety days of the last excursion to demonstrate compliance with 10 CSR 10-6.400. If the test demonstrates noncompliance with the above emission limitation the permittee shall propose a schedule to implement further corrective actions to bring the source into compliance and demonstrate that compliance. [Construction Permit 102005-015, Special Condition 3.E]
- 4) Poet Biorefining shall monitor and record the operating pressure drop across the baghouse(s) at least once in every twenty-four hour period when the associated equipment is operated. The operating pressure drop shall be maintained within the normal operating range specified by the manufacturer's performance warranty. If the pressure drop reading should fall outside of this normal operating range, then the associated equipment shall be shut down as quickly as is reasonably practical.

Corrective actions shall be taken to address the cause of the non-normal pressure drop and the baghouse(s) shall be returned to normal operation before restarting the equipment.

[Construction Permit 102005-015, Special Condition 3.F]

- 5) Poet Biorefining shall inspect the baghouse(s) at least once every six months and at a minimum, conduct the following activities: [Construction Permit 102005-015, Special Condition 3.G]
 - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
- 6) The permittee shall maintain records of all visible emissions observation results (see Attachment G-1 or G-2), noting:
 - a) Whether any air emissions (except for water vapor) were visible from the emission units,
 - b) All emission units from which visible emissions occurred, and
 - c) Whether the visible emissions were normal for the process.
- 7) The permittee shall maintain records of any equipment malfunctions. (see Attachment H)
- 8) Attachments G-1, G-2, and H contain logs including these recordkeeping requirements. These logs, or equivalent forms created by the permittee, must be used to certify compliance with this requirement.
- 9) All records shall be maintained for five years.
- 10) These records shall be made available immediately for inspection to the Department of Natural Resources' personnel upon their verbal request and presentation of identification.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri, 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded this permit condition and/or normal pressure drop range.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

EU0120 – PNEUMATIC FLOUR RECEIVER			
Emission Unit	Description	Manufacturer/ Model #	2006 EIQ Reference #
EU0120	Pneumatic Flour Receiver: pneumatic flour conveyor; vented to baghouse (CE-07); MHDR 66 tons flour/hr; construction date 2005	MAC	EP-07

<p>PERMIT CONDITION EU0120-001 10 CSR 10-6.060 Construction Permits Required Construction Permit 102005-015, Issued October 20, 2005 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants 10 CSR 10-6.400 Restriction of Emission of Particulate Matter from Industrial Processes</p>

Emission Limitation:

Poet Biorefining shall not discharge PM₁₀ into the atmosphere from the stack (SV-07) associated with Pneumatic Flour Receiver (EU0120) in excess of 0.18 lbs/hr. This emission rate shall be verified through performance testing, as detailed in Permit Condition PW001.

[Construction Permit 102005-015, Special Condition 2.E]

Operational Specifications:

- 1) The baghouse (CE-07) must be in use at all times when the associated equipment is in operation. [Construction Permit 102005-015, Special Condition 3.A]
- 2) The baghouse(s) and any related instrumentation or equipment shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse(s) shall be equipped with a gauge or meter that indicates the pressure drop across each baghouse. This gauge or meter shall be located in such a way it may be easily observed by Department of Natural Resources' employees. [Construction Permit 102005-015, Special Condition 3.B]
- 3) Replacement bags for all baghouse(s) shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance). [Construction Permit 102005-015, Special Condition 3.C]

Monitoring/Recordkeeping:

- 1) Visible emissions will be used as an indicator of the proper operation of the control device. During proper operation, no visible emissions are expected from this emission unit. The existence of visible emissions will indicate a decrease in the efficiency of the control device and corrective actions will be implemented: [Construction Permit 102005-015, Special Condition 3.D]
 - a) Visible emissions from the exhaust shall be monitored on a daily basis when the process is in operation.
 - b) The duration of the observation shall be for a two minute time period.
 - c) The condition of no visible emissions is considered normal for this emission unit. When visible emissions are noted from the emission unit, it shall be documented and corrective actions taken.
- 2) The permittee shall conduct opacity readings on the emission unit(s) using the procedures contained in U.S. EPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow.
- 3) The observation of visible emissions from this emission unit will be considered an excursion and corrective actions shall be implemented within a reasonable period. An excursion does not necessarily indicate a violation of the applicable requirement. When the level of excursions exceed three percent of the total number of observations in a six month period and corrective actions fail to return the emission unit to a no visible emission condition, then the permittee shall conduct source testing within ninety days of the last excursion to demonstrate compliance with 10 CSR 10-6.400. If the test demonstrates noncompliance with the above emission limitation the permittee shall propose a schedule to implement further corrective actions to bring the source into compliance and demonstrate that compliance. [Construction Permit 102005-015, Special Condition 3.E]
- 4) Poet Biorefining shall monitor and record the operating pressure drop across the baghouse(s) at least once in every twenty-four hour period when the associated equipment is operated. The operating pressure drop shall be maintained within the normal operating range specified by the manufacturer's performance warranty. If the pressure drop reading should fall outside of this normal operating range, then the associated equipment shall be shut down as quickly as is reasonably practical. Corrective actions shall be taken to address the cause of the non-normal pressure drop and the baghouse(s) shall be returned to normal operation before restarting the equipment. [Construction Permit 102005-015, Special Condition 3.F]

- 5) Poet Biorefining shall inspect the baghouse(s) at least once every six months and at a minimum, conduct the following activities: [Construction Permit 102005-015, Special Condition 3.G]
 - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
- 6) The permittee shall maintain records of all visible emissions observation results (see Attachment G-1 or G-2), noting:
 - a) Whether any air emissions (except for water vapor) were visible from the emission units,
 - b) All emission units from which visible emissions occurred, and
 - c) Whether the visible emissions were normal for the process.
- 7) The permittee shall maintain records of any equipment malfunctions. (see Attachment H)
- 8) Attachments G-1, G-2, and H contain logs including these recordkeeping requirements. These logs, or equivalent forms created by the permittee, must be used to certify compliance with this requirement.
- 9) All records shall be maintained for five years.
- 10) These records shall be made available immediately for inspection to the Department of Natural Resources' personnel upon their verbal request and presentation of identification.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri, 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded this permit condition and/or normal pressure drop range.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

EU0130 – FERMENTATION TANKS EU0140 – BEER WELL EU0150 – DISTILLATION			
Emission Unit	Description	Manufacturer/ Model #	2006 EIQ Reference #
EU0130	Fermentation Tanks: five 570,000-gallon fermentation storage tanks; yeast and enzymes are added to mash slurry in the fermentation tanks; air emissions flow to wet scrubber (CE-08) then released to RTO (CE-11) except for maximum 500 hours/yr when RTO bypassed; construction date 2005	Broin & Associates/ Custom	EP-08
EU0140	Beer Well: 685,000-gallon beer storage tank used to store liquid beer from fermentation process; air emissions flow to wet scrubber (CE-08) then released to RTO (CE-11) except for maximum 500 hours/yr when RTO bypassed; construction date 2005	Broin & Associates/ Custom	EP-08
EU0150	Distillation: the distillation process distills the liquid beer from the fermentation process; the distillation process consists of the beer stripper, side stripper, molecular sieve, rectifier, and evaporator; air emissions flow to wet scrubber (CE-08) then released to RTO (CE-11), except for maximum 500 hours/yr when RTO bypassed; construction date 2005	Broin & Associates/ Custom	EP-08

PERMIT CONDITION (EU0130 through EU0150)-001

10 CSR 10-6.060 Construction Permits Required
Construction Permit 102005-015, Issued October 20, 2005

Operational Specifications:

- 1) The wet scrubber (CE-08) must be in use at all times when the associated equipment is in operation. [Construction Permit 102005-015, Special Condition 4.A]
- 2) Emissions from the scrubbers (CE-08) shall be routed to the Thermal Oxidizer (CE-11) to further control VOC and HAP emissions. Poet Biorefining may allow scrubber emissions to bypass the thermal oxidizer during times when the thermal oxidizer is not in operation for a maximum of 500 hours annually during which time the emission rate from the scrubber must be used to demonstrate compliance with the VOC emission limitation of 100 tons/year in Permit Condition PW001 (Special Condition 2.B). [Construction Permit 102005-015, Special Condition 4.B]

Monitoring/Recordkeeping:

- 1) The scrubbers and any related instrumentation or equipment shall be operated and maintained in accordance with the manufacturer's specifications. The scrubber shall be equipped with a gauge or meter that indicates the pressure drop across the scrubber. The scrubber shall be equipped with a flow meter that indicates the flow through the scrubber. This gauge and meter shall be located in such a way they may be easily observed by Department of Natural Resources' employees. [Construction Permit 102005-015, Special Condition 4.C]
- 2) Poet Biorefining shall monitor and record the operating pressure drop across each scrubber at least once every twenty-four hours during times when the thermal oxidizer is being bypassed in accordance with Operational Specification 2 of this Permit Condition (Special Condition 4.B). The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty. [Construction Permit 102005-015, Special Condition 4.D]
- 3) Poet Biorefining shall monitor and record the flow rate through the scrubber at least once every twenty-four hours. The flow rate shall be maintained within the design conditions specified by the Manufacturer's performance warranty. [Construction Permit 102005-015, Special Condition 4.E]
- 4) Poet Biorefining shall maintain an operating and maintenance log for the scrubber which shall include the following: [Construction Permit 102005-015, Special Condition 4.F]
 - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
 - c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.
 - d) A written record of the total number of hours the thermal oxidizer is bypassed including the date and time of the bypass.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri, 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded the normal flow rate and/or normal pressure drop range.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

EU0160 – CENTRIFUGES EU0170 – DDGS DRYER #1 EU0180 – DDGS DRYER #2			
Emission Unit	Description	Manufacturer/ Model #	2006 EIQ Reference #
EU0160	Centrifuges: five (5) centrifuges which centrifuge the whole stillage to yield thin stillage and solid fractions; air emissions vented to RTO; construction date 2005	Barr-Rosin/ Custom	EP-09
EU0170	DDGS Dryer #1: ring dryer which dries centrifuged wet solids and thin stillage syrup to produce Distilled Dried Grain & Solubles (DDGS); air and water vapor will go through multicyclones (CE-09) before being vented to the RTO; natural gas-fired; MHDR 60 MMBtu/hr; construction date 2005	Barr-Rosin/ Custom	EP-09
EU0180	DDGS Dryer #2: ring dryer which dries centrifuged wet solids and thin stillage syrup to produce Distilled Dried Grain & Solubles (DDGS); air and water vapor will go through multicyclones (CE-10) before being vented to the RTO; natural gas-fired; MHDR 60 MMBtu/hr; construction date 2005	Barr-Rosin/ Custom	EP-09

PERMIT CONDITION (EU0160 through EU0180)-001
 10 CSR 10-6.060 Construction Permits Required
 Construction Permit 102005-015, Issued October 20, 2005
 10 CSR 10-6.400 Restriction of Emission of Particulate Matter from Industrial Processes

Emission Limitations:

- 1) Poet Biorefining shall not discharge PM₁₀ into the atmosphere from the stack (SV-09) associated with Centrifuges, DDGS Dryer 1, DDGS Dryer 2, (EU0160 through EU0180) and Regenerative Thermal Oxidizer (CE-11) in excess of 6.5 lbs/hr. This emission rate shall be verified through performance testing, as detailed in Permit Condition PW001.
 [Construction Permit 102005-015, Special Condition 2.E]
- 2) Poet Biorefining shall not discharge nitrogen oxides (NOx) into the atmosphere from the stack (SV-09) associated with equipment Centrifuges, DDGS Dryer 1 and DDGS Dryer 2 (EU0160 through EU0180) and Regenerative Thermal Oxidizer (CE-11) in excess of 11.5 lbs/hr. This emission rate shall be verified through performance testing, as detailed in Permit Condition PW001.
 [Construction Permit 102005-015, Special Condition 2.F]

Operational Specifications:

- 1) The multicyclones (CE-09 and CE-10) must be in use at all times when the DDGS Dryers 1 and 2 (EU0170 and EU0180) are in operation. The multicyclones shall be operated and maintained in accordance with the manufacturer’s specifications.
 [Construction Permit 102005-015, Special Condition 5.A]
- 2) The multicyclones shall be equipped with a gauge or meter that indicates the pressure drop across the multicyclones. [Construction Permit 102005-015, Special Condition 5.B]
- 3) The thermal oxidizer (CE-11) must be in use at all times when the DDGS Dryers 1 and 2 (EU0170 and EU0180) are in operation or any time that regulated PM₁₀, volatile organic compounds (VOC) or hazardous air pollutant (HAP) emissions are possible. The thermal oxidizer (CE-11) shall be operated and maintained in accordance with the manufacturer’s specifications. Emission rates of

PM₁₀, VOC, HAPs, CO and NO_x will be tested, as detailed in Permit Condition PW001, to verify the thermal oxidizer is operating as assumed.
[Construction Permit 102005-015, Special Condition 6.A]

Monitoring/Recordkeeping:

- 1) Poet Biorefining shall monitor and record the operating pressure drop across the multicyclones at least once every twenty-four hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
[Construction Permit 102005-015, Special Condition 5.B]
- 2) Poet Biorefining shall maintain an operating and maintenance log for the multicyclones (CE-09 and CE-10) which shall include the following:
[Construction Permit 102005-015, Special Condition 5.C]
 - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
 - c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.
- 3) The operating temperature of the thermal oxidizer (CE-11) shall be continuously monitored and recorded during operation. The operating temperature of the thermal oxidizer shall be maintained on a rolling three-hour average within fifty degrees Fahrenheit of the average temperature of the oxidizer recorded during the compliance test specified in Permit Condition PW001 which demonstrated compliance with the emission limits. The acceptable temperature range may be reestablished by performing a new set of emission tests. The most recent sixty months of records shall be maintained on-site and shall be made immediately available to Missouri Department of Natural Resources' personnel upon request.
[Construction Permit 102005-015, Special Condition 6.B]
- 4) Poet Biorefining shall maintain an operating and maintenance log for the thermal oxidizer (CE-11) which shall include the following: [Construction Permit 102005-015, Special Condition 6.C]
 - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
 - c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri, 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded this permit condition and/or normal pressure drop range.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

PERMIT CONDITION (EU0160 through EU0180)-002
10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants

Emission Limitations:

- 1) No owner or other person shall cause or permit to be discharged into the atmosphere from any source any visible emissions with an opacity greater than twenty percent.
- 2) Exception: A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six minutes in any sixty minutes air contaminants with an opacity up to sixty percent.

Monitoring:

- 1) The permittee shall conduct opacity readings on the stack (SV-09) associated with Centrifuges, DDGS Dryer 1, and DDGS Dryer 2 (EU0160 through EU0180) and Regenerative Thermal Oxidizer (CE-11) using the procedures contained in U.S. EPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
- 2) The following monitoring schedule must be maintained:
 - a) Weekly observations shall be conducted for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then-
 - b) Observations must be made once every two weeks for a period of eight weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then-
 - c) Observations must be made once per month. If a violation is noted, monitoring reverts to weekly.
- 3) If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency.

Recordkeeping:

- 1) The permittee shall maintain records of all visible emissions observation results (see Attachment G-1 or G-2), noting:
 - a) Whether any air emissions (except for water vapor) were visible from the emission units,
 - b) All emission units from which visible emissions occurred, and
 - c) Whether the visible emissions were normal for the process.
- 2) The permittee shall maintain records of any equipment malfunctions. (see Attachment H)
- 3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (see Attachment I)
- 4) Attachments G-1, G-2, H and I contain logs including these recordkeeping requirements. These logs, or equivalent forms created by the permittee, must be used to certify compliance with this requirement.
- 5) All records shall be maintained for five years.
- 6) These records shall be made available immediately for inspection to the Department of Natural Resources' personnel upon their verbal request and presentation of identification.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program’s Enforcement Section, P.O. Box 176, Jefferson City, Missouri, 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit exceeded the opacity limit.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

EU0190 – DDGS FLUID BED COOLER			
Emission Unit	Description	Manufacturer/ Model #	2006 EIQ Reference #
EU0190	DDGS Fluid Bed Cooler: fluidized bed cooling; vented to baghouse (CE-12); MHDR 23 tons DDGS/hr; construction date 2005	Barr-Rosin/ Custom	EP-10

<p>PERMIT CONDITION EU0190-001 10 CSR 10-6.060 Construction Permits Required Construction Permit 102005-015, Issued October 20, 2005 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants 10 CSR 10-6.400 Restriction of Emission of Particulate Matter from Industrial Processes</p>

Emission Limitation:

Poet Biorefining shall not discharge PM₁₀ into the atmosphere from the stack (SV-10) associated with DDGS Fluid Bed Cooler (EU0190) in excess of 1.02 lbs/hr. This emission rate shall be verified through performance testing, as detailed in Permit Condition PW001.
 [Construction Permit 102005-015, Special Condition 2.E]

Operational Specifications:

- 1) The baghouse (CE-12) must be in use at all times when the associated equipment is in operation.
 [Construction Permit 102005-015, Special Condition 3.A]
- 2) The baghouse(s) and any related instrumentation or equipment shall be operated and maintained in accordance with the manufacturer’s specifications. The baghouse(s) shall be equipped with a gauge or meter that indicates the pressure drop across each baghouse. This gauge or meter shall be located in such a way it may be easily observed by Department of Natural Resources’ employees.
 [Construction Permit 102005-015, Special Condition 3.B]
- 3) Replacement bags for all baghouse(s) shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance). [Construction Permit 102005-015, Special Condition 3.C]

Monitoring/Recordkeeping:

- 1) Visible emissions will be used as an indicator of the proper operation of the control device. During proper operation, no visible emissions are expected from this emission unit. The existence of visible emissions will indicate a decrease in the efficiency of the control device and corrective actions will be implemented: [Construction Permit 102005-015, Special Condition 3.D]
 - a) Visible emissions from the exhaust shall be monitored on a daily basis when the process is in operation.

- b) The duration of the observation shall be for a two minute time period.
- c) The condition of no visible emissions is considered normal for this emission unit. When visible emissions are noted from the emission unit, it shall be documented and corrective actions taken.
- 2) The permittee shall conduct opacity readings on the emission unit(s) using the procedures contained in U.S. EPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow.
- 3) The observation of visible emissions from this emission unit will be considered an excursion and corrective actions shall be implemented within a reasonable period. An excursion does not necessarily indicate a violation of the applicable requirement. When the level of excursions exceed three percent of the total number of observations in a six month period and corrective actions fail to return the emission unit to a no visible emission condition, then the permittee shall conduct source testing within ninety days of the last excursion to demonstrate compliance with 10 CSR 10-6.400. If the test demonstrates noncompliance with the above emission limitation the permittee shall propose a schedule to implement further corrective actions to bring the source into compliance and demonstrate that compliance. [Construction Permit 102005-015, Special Condition 3.E]
- 4) Poet Biorefining shall monitor and record the operating pressure drop across the baghouse(s) at least once in every twenty-four hour period when the associated equipment is operated. The operating pressure drop shall be maintained within the normal operating range specified by the manufacturer's performance warranty. If the pressure drop reading should fall outside of this normal operating range, then the associated equipment shall be shut down as quickly as is reasonably practical. Corrective actions shall be taken to address the cause of the non-normal pressure drop and the baghouse(s) shall be returned to normal operation before restarting the equipment. [Construction Permit 102005-015, Special Condition 3.F]
- 5) Poet Biorefining shall inspect the baghouse(s) at least once every six months and at a minimum, conduct the following activities: [Construction Permit 102005-015, Special Condition 3.G]
 - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
- 6) The permittee shall maintain records of all visible emissions observation results (see Attachment G-1 or G-2), noting:
 - a) Whether any air emissions (except for water vapor) were visible from the emission units,
 - b) All emission units from which visible emissions occurred, and
 - c) Whether the visible emissions were normal for the process.
- 7) The permittee shall maintain records of any equipment malfunctions. (see Attachment H)
- 8) Attachments G-1, G-2, and H contain logs including these recordkeeping requirements. These logs, or equivalent forms created by the permittee, must be used to certify compliance with this requirement.
- 9) All records shall be maintained for five years.
- 10) These records shall be made available immediately for inspection to the Department of Natural Resources' personnel upon their verbal request and presentation of identification.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri, 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded this permit condition and/or normal pressure drop range.

- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

EU0200 – DDGS STORAGE SILO EU0210 – DDGS STORAGE SILO BYPASS			
Emission Unit	Description	Manufacturer/ Model #	2006 EIQ Reference #
EU0200	DDGS Storage Silo: storage bin vents; vented to baghouse (CE-13); MHDR 23 tons DDGS/hr; construction date 2005	Laidig-SMI/ Custom	EP-11
EU0210	DDGS Storage Silo Bypass: storage silo bypass receiver; vented to baghouse (CE-14); MHDR 23 tons DDGS/hr; construction date 2005	MAC/ 96RT52	EP-12

<p>PERMIT CONDITION (EU0200 and EU0210)-001 10 CSR 10-6.060 Construction Permits Required Construction Permit 102005-015, Issued October 20, 2005 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants 10 CSR 10-6.400 Restriction of Emission of Particulate Matter from Industrial Processes</p>
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Emission Limitations:

- 1) Poet Biorefining shall not discharge PM₁₀ into the atmosphere from the stack (SV-11) associated with DDGS Storage Silo (EU0200) in excess of 0.17 lbs/hr. This emission rate shall be verified through performance testing, as detailed in Permit Condition PW001. [Construction Permit 102005-015, Special Condition 2.E]
- 2) Poet Biorefining shall not discharge PM₁₀ into the atmosphere from the stack (SV-12) associated with DDGS Storage Silo Bypass (EU0210) in excess of 0.17 lbs/hr. This emission rate shall be verified through performance testing, as detailed in Permit Condition PW001. [Construction Permit 102005-015, Special Condition 2.E]

Operational Specifications:

- 1) The baghouses (CE-13 and CE-14) must be in use at all times when the associated equipment are in operation. [Construction Permit 102005-015, Special Condition 3.A]
- 2) The baghouse(s) and any related instrumentation or equipment shall be operated and maintained in accordance with the manufacturer’s specifications. The baghouse(s) shall be equipped with a gauge or meter that indicates the pressure drop across each baghouse. This gauge or meter shall be located in such a way it may be easily observed by Department of Natural Resources’ employees. [Construction Permit 102005-015, Special Condition 3.B]
- 3) Replacement bags for all baghouse(s) shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance). [Construction Permit 102005-015, Special Condition 3.C]

Monitoring/Recordkeeping:

- 1) Visible emissions will be used as an indicator of the proper operation of the control device. During proper operation, no visible emissions are expected from this emission unit. The existence of visible emissions will indicate a decrease in the efficiency of the control device and corrective actions will be implemented: [Construction Permit 102005-015, Special Condition 3.D]
 - a) Visible emissions from the exhaust shall be monitored on a daily basis when the process is in operation.
 - b) The duration of the observation shall be for a two minute time period.
 - c) The condition of no visible emissions is considered normal for this emission unit. When visible emissions are noted from the emission unit, it shall be documented and corrective actions taken.
- 2) The permittee shall conduct opacity readings on the emission unit(s) using the procedures contained in U.S. EPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow.
- 3) The observation of visible emissions from this emission unit will be considered an excursion and corrective actions shall be implemented within a reasonable period. An excursion does not necessarily indicate a violation of the applicable requirement. When the level of excursions exceed three percent of the total number of observations in a six month period and corrective actions fail to return the emission unit to a no visible emission condition, then the permittee shall conduct source testing within ninety days of the last excursion to demonstrate compliance with 10 CSR 10-6.400. If the test demonstrates noncompliance with the above emission limitation the permittee shall propose a schedule to implement further corrective actions to bring the source into compliance and demonstrate that compliance. [Construction Permit 102005-015, Special Condition 3.E]
- 4) Poet Biorefining shall monitor and record the operating pressure drop across the baghouse(s) at least once in every twenty-four hour period when the associated equipment is operated. The operating pressure drop shall be maintained within the normal operating range specified by the manufacturer's performance warranty. If the pressure drop reading should fall outside of this normal operating range, then the associated equipment shall be shut down as quickly as is reasonably practical. Corrective actions shall be taken to address the cause of the non-normal pressure drop and the baghouse(s) shall be returned to normal operation before restarting the equipment. [Construction Permit 102005-015, Special Condition 3.F]
- 5) Poet Biorefining shall inspect the baghouse(s) at least once every six months and at a minimum, conduct the following activities: [Construction Permit 102005-015, Special Condition 3.G]
 - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
- 6) The permittee shall maintain records of all visible emissions observation results (see Attachment G-1 or G-2), noting:
 - a) Whether any air emissions (except for water vapor) were visible from the emission units,
 - b) All emission units from which visible emissions occurred, and
 - c) Whether the visible emissions were normal for the process.
- 7) The permittee shall maintain records of any equipment malfunctions. (see Attachment H)
- 8) Attachments G-1, G-2, and H contain logs including these recordkeeping requirements. These logs, or equivalent forms created by the permittee, must be used to certify compliance with this requirement.
- 9) All records shall be maintained for five years.

10) These records shall be made available immediately for inspection to the Department of Natural Resources' personnel upon their verbal request and presentation of identification.

Reporting:

- 1) The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri, 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded this permit condition and/or normal pressure drop range.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

EU0220 AND EU0230 – BOILERS #1 AND #2			
Emission Unit	Description	Manufacturer/ Model #	2006 EIQ Reference #
EU0220	Boiler #1: natural gas-fired internal combustion; MHDR 100 MMBtu/hr; construction date 2005	Victory Henry/ Erie Power 15M	EP-13
EU0230	Boiler #2: natural gas-fired internal combustion; MHDR 100 MMBtu/hr; construction date 2005	Victory Henry/ Erie Power 15M	EP-14

PERMIT CONDITION (EU0220 and EU0230)-001
 10 CSR 10-6.060 Construction Permits Required
 Construction Permit 102005-015, Issued October 20, 2005

Emission Limitations:

Poet Biorefining shall not discharge nitrogen oxides (NOx) into the atmosphere from the stacks associated with Boiler 1 or Boiler 2 (EU0220 and EU0230) in excess of 4.0 lbs/hr. This emission rate shall be verified through performance testing, as detailed in Permit Condition PW001. [Construction Permit 102005-015, Special Condition 2.F]

Reporting:

The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri, 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded the emission limitation.

PERMIT CONDITION (EU0220 and EU0230)-002
 10 CSR 10-6.070 New Source Performance Regulations
 40 CFR Part 60 Subpart A General Provisions and Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Monitoring and Recordkeeping:

- 1) The permittee shall record and maintain records of the amount of each fuel combusted during each operating day. [§60.48c(g)(1)]
 - a) Exception, as an owner or operator of an affected facility that combusts only natural gas, the permittee may elect to record and maintain records of the amount of each fuel combusted during each calendar month. [§60.48c(g)(2)]

Reporting:

- 1) The permittee shall submit notification of the date of construction or reconstruction and actual start-up, as provided by §60.7 of Part 60. This notification shall include: [§60.48c(a)]
 - a) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility. [§60.48c(a)(1)]

EU0240 – DENATURED ETHANOL TRUCK LOADOUT EU0250 – DENATURED ETHANOL RAILCAR LOADOUT			
Emission Unit	Description	Manufacturer/ Model #	2006 EIQ Reference #
EU0240	Denatured ethanol truck loadout: MHDR 36,000 gallons/hr; equipped with flare; construction date 2005	Enco Wheaton	EP-15
EU0250	Denatured ethanol railcar loadout: MHDR 144,000 gallons/hr; construction date 2005	Enco Wheaton	EP-16

<p>PERMIT CONDITION (EU0240 and EU0250)-001 10 CSR 10-6.060 Construction Permits Required Construction Permit 102005-015, Issued October 20, 2005</p>
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Operational Specifications:

- 1) The flare must be in use at all times during denatured ethanol truck loadout (EU0240) and loadout into non-ethanol dedicated tanks (EU0250). The flare shall be operated and maintained in accordance with the manufacturer’s specifications.
 [Construction Permit 102005-015, Special Condition 7.A]
- 2) The flare may be bypassed for a total of two million gallons during which time the uncontrolled emission rate shall be used for compliance with Permit Condition PW001 (Special Condition 2.B). The bypass total shall include both truck and rail loadout.
 [Construction Permit 102005-015, Special Condition 7.B]
- 3) Poet Biorefining shall maintain an operating and maintenance log for the flare which shall include the following: [Construction Permit 102005-015, Special Condition 7.C]
 - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
 - c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.
 - d) A written record of the total number of hours the flare is bypassed including the date and time of the bypass.

Reporting:

Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

EU0260 – HAUL ROADS			
Emission Unit	Description	Manufacturer/Model #	2006 EIQ Reference #
EU0260	Haul Roads: truck traffic fugitives	NA	EP-FS-02

PERMIT CONDITION EU0260-001
 10 CSR 10-6.060 Construction Permits Required
 Construction Permit 102005-015, Issued October 20, 2005

Operational Specifications:

- 1) Poet Biorefining shall pave the specified haul roads (EU0260) with materials such as asphalt, concrete, and/or other material(s) after receiving approval from the program. The pavement will be applied in accordance with industry standards for such pavement so as to achieve “Control of Fugitive Emissions” while the plant is operating.
 [Construction Permit 102005-015, Special Condition 13.A]
- 2) Maintenance and/or repair of the surfaces will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating. [Construction Permit 102005-015, Special Condition 13.B]
- 3) Poet Biorefining shall periodically water, wash and/or otherwise clean all of the paved portions of the haul road as necessary to achieve control of fugitive emissions from these areas while the plant is operating. [Construction Permit 102005-015, Special Condition 13.C]

Reporting:

Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

EU0270 – VOC EQUIPMENT LEAKS			
Emission Unit	Description	Manufacturer/Model #	2006 EIQ Reference #
EU0270	VOC Equipment Leaks: fugitive VOC sources and equipment leaks	NA	EP-FS-03

PERMIT CONDITION EU0270-001
 10 CSR 10-6.070 New Source Performance Regulations
 40 CFR Part 60 Subpart A General Provisions and Subpart VV Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

Note:

The permittee does not own or operate the following equipment; therefore, sections of Part 60, Subpart VV that relate to this equipment are not included in this permit condition:

- 1) pumps and valves in heavy liquid service,
- 2) pressure relief valves in light or heavy service,
- 3) closed vent system and control devices,
- 4) sampling connection systems, and
- 5) compressors.

Emission Limitations:

Standards: General

- 1) The permittee shall demonstrate compliance with the requirements of §§60.482-1 through 60.482-10 or §60.480(e) for all equipment within 180 days of initial startup. [§60.482-1(a)]
- 2) Compliance with §§60.482-1 to 60.482-10 will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in §60.485. [§60.482-1(b)]
- 3) The permittee may request a determination of equivalence of a means of emission limitation to the requirements of §§60.482-2, 60.482-3, 60.482-5, 60.482-6, 60.482-7, 60.482-8, and 60.482-10 as provided in §60.484. [§60.482-1(c)(1)]
- 4) If the administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of §§60.482-2, 60.482-3, 60.482-5, 60.482-6, 60.482-7, 60.482-8, or 60.482-10, the permittee shall comply with the requirements of that determination. [§60.482-1(c)(2)]
- 5) Equipment that is in vacuum service is excluded from the requirements of §§60.482-2 to 60.482-10 if it is identified as required in §60.486(e)(5). [§60.482-1(d)]

Equivalence of means of emission limitation

- 1) The permittee may apply to the administrator for determination of equivalence for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in subpart VV. [§60.484(a)]
- 2) Determination of equivalence to the equipment, design, and operational requirements of subpart VV will be evaluated by the following guidelines: [§60.484(b)]
 - a) Each owner or operator applying for an equivalence determination shall be responsible for collecting and verifying test data to demonstrate equivalence of means of emission limitation. [§60.484(b)(1)]
 - b) The administrator will compare test data for the means of emission limitation to test data for the equipment, design, and operational requirements. [§60.484(b)(2)]
 - c) The administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements. [§60.484(b)(3)]
- 3) Determination of equivalence to the required work practices in subpart VV will be evaluated by the following guidelines: [§60.484(c)]
 - a) Each owner or operator applying for a determination of equivalence shall be responsible for collecting and verifying test data to demonstrate equivalence of an equivalent means of emission limitation. [§60.484(c)(1)]
 - b) For each affected facility for which a determination of equivalence is requested, the emission reduction achieved by the required work practice shall be demonstrated. [§60.484(c)(2)]
 - c) For each affected facility, for which a determination of equivalence is requested, the emission reduction achieved by the equivalent means of emission limitation shall be demonstrated. [§60.484(c)(3)]
 - d) Each owner or operator applying for a determination of equivalence shall commit in writing to work practice(s) that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practice. [§60.484(c)(4)]
 - e) The administrator will compare the demonstrated emission reduction for the equivalent means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in §60.484(c)(4). [§60.484(c)(5)]

- f) The administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the required work practice. [§60.484(c)(6)]
- 4) An owner or operator may offer a unique approach to demonstrate the equivalence of any equivalent means of emission limitation. [§60.484(d)]
- 5) After a request for determination of equivalence is received, the administrator will publish a notice in the Federal Register and provide the opportunity for public hearing if the administrator judges that the request may be approved. [§60.484(e)(1)]
- 6) After notice and opportunity for public hearing, the administrator will determine the equivalence of a means of emission limitation and will publish the determination in the Federal Register. [§60.484(e)(2)]
- 7) Any equivalent means of emission limitations approved under §60.484 shall constitute a required work practice, equipment, design, or operational standard within the meaning of section 111(h)(1) of the Clean Air Act. [§60.484(e)(3)]

Monitoring:

Standards: Pumps in light liquid service

- 1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in §60.485(b) (see Testing), except as provided in §60.482-1(c) and §§60.482-2(d), (e), and (f). [§60.482-2(a)(1)]
- 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. [§60.482-2(a)(2)]
- 3) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [§60.482-2(b)(1)]
- 4) If there are indications of liquids dripping from the pump seal, a leak is detected. [§60.482-2(b)(2)]
- 5) When a leak is detected, it shall be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in §60.482-9 (see Standards: Delay of repair). [§60.482-2(c)(1)]
- 6) A first attempt at repair shall be made no later than five calendar days after each leak is detected. [§60.482-2(c)(2)]
- 7) *Dual Mechanical Seal System* - Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of §60.482-2(a), *provided* the following requirements are met: [§60.482-2(d)]
 - a) Each dual mechanical seal system is - [§60.482-2(d)(1)]
 - i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or [§60.482-2(d)(1)(i)]
 - ii) Equipment with a barrier fluid 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 §60.482-10; or [§60.482-2(d)(1)(ii)]
 - iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere. [§60.482-2(d)(1)(iii)]
 - b) The barrier fluid system is in heavy liquid service or is not in VOC service. [§60.482-2(d)(2)]
 - c) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both. [§60.482-2(d)(3)]
 - d) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals. [§60.482-2(d)(4)]
 - e) Each sensor as described in §60.482-2(d)(3) is checked daily or is equipped with an audible alarm, and [§60.482-2(d)(5)(i)]

- i) The permittee determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. [§60.482-2(d)(5)(ii)]
- f) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in §60.482-2 (d)(5)(ii), a leak is detected. [§60.482-2(d)(6)(i)]
- g) When a leak is detected, it shall be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in §60.482-9. [§60.482-2(d)(6)(ii)]
- h) A first attempt at repair shall be made no later than five calendar days after each leak is detected. [§60.482-2(d)(6)(iii)]
- 8) *No Detectable Emission* - Any pump that is designated, as described in §60.486(e)(1) and (2), for no detectable emission, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of §§60.482-2(a), (c), and (d) if the pump: [§60.482-2(e)]
 - a) Has no externally actuated shaft penetrating the pump housing, [§60.482-2(e)(1)]
 - b) 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 §60.485(c), and [§60.482-2(e)(2)]
 - c) Is tested for compliance with §60.482-2(e)(2) initially upon designation, annually, and at other times requested by the administrator. [§60.482-2(e)(3)]
- 9) Any pump that is designated, as described in §60.486(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of §§60.482-2(a) and (d)(4) through (6) if: [§60.482-2(g)]
 - a) The permittee demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with §60.482-2(a); and [§60.482-2(g)(1)]
 - b) The permittee 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 §60.482-2(c) if a leak is detected. [§60.482-2(g)(2)]

Standards: Pressure relief devices in gas/vapor service

- 1) 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 §60.485(c) (see Testing). [§60.482-4(a)]
- 2) 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 five calendar days after the pressure release, except as provided in §60.482-9 (see Standards: Delay of repair). [§60.482-4(b)(1)]
 - a) No later than five 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 §60.485(c). [§60.482-4(b)(2)]
- 3) Any pressure relief device that is routed to a process or fuel gas system is exempted from the requirements of §60.482-4(a) and (b). [§60.482-4(c)]
- 4) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of §60.482-4(a) and (b), provided the permittee complies with the requirements in §60.482-4(d)(2). [§60.482-4(d)(1)]

- a) 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 five calendar days after each pressure release, except as provided in §60.482-9. [§60.482-4(d)(2)]

Standards: Open-ended valves or lines

- 1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1(c). [§60.482-6(a)(1)]
 - a) 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. [§60.482-6(a)(2)]
- 2) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. [§60.482-6(b)]
- 3) When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with §60.482-6(a) at all other times. [§60.482-6(c)]
- 4) 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 §60.482-6(a), (b) and (c). [§60.482-6(d)]
- 5) 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 §60.482-6(a) through (c) are exempt from the requirements of §60.482-6(a) through (c). [§60.482-6(e)]

Standards: Valves in gas/vapor service and in light liquid service

- 1) Each valve shall be monitored monthly to detect leaks by the methods specified in §60.485(b) (see Testing) and shall comply with §60.482-7(b) through (e), except as provided in §60.482-7(f), §60.483-1, 2, and §60.482-1(c). [§60.482-7(a)]
- 2) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [§60.482-7(b)]
- 3) Any valve for which a leak is not detected for two successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. [§60.482-7(c)(1)]
 - a) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for two successive months. [§60.482-7(c)(2)]
- 4) When a leak is detected, it shall be repaired as soon as practicable, but no later than fifteen calendar days after the leak is detected, except as provided in §60.482-9 (See Standards: Delay of repair). [§60.482-7(d)(1)]
 - a) A first attempt at repair shall be made no later than five calendar days after each leak is detected. [§60.482-7(d)(2)]
- 5) First attempts at repair include, but are not limited to, the following best practices where practicable: [§60.482-7(e)]
 - a) Tightening of bonnet bolts; [§60.482-7(e)(1)]
 - b) Replacement of bonnet bolts; [§60.482-7(e)(2)]
 - c) Tightening of packing gland nuts; [§60.482-7(e)(3)]
 - d) Injection of lubricant into lubricated packing. [§60.482-7(e)(4)]
- 6) Any valve that is designated, as described in §60.486(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 §60.482-7(a) if the valve: [§60.482-7(f)]
 - a) Has no external actuating mechanism in contact with the process fluid, [§60.482-7(f)(1)]

- b) Is operated with emissions less than 500 ppm above background as determined by the method specified in §60.485(c), and [§60.482-7(f)(2)]
- c) Is tested for compliance with §60.482-7(f)(2) initially upon designation, annually, and at other times requested by the administrator. [§60.482-7(f)(3)]
- 7) Any valve that is designated, as described in §60.486(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of §60.482(a) if: [§60.482-7(g)]
 - a) The permittee demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with §60.482-7(a), and
 - b) The permittee adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.
- 8) Any valve that is designated, as described in §60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of §60.482(a) if: [§60.482-7(h)]
 - a) The permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than two meters above a support surface. [§60.482-7(h)(1)]
 - b) The process unit within which the valve is located either becomes an affected facility through §60.14 or §60.15 or the permittee designates less than three percent of the total number of valves as difficult-to-monitor, and [§60.482-7(h)(2)]
 - c) The permittee follows a written plan that requires monitoring of the valve at least once per calendar year. [§60.482-7(h)(3)]

Standards: Connectors

- 1) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at connectors, the permittee shall follow either one of the following procedures: [§60.482-8(a)]
 - a) The permittee shall monitor the equipment within five days by the method specified in §60.485(b) (see Testing) and shall comply with the requirements of §60.482-8(b) through (d). [§60.482-8(a)(1)]
 - b) The permittee shall eliminate the visual, audible, olfactory, or other indication of a potential leak. [§60.482-8(a)(2)]
- 2) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [§60.482-8(b)]
- 3) When a leak is detected, it shall be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in §60.482-9 (see Standards: Delay of repair). [§60.482-8(c)(1)]
 - a) The first attempt at repair shall be made no later than five calendar days after each leak is detected. [§60.482-8(c)(2)]
- 4) First attempts at repair include, but are not limited to, the best practices described under §60.482-7(e). [§60.482-8(d)]

Standards: Delay of repair

- 1) Delay of repair of equipment for which leaks have been detected will be allowed if repair within fifteen days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. [§60.482-9(a)]
- 2) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service. [§60.482-9(b)]
- 3) Delay of repair for valves will be allowed if: [§60.482-9(c)]
 - a) The permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and [§60.482-9(c)(1)]

- b) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §60.482-10. [§60.482-9(c)(2)]
- 4) Delay of repair for pumps will be allowed if: [§60.482-9(d)]
 - a) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and [§60.482-9(d)(1)]
 - b) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected. [§60.482-9(d)(2)]
- 5) 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. [§60.482-9(e)]

Alternative standards for valves - allowable percentage of valves leaking

- 1) The permittee may elect to comply with an allowable percentage of valves leaking of equal to or less than two percent. [§60.483-1(a)]
- 2) The following requirements shall be met if the permittee wishes to comply with an allowable percentage of valves leaking: [§60.483-1(b)]
 - a) The permittee must notify the administrator that the permittee has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in §60.487(d). [§60.483-1(b)(1)]
 - b) A performance test as specified in §60.483-1(c) shall be conducted initially upon designation, annually, and at other times requested by the administrator. [§60.483-1(b)(2)]
 - c) If a valve leak is detected, it shall be repaired in accordance with §60.482-7(d) and (e). [§60.483-1(b)(3)]
- 3) Performance tests shall be conducted in the following manner: [§60.483-1(c)]
 - a) All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by the methods specified in §60.485(b) (see Testing). [§60.483-1(c)(1)]
 - b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [§60.483-1(c)(2)]
 - c) The leak percentage shall be determined by dividing the number of valves for which leaks are detected by the number of valves in gas/vapor and light liquid service within the affected facility. [§60.483-1(c)(3)]
- 4) Owners and operators who elect to comply with this alternative standard shall not have an affected facility with a leak percentage greater than two percent. [§60.483-1(d)]

Alternative standards for valves - skip period leak detection and repair

- 1) The permittee may elect to comply with one of the alternative work practices specified in §60.483-2(b)(2) and (3) as listed below. [§60.483-2(a)(1)]
- 2) The permittee must notify the administrator before implementing one of the alternative work practices, as specified in §60.487(d). [§60.483-2(a)(2)]
- 3) The permittee shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in §60.482-7. [§60.483-2(b)(1)]
- 4) After two consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than two, the permittee may begin to skip one of the quarterly leak detection periods for the valves in gas/vapor and light liquid service. [§60.483-2(b)(2)]

- 5) After five consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than two, the permittee may begin to skip three of the quarterly leak detection periods for the valves in gas/vapor and light liquid service. [§60.483-2(b)(3)]
- 6) If the percent of valves leaking is greater than two, the permittee shall comply with the requirements as described in §60.482-7 but can again elect to use this section. [§60.483-2(b)(4)]
- 7) The percent of valves leaking shall be determined by dividing the sum of valves found leaking during current monitoring and valves for which repair has been delayed by the total number of valves subject to the requirements of this section. [§60.483-2(b)(5)]
- 8) The permittee must keep a record of the percent of valves found leaking during each leak detection period. [§60.483-2(b)(6)]

Testing:

- 1) In conducting the performance tests required in §60.8, the permittee shall use as reference methods and procedures the test methods in appendix A of part 60 or other methods and procedures as specified in §60.485(a), except as provided in §60.8(b). [§60.485(a)]
- 2) The permittee shall determine compliance with the standards in §§60.482, 60.483, and 60.484 as follows: [§60.485(b)]
 - a) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21. The following calibration gases shall be used: [§60.485(b)(1)]
 - i) Zero air (less than 10 ppm of hydrocarbon in air); and [§60.485(b)(1)(i)]
 - ii) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [§60.485(b)(1)(ii)]
- 3) The permittee shall determine compliance with the no detectable emission standards in §§60.482-2(e), 60.482-3(i), 60.482-4, 60.482-7(f), and 60.482-10(e) as follows: [§60.485(c)]
 - a) The requirements of §60.485(b) shall apply. [§60.485(c)(1)]
 - b) Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance. [§60.485(c)(2)]
- 4) The permittee shall test each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used: [§60.485(d)]
 - a) Procedures that conform to the general methods in ASTM E260-73, 91, or 96, E168-67, 77, or 92, E169-63, 77, or 93 (incorporated by reference—see §60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment. [§60.485(d)(1)]
 - b) Organic compounds that are considered by the administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid. [§60.485(d)(2)]
 - c) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the administrator disagrees with the judgment, §60.485(d)(1) and (2) shall be used to resolve the disagreement. [§60.485(d)(3)]

- 5) The permittee shall demonstrate that an equipment is in light liquid service by showing that all the following conditions apply: [§60.485(e)]
 - a) The vapor pressure of one or more of the components is greater than 0.3 kPa at 20 °C (1.2 in. H₂O at 68 °F). Standard reference texts or ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17) shall be used to determine the vapor pressures. [§60.485(e)(1)]
 - b) The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H₂O at 68 °F) is equal to or greater than twenty percent by weight. [§60.485(e)(2)]
 - c) The fluid is a liquid at operating conditions. [§60.485(e)(3)]
- 6) Samples used in conjunction with §60.485(d), (e), and (g) shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare. [§60.485(f)]

Recordkeeping:

- 1) The permittee shall comply with the following recordkeeping requirements. [§60.486(a)(1)]
- 2) An owner or operator of more than one affected facility subject to the provisions of subpart VV may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility. [§60.486(a)(2)]
- 3) When each leak is detected as specified in §§60.482–2, 60.482–3, 60.482–7, 60.482–8, and 60.483–2, the following requirements apply: [§60.486(b)]
 - a) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. [§60.486(b)(1)]
 - b) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in §60.482–7(c) and no leak has been detected during those 2 months. [§60.486(b)(2)]
 - c) The identification on equipment except on a valve, may be removed after it has been repaired. [§60.486(b)(3)]
- 4) When each leak is detected as specified in §§60.482–2, 60.482–7, 60.482–8, and 60.483–2, the following information shall be recorded in a log and shall be kept for five years in a readily accessible location: [§60.486(c)]
 - a) The instrument and operator identification numbers and the equipment identification number. [§60.486(c)(1)]
 - b) The date the leak was detected and the dates of each attempt to repair the leak. [§60.486(c)(2)]
 - c) Repair methods applied in each attempt to repair the leak. [§60.486(c)(3)]
 - d) “Above 10,000” if the maximum instrument reading measured by the methods specified in §60.485(a) after each repair attempt is equal to or greater than 10,000 ppm. [§60.486(c)(4)]
 - e) “Repair delayed” and the reason for the delay if a leak is not repaired within fifteen calendar days after discovery of the leak. [§60.486(c)(5)]
 - f) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown. [§60.486(c)(6)]
 - g) The expected date of successful repair of the leak if a leak is not repaired within fifteen days. [§60.486(c)(7)]
 - h) Dates of process unit shutdowns that occur while the equipment is unrepaired. [§60.486(c)(8)]
 - i) The date of successful repair of the leak. [§60.486(c)(9)]
- 5) The following information pertaining to all equipment subject to the requirements in §§60.482–1 to 60.482–10 shall be recorded in a log that is kept in a readily accessible location: [§60.486(e)]
 - a) A list of identification numbers for equipment subject to the requirements of subpart VV. [§60.486(e)(1)]

- b) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §§60.482–2(e), 60.482–3(i) and 60.482–7(f). [§60.486(e)(2)(i)]
 - i) The designation of equipment as subject to the requirements of §60.482–2(e), §60.482–3(i), or §60.482–7(f) shall be signed by the owner or operator. [§60.486(e)(2)(ii)]
- c) A list of equipment identification numbers for pressure relief devices required to comply with §60.482–4. [§60.486(e)(3)]
- d) The dates of each compliance test as required in §§60.482–2(e), 60.482–3(i), 60.482–4, and 60.482–7(f). [§60.486(e)(4)(i)]
 - i) The background level measured during each compliance test. [§60.486(e)(4)(ii)]
 - ii) The maximum instrument reading measured at the equipment during each compliance test. [§60.486(e)(4)(iii)]
- e) A list of identification numbers for equipment in vacuum service. [§60.486(e)(5)]
- 6) The following information pertaining to all valves subject to the requirements of §60.482–7(g) and (h) and to all pumps subject to the requirements of §60.482–2(g) shall be recorded in a log that is kept in a readily accessible location: [§60.486(f)]
 - a) A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump. [§60.486(f)(1)]
 - b) 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. [§60.486(f)(2)]
- 7) The following information shall be recorded for valves complying with §60.483–2: [§60.486(g)]
 - a) A schedule of monitoring. [§60.486(g)(1)]
 - b) The percent of valves found leaking during each monitoring period. [§60.486(g)(2)]
- 8) The following information shall be recorded in a log that is kept in a readily accessible location: [§60.486(h)]
 - a) Design criterion required in §§60.482–2(d)(5) and 60.482–3(e)(2) and explanation of the design criterion; and [§60.486(h)(1)]
 - b) Any changes to this criterion and the reasons for the changes. [§60.486(h)(2)]
- 9) 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 §60.480(d): [§60.486(i)]
 - a) An analysis demonstrating the design capacity of the affected facility, [§60.486(i)(1)]
 - b) 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 [§60.486(i)(2)]
 - c) An analysis demonstrating that equipment is not in VOC service. [§60.486(i)(3)]
- 10) 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. [§60.486(j)]
- 11) The provisions of §60.7(b) and (d) do not apply to affected facilities subject to subpart VV. [§60.486(k)]

Reporting:

- 1) The permittee shall submit semi-annual reports to the administrator beginning six months after the initial start-up date. [§60.487(a)]
- 2) The initial semi-annual report to the administrator shall include the following information: [§60.487(b)]
 - a) Process unit identification. [§60.487(b)(1)]

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- b) Number of valves subject to the requirements of §60.482–7, excluding those valves designated for no detectable emissions under the provisions of §60.482–7(f). [§60.487(b)(2)]
 - c) Number of pumps subject to the requirements of §60.482–2, excluding those pumps designated for no detectable emissions under the provisions of §60.482–2(e) and those pumps complying with §60.482–2(f). [§60.487(b)(3)]
 - 3) All semi-annual reports to the administrator shall include the following information, summarized from the information in §60.486: [§60.487(c)]
 - a) Process unit identification. [§60.487(c)(1)]
 - b) For each month during the semi-annual reporting period, [§60.487(c)(2)]
 - i) Number of valves for which leaks were detected as described in §60.482(7)(b) or §60.483–2, [§60.487(c)(2)(i)]
 - ii) Number of valves for which leaks were not repaired as required in §60.482–7(d)(2), [§60.487(c)(2)(ii)]
 - iii) Number of pumps for which leaks were detected as described in §60.482–2(b) and (d)(6)(i), [§60.487(c)(2)(iii)]
 - iv) Number of pumps for which leaks were not repaired as required in §60.482–2(c)(2) and (d)(6)(ii), [§60.487(c)(2)(iv)]
 - v) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible. [§60.487(c)(2)(vii)]
 - c) Dates of process unit shutdowns which occurred within the semi-annual reporting period. [§60.487(c)(3)]
 - d) Revisions to items reported according to §60.487(b) if changes have occurred since the initial report or subsequent revisions to the initial report. [§60.487(c)(4)]
 - 4) An owner or operator electing to comply with the provisions of §§60.483–1 or 60.483–2 shall notify the administrator of the alternative standard selected ninety days before implementing either of the provisions. [§60.487(d)]
 - 5) The permittee shall report the results of all performance tests in accordance with §60.8 of the General Provisions. The provisions of §60.8(d) do not apply to affected facilities subject to the provisions of subpart VV except that an owner or operator must notify the administrator of the schedule for the initial performance tests at least thirty days before the initial performance tests. [§60.487(e)]
 - 6) The requirements of §60.487(a) through (c) remain in force until and unless EPA, in delegating enforcement authority to a state under section 111(c) of the Act, 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 §60.487(a) through (c), provided that they comply with the requirements established by the state. [§60.487(f)]

EU0280 THROUGH EU0320 – STORAGE TANKS			
Emission Unit	Description	Manufacturer/ Model #	2006 EIQ Reference #
EU0280	Denaturant (Natural Gasoline) Storage Tank: capacity 126,900 gallons, construction date 2005	NA	EP-TK-01
EU0290	190 Proof Ethanol Storage Tank: capacity 250,000 gallons, construction date 2005	NA	EP-TK-02
EU0300	200 Proof Ethanol Storage Tank: capacity 250,000 gallons, construction date 2005:	NA	EP-TK-03
EU0310	Denatured Ethanol Storage Tank #1: capacity 1,500,000 gallons, construction date 2005	NA	EP-TK-04
EU0320	Denatured Ethanol Storage Tank #2: capacity 1,500,000 gallons, construction date 2005	NA	EP-TK-05

PERMIT CONDITION (EU0280 through EU0320)-001
 10 CSR 10-6.070 New Source Performance Regulations
 40 CFR Part 60 Subpart A General Provisions and Subpart Kb Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23,1984

Note:

Each of these storage tanks (EU0280 through EU0320) have a design capacity greater than or equal to 151 m³ and contain a volatile organic liquid (VOL) that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa. According to §60.112b(a), the permittee shall equip each of these storage vessel with either (1) a fixed roof in combination with an internal floating roof, (2) an external floating roof, (3) a closed vent system and control device or (4) an alternative means of emission limitation. The permittee has chosen to equip each storage vessel with a fixed roof in combination with an internal floating roof. Therefore §60.112b(a)(1) of this regulation applies.

Operational Specifications:

- 1) The permittee shall equip the storage vessel with a fixed roof in combination with an internal floating roof meeting the following specifications: [§60.112b(a)(1)]
 - a) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. [§60.112b(a)(1)(i)]
 - b) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof: [§60.112b(a)(1)(ii)]
 - i) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank. [§60.112b(a)(1)(ii)(A)]
 - ii) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the

- internal floating roof. The lower seal may be vapor-mounted, but both must be continuous. [§60.112b(a)(1)(ii)(B)]
- iii) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof. [§60.112b(a)(1)(ii)(C)]
- c) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface. [§60.112b(a)(1)(iii)]
- d) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use. [§60.112b(a)(1)(iv)]
- e) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [§60.112b(a)(1)(v)]
- f) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [§60.112b(a)(1)(vi)]
- g) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least ninety percent of the opening. [§60.112b(a)(1)(vii)]
- h) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. [§60.112b(a)(1)(viii)]
- i) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [§60.112b(a)(1)(ix)]

Monitoring:

- 1) After installing the control equipment required to meet §60.112b(a)(1) (permanently affixed roof and internal floating roof), the permittee shall: [§60.113b(a)]
- a) 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 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 owner or operator shall repair the items before filling the storage vessel. [§60.113b(a)(1)]
- b) For vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every twelve months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within forty-five days. If a failure that is detected during inspections required in this paragraph cannot be repaired within forty-five days and if the vessel cannot be emptied within forty-five days, a thirty-day extension may be requested from the administrator in the inspection report required in §60.115b(a)(3). Such a request for an extension must document that alternate

storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. [§60.113b(a)(2)]

- c) For vessels equipped with a double-seal system as specified in §60.112b(a)(1)(ii)(B): [§60.113b(a)(3)]
 - i) Visually inspect the vessel as specified in §60.113b(a)(4) at least every 5 years; or [§60.113b(a)(3)(i)]
 - ii) Visually inspect the vessel as specified in §60.113b(a)(2). [§60.113b(a)(3)(ii)]
- d) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than ten percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with Subpart Kb occur at intervals greater than ten years in the case of vessels conducting the annual visual inspection as specified in §60.113b(a)(2) and (a)(3)(ii) and at intervals no greater than five years in the case of vessels specified in §60.113b(a)(3)(i). [§60.113b(a)(4)]

Recordkeeping:

- 1) The permittee shall keep records and furnish reports as required by §60.115b and §60.116b. The permittee shall keep copies of all reports and records required for at least five years with the following exception: [§60.115b and §60.116b(a)]
 - a) The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. These records shall be kept for the life of the source. [§60.116b(b)]
- 2) After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the permittee shall meet the following recordkeeping requirements. [§60.115b(a)]
 - a) Keep a record of each inspection performed as required by §60.113b(a)(1), (a)(2), (a)(3), and (a)(4). 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). [§60.115b(a)(2)]
- 3) The permittee shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. [§60.116b(c)]
- 4) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below. [§60.116b(e)]
 - a) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [§60.116b(e)(1)]
 - b) For crude oil or refined petroleum products the vapor pressure may be obtained by the following: [§60.116b(e)(2)]
 - i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product

- may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference - see §60.17), unless the administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [§60.116b(e)(2)(i)]
- ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa. [§60.116b(e)(2)(ii)]
 - c) For other liquids, the vapor pressure: [§60.116b(e)(3)]
 - i) May be obtained from standard reference texts, or [§60.116b(e)(3)(i)]
 - ii) Determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or [§60.116b(e)(3)(ii)]
 - iii) Measured by an appropriate method approved by the administrator; or [§60.116b(e)(3)(iii)]
 - iv) Calculated by an appropriate method approved by the administrator. [§60.116b(e)(3)(iv)]
 - 5) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements. [§60.116b(f)]
 - a) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in §60.116b(e). [§60.116b(f)(1)]
 - b) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in §60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every six months thereafter is required as determined by the following methods: [§60.116b(f)(2)]
 - i) ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or [§60.116b(f)(1)(i)]
 - ii) ASTM D323–82 or 94 (incorporated by reference—see §60.17); or [§60.116b(f)(1)(ii)]
 - iii) As measured by an appropriate method as approved by the administrator. [§60.116b(f)(1)(iii)]

Reporting:

- 1) After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the permittee shall meet the following reporting requirements. [§60.115b(a)]
 - a) Furnish the administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(1) and §60.113b(a)(1). This report shall be an attachment to the notification required by §60.7(a)(3). [§60.115b(a)(1)]
 - b) If any of the conditions described in §60.113b(a)(2) are detected during the annual visual inspection required by §60.113b(a)(2), a report shall be furnished to the administrator within thirty days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made. [§60.115b(a)(3)]
 - c) After each inspection required by §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 §60.113b(a)(3)(ii), a report shall be furnished to the administrator within thirty days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of §60.112b(a)(1) or §60.113b(a)(3) and list each repair made. [§60.115b(a)(4)]
- 2) Notify the administrator in writing at least thirty days prior to the filling or refilling of each storage vessel for which an inspection is required by §60.113b(a)(1) and (a)(4) to afford the administrator the opportunity to have an observer present. If the inspection required by §60.113b(a)(4) is not

planned and the owner or operator could not have known about the inspection thirty days in advance or refilling the tank, the owner or operator shall notify the administrator at least seven days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately 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 administrator at least seven days prior to the refilling. [§60.113b(a)(5)]

IV. Core Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR), Code of State Regulations (CSR), and local ordinances for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect on the date of permit issuance.

10 CSR 10-6.050 Start-up, Shutdown and Malfunction Conditions

- 1) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the director within two business days, in writing, the following information:
 - a) Name and location of installation;
 - b) Name and telephone number of person responsible for the installation;
 - c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
 - d) Identity of the equipment causing the excess emissions;
 - e) Time and duration of the period of excess emissions;
 - f) Cause of the excess emissions;
 - g) Air pollutants involved;
 - h) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
 - i) Measures taken to mitigate the extent and duration of the excess emissions; and
 - j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
- 2) The permittee shall submit the paragraph one information list to the director in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.
- 3) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph one list and shall be submitted not later than fifteen days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under section 643.080 or 643.151, RSMo.
- 4) Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under sections 643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
- 5) Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

10 CSR 10-6.060 Construction Permits Required

The permittee shall not commence construction, modification, or major modification of any installation subject to this rule, begin operation after that construction, modification, or major modification, or begin operation of any installation which has been shut down longer than five years without first obtaining a permit from the permitting authority.

10 CSR 10-6.065 Operating Permits

The permittee shall file a complete application for renewal of this operating permit at least six months before the date of permit expiration. In no event shall this time be greater than eighteen months. [10 CSR 10-6.065(5)(B)1.A(III)] The permittee shall retain the most current operating permit issued to this installation on-site. [10 CSR 10-6.065, §(5)(C)(1) and §(6)(C)1.C(II)] The permittee shall immediately make such permit available to any Missouri Department of Natural Resources' personnel upon request. [10 CSR 10-6.065, §(5)(C)(1) and §(6)(C)3.B]

10 CSR 10-6.110 Submission of Emission Data, Emission Fees and Process Information

- 1) The permittee shall complete and submit an Emission Inventory Questionnaire (EIQ) in accordance with the requirements outlined in this rule.
- 2) The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079.
- 3) The fees shall be payable to the Department of Natural Resources and shall be accompanied by the Emissions Inventory Questionnaire (EIQ) form or equivalent approved by the director.

10 CSR 10-6.130 Controlling Emissions During Episodes of High Air Pollution Potential

This rule specifies the conditions that establish an air pollution alert (yellow/orange/red/purple), or emergency (maroon) and the associated procedures and emission reduction objectives for dealing with each. The permittee shall submit an appropriate emergency plan if required by the director.

10 CSR 10-6.150 Circumvention

The permittee shall not cause or permit the installation or use of any device or any other means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.

10 CSR 10-6.170 Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin

- 1) The permittee shall not cause or allow to occur any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line of origin. The nature or origin of the particulate matter shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director.
- 2) The permittee shall not cause nor allow to occur any fugitive particulate matter emissions to remain visible in the ambient air beyond the property line of origin.

- 3) Should it be determined that non-compliance has occurred, the director may require reasonable control measures as may be necessary. These measures may include, but are not limited to, the following:
 - a) Revision of procedures involving construction, repair, cleaning and demolition of buildings and their appurtenances that produce particulate matter emissions;
 - b) Paving or frequent cleaning of roads, driveways and parking lots;
 - c) Application of dust-free surfaces;
 - d) Application of water; and
 - e) Planting and maintenance of vegetative ground cover.

10 CSR 10-6.180 Measurement of Emissions of Air Contaminants

- 1) The director may require any person responsible for the source of emission of air contaminants to make or have made tests to determine the quantity or nature, or both, of emission of air contaminants from the source. The director may specify testing methods to be used in accordance with good professional practice. The director may observe the testing. All tests shall be performed by qualified personnel.
- 2) The director may conduct tests of emissions of air contaminants from any source. Upon request of the director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.
- 3) The director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

10 CSR 10-6.045 Open Burning Requirements

- (1) General Provisions. The open burning of tires, petroleum-based products, asbestos containing materials, and trade waste is prohibited, except as allowed below. Nothing in this rule may be construed as to allow open burning which causes or constitutes a public health hazard, nuisance, a hazard to vehicular or air traffic, nor which violates any other rule or statute.
- (2) Refer to the regulation for a complete list of allowances. The following is a listing of exceptions to the allowances:
 - (A) Burning of household or domestic refuse. Burning of household or domestic refuse is limited to open burning on a residential premises having not more than four dwelling units, provided that the refuse originates on the same premises, with the following exceptions:
 1. Kansas City metropolitan area. The open burning of household refuse must take place in an area zoned for agricultural purposes and outside that portion of the metropolitan area surrounded by the corporate limits of Kansas City and every contiguous municipality;
 2. Springfield-Greene County area. The open burning of household refuse must take place outside the corporate limits of Springfield and only within areas zoned A-1, Agricultural District;
 3. St. Joseph area. The open burning of household refuse must take place within an area zoned for agricultural purposes and outside that portion of the metropolitan area surrounded by the corporate limits of St. Joseph; and
 4. St. Louis metropolitan area. The open burning of household refuse is prohibited;
 - (B) Yard waste, with the following exceptions:
 1. Kansas City metropolitan area. The open burning of trees, tree leaves, brush or any other type of vegetation shall require an open burning permit;

2. Springfield-Greene County area. The City of Springfield requires an open burning permit for the open burning of trees, brush or any other type of vegetation. The City of Springfield prohibits the open burning of tree leaves;
 3. St. Joseph area. Within the corporate limits of St. Joseph, the open burning of trees, tree leaves, brush or any other type of vegetation grown on a residential property is allowed during the following calendar periods and time-of-day restrictions:
 - A. A three (3)-week period within the period commencing the first day of March through April 30 and continuing for twenty-one (21) consecutive calendar days;
 - B. A three (3)-week period within the period commencing the first day of October through November 30 and continuing for twenty-one (21) consecutive calendar days;
 - C. The burning shall take place only between the daytime hours of 10:00 a.m. and 3:30 p.m.; and
 - D. In each instance, the twenty-one (21)-day burning period shall be determined by the director of Public Health and Welfare of the City of St. Joseph for the region in which the City of St. Joseph is located provided, however, the burning period first shall receive the approval of the department director; and
 4. St. Louis metropolitan area. The open burning of trees, tree leaves, brush or any other type of vegetation is limited to the period beginning September 16 and ending April 14 of each calendar year and limited to a total base area not to exceed sixteen (16) square feet. Any open burning shall be conducted only between the hours of 10:00 a.m. and 4:00 p.m. and is limited to areas outside of incorporated municipalities;
- (3) Certain types of materials may be open burned provided an open burning permit is obtained from the director. The permit will specify the conditions and provisions of all open burning. The permit may be revoked if the owner or operator fails to comply with the conditions or any provisions of the permit.
- (4) Poet Biorefining - Laddonia may be issued an annually renewable open burning permit for open burning provided that an air curtain destructor or incinerator is utilized and only tree trunks, tree limbs, vegetation or untreated wood waste are burned. Open burning shall occur at least two hundred (200) yards from the nearest occupied structure unless the owner or operator of the occupied structure provides a written waiver of this requirement. Any waiver shall accompany the open burning permit application. The permit may be revoked if Poet Biorefining - Laddonia fails to comply with the provisions or any condition of the open burning permit.
- (A) In a non-attainment area, as defined in 10 CSR 10-6.020, paragraph (2)(N)5., the director shall not issue a permit under this section unless the owner or operator can demonstrate to the satisfaction of the director that the emissions from the open burning of the specified material would be less than the emissions from any other waste management or disposal method.
- (5) Reporting and Record Keeping. New Source Performance Standard (NSPS) 40 CFR Part 60 Subpart CCCC establishes certain requirements for air curtain destructors or incinerators that burn wood trade waste. These requirements are established in 40 CFR 60.2245-60.2260. The provisions of 40 CFR Part 60 Subpart CCCC promulgated as of September 22, 2005 shall apply and are hereby incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401. To comply with NSPS 40 CFR 60.2245-60.2260, sources must conduct an annual Method 9 test. A copy of the annual Method 9 test results shall be submitted to the director.
- (6) Test Methods. The visible emissions from air pollution sources shall be evaluated as specified by 40 CFR Part 60, Appendix A—Test Methods, Method 9—Visual Determination of the Opacity of Emissions from Stationary Sources. The provisions of 40 CFR Part 60, Appendix A, Method 9

promulgated as of December 23, 1971, is incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401.

10 CSR 10-3.090 Restriction of Emission of Odors

This requirement is not federally enforceable.

No person may cause, permit or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one volume of odorous air is diluted with seven volumes of odor-free air for two separate trials not less than fifteen minutes apart within the period of one hour.

**10 CSR 10-6.080 Emission Standards for Hazardous Air Pollutants and 40 CFR Part 61
Subpart M National Emission Standard for Asbestos**

- 1) The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos.
- 2) The permittee shall conduct monitoring to demonstrate compliance with registration, certification, notification, and Abatement Procedures and Practices standards as specified in 40 CFR Part 61, Subpart M.

10 CSR 10-6.250 Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Missouri Department of Natural Resource's Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the department's Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the department to monitor training provided to employees. Each individual who works in asbestos abatement projects must first obtain certification for the appropriate occupation from the department. Each person who offers training for asbestos abatement occupations must first obtain accreditation from the department. Certain business entities that meet the requirements for state-approved exemption status must allow the department to monitor training classes provided to employees who perform asbestos abatement.

Title VI – 40 CFR Part 82 Protection of Stratospheric Ozone

- 1) The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
 - a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
 - b) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
 - c) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
 - d) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

- 2) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:
 - a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
 - b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
 - c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
 - d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like" appliance as defined at §82.152).
 - e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
 - f) Owners/operators of appliances normally containing fifty or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- 3) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.
- 4) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.

The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR Part 82*

10 CSR 10-6.280 Compliance Monitoring Usage

- 1) The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
 - a) Monitoring methods outlined in 40 CFR Part 64;
 - b) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
 - c) Any other monitoring methods approved by the director.
- 2) Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred by a permittee:
 - a) Monitoring methods outlined in 40 CFR Part 64;
 - b) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
 - c) Compliance test methods specified in the rule cited as the authority for the emission limitations.

- 3) The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
 - a) Applicable monitoring or testing methods, cited in:
 - i) 10 CSR 10-6.030, "Sampling Methods for Air Pollution Sources";
 - ii) 10 CSR 10-6.040, "Reference Methods";
 - iii) 10 CSR 10-6.070, "New Source Performance Standards";
 - iv) 10 CSR 10-6.080, "Emission Standards for Hazardous Air Pollutants"; or
 - b) Other testing, monitoring, or information gathering methods, if approved by the director, that produce information comparable to that produced by any method listed above.

V. General Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

10 CSR 10-6.065, §(5)(C)1 and §(6)(C)1.B Permit Duration

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed.

10 CSR 10-6.065, §(5)(C)1 and §(6)(C)1.C General Record Keeping and Reporting Requirements

- 1) Record Keeping
 - a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
 - b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any Missouri Department of Natural Resources' personnel upon request.
- 2) Reporting
 - a) All reports shall be submitted to the Air Pollution Control Program's Enforcement Section, P. O. Box 176, Jefferson City, Missouri, 65102.
 - b) The permittee shall submit a report of all required monitoring by:
 - i) April 1st for monitoring which covers the January through December time period.
 - ii) Exception. Monitoring requirements which require reporting more frequently than annually shall report no later than thirty days after the end of the calendar quarter in which the measurements were taken.
 - c) Each report shall identify any deviations from emission limitations, monitoring, record keeping, reporting, or any other requirements of the permit.
 - d) Submit supplemental reports as required or as needed. Supplemental reports are required no later than ten days after any exceedance of any applicable rule, regulation or other restriction. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
 - i) Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph (6)(C)7 of 10 CSR 10-6.065 (Emergency Provisions), shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.
 - ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.

- iii) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's annual report shall be reported on the schedule specified in this permit, and no later than ten days after any exceedance of any applicable rule, regulation, or other restriction.
- e) Every report submitted shall be certified by the responsible official, except that, if a report of a deviation must be submitted within ten days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within ten days after that, together with any corrected or supplemental information required concerning the deviation.
- f) The permittee may request confidential treatment of information submitted in any report of deviation.

10 CSR 10-6.065 §(5)(C)1 and §(6)(C)1.D Risk Management Plan Under Section 112(r)

The permittee shall comply with the requirements of 40 CFR Part 68, Accidental Release Prevention Requirements. If the permittee has more than a threshold quantity of a regulated substance in process, as determined by 40 CFR Section 68.115, the permittee shall submit a Risk Management Plan in accordance with 40 CFR Part 68 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.

10 CSR 10-6.065(5)(C)1.A General Requirements

- 1) The permittee must comply with all of the terms and conditions of this permit. Any non-compliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application.
- 2) The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit
- 3) The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated non-compliance, does not stay any permit condition.
- 4) This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
- 5) The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the Air Pollution Control Program copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted under this rule.
- 6) Failure to comply with the limitations and conditions that qualify the installation for an intermediate permit make the installation subject to the provisions of 10 CSR 10-6.065(6) and enforcement action for operating without a valid part 70 operating permit.

10 CSR 10-6.065(5)(C)1.C Reasonably Anticipated Operating Scenarios

None.

10 CSR 10-6.065, §(5)(B)4; §(5)(C)1, §(6)(C)3.B; and §(6)(C)3.D; and §(5)(C)3 and §(6)(C)3.E.(I) – (III) and (V) – (VI) Compliance Requirements

- 1) Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
- 2) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
 - a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
 - b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
- 3) All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
 - a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
 - b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
- 4) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by June 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri, 65102. All deviations and exceedances must be included in the compliance certifications. The compliance certification shall include the following:
 - a) The identification of each term or condition of the permit that is the basis of the certification;
 - b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
 - c) Whether compliance was continuous or intermittent;
 - d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and
 - e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

10 CSR 10-6.065, §(5)(C)1 and §(6)(C)7 Emergency Provisions

- 1) An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7.A shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:
 - a) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
 - b) That the installation was being operated properly,
 - c) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
 - d) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
- 2) Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

10 CSR 10-6.065(5)(C)5 Off-Permit Changes

- 1) Except as noted below, the permittee may make any change in its permitted installation's operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Off-permit changes shall be subject to the following requirements and restrictions:
 - a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is a Title I modification; Please Note: Changes at the installation which affect the emission limitation(s) classifying the installation as an intermediate source (add additional equipment to the record keeping requirements, increase the emissions above major source level) do not qualify for off-permit changes.
 - b) The permittee must provide written notice of the change to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri, 65102, as well as EPA Region VII, 901 North 5th Street, Kansas City, Kansas, 66101, no later than the next annual emissions report. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change; and
 - c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes.

10 CSR 10-6.020(2)(R)12 Responsible Official

The application utilized in the preparation of this permit was signed by Robin Venn, General Manager. If this person terminates employment, or is reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within thirty days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All

representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

10 CSR 10-6.065 §(5)(E)4 and §(6)(E)6.A(III)(a)-(c) Reopening-Permit for Cause

This permit may be reopened for cause if:

- 1) The Missouri Department of Natural Resources (MDNR) or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
- 2) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
 - a) The permit has a remaining term of less than three years;
 - b) The effective date of the requirement is later than the date on which the permit is due to expire;
or
 - c) The additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
- 3) MDNR or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

10 CSR 10-6.065 §(5)(E)1.A and §(6)(E)1.C Statement of Basis

This permit is accompanied by a statement setting forth the legal and factual basis for the permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

VI. Attachments

Attachments follow.

ATTACHMENT F
Screen Modeling Action Levels for Individual HAPs

Chemical	CAS#	Screen Modeling Action Levels (tons/year)	Synonyms
Acetaldehyde	75-07-0	9	Acetic Aldehyde, Aldehyde, Ethanal, Ethyl Aldehyde
Acetamide	60-35-5	1	Acetic Acid Amide, Ethanamide
Acetonitrile	75-05-8	4	Methyl Cyanide, Ethanenitrile, Cyanomethane
Acetophenone	98-86-2	1	Acetylbenzene, Methyl Phenyl Ketone, Hypnone
Acetylaminofluorine, [2-]	53-96-3	0.005	N-2-Fluorenyl Acetamide, N-Fluorenyl Acetamide, 2-Acetamideofluorene
Acrolein	107-02-8	0.04	Acrylaldehyde, Acrylic Aldehyde, Allyl Aldehyde, Propenal
Acrylamide	79-06-1	0.02	Propenamide, Acrylic Amide, Acrylamide Monomer, Ethylenecarboxamide
Acrylic Acid	79-10-7	0.6	Propenoic Acid, Ethylene Carboxylic Acid, Vinylformic Acid
Acrylonitrile	107-13-1	0.3	Vinyl Cyanide, Cyanoethylene, Propenenitrile
Allyl Chloride	107-05-1	1	1-Chloro-2-Propene, 3-Chloropropylene, Chloroallylene, Alpha-Propylene
Aminobiphenyl,[4-]	92-67-1	1	Biphenylene, P-Phenylaniline, Xenylamine, 4-Aminodiphenyl, 4-Biphenylamine
Aniline	62-53-3	1	Aminobenzene, Phenylamine, Aniline Oil, Aminophen, Arylamine
Anisidine, [Ortho-]	90-04-0	1	O-Methoxyaniline
Antimony Compounds (except those specifically listed)		5	Antimony (Pentachloride, Tribromide, Trichloride, Trifluoride)
Antimony Pentafluoride	7783-70-2	0.1	
Antimony Potassium Tartrate	28300-74-5	1	
Antimony Trioxide	1309-64-4	1	
Antimony Trisulfide	1345-04-6	0.1	
Arsenic and Inorganic Arsenic Compounds		0.005	Arsenic (Diethyl, Disulfide, Pentoxide, Trichloride, Trioxide, Trisulfide), Arsinine, Arsenous Oxide
Benz(a)Anthracene	56-55-3	0.01	
Benz(c)acridine	225-51-4	0.01	
Benzene	71-43-2	2	Benzol, Phenyl Hydride, Coal Naphtha, Phene, Benzole, Cyclohexatriene
Benzidine	92-87-5	0.0003	4,4'-Biphenyldiamine, P-Diaminodiphenyl, 4,4'-Diaminobiphenyl, Benzidine Base
A. Benzo(a)pyrene	50-32-8	0.01	
B. Benzo(b)fluoranthene	205-992	0.01	
C. Benzotrichloride	98-07-7	0.006	Benzoic Trichloride, Phenyl Chloroform, Trichloromethylbenzene
Benzyl Chloride	100-44-7	0.1	Alpha-Chlorotoluene, Toly Chloride

ATTACHMENT F (Continued)
Screen Modeling Action Levels for Individual HAPs

Chemical	CAS#	Screen Modeling Action Levels (tons/year)	Synonyms
Beryllium Compounds (except Beryllium Salts)		0.008	Beryllium (Acetate, Carbonate, Chloride, Fluoride, Hydroxide, Nitrate, Oxide)
Beryllium Salts		0.00002	
Bis(Chloroethyl) Ether	111-44-4	0.06	Dichloroethyl ether, Dichloroether, Dichloroethyl Oxide, BCEE
Bis(Chloromethyl) Ether	542-88-1	0.0003	BCME, Sym-Dichloromethyl ether, Dichloromethyl Ether, Oxybis(Chloromethane)
Butadiene, [1,3-]	106-99-0	0.07	Biethylene, Bivinyll, Butadiene Monomer, Divinyl Erythrene, Vinylethylene
Butylene Oxide, [1,2-]	106-88-7	1	1,2-Epoxybutane, 1-Butene Oxide, 1,2-Butene Oxide, Butylene Oxide, Ethylethylene
Cadmium Compounds		0.01	Cadmium (Dust, Fume, Acetate, Chlorate, Chloride, Fluoride, Oxide, Sulfate, Sulfide)
Carbon Disulfide	75-15-0	1	Carbon Bisulfide, Dithiocarbonic Anhydride
Carbon Tetrachloride	56-23-5	1	Tetrachloromethane, Perchloromethane
Carbonyl Sulfide	463-58-1	5	Carbon Oxide Sulfide, Carbonoxysulfide
Catechol	120-80-9	5	Pyrocatechol, O-Dihydroxybenzene
Chloramben	133-90-4	1	3-Amino-2,5-Dichlorobenzoic Acid, Amben, Amiben*, Vegiben* (*Trademark)
Chlordane	57-74-9	0.01	ENT9932, Octachlor
Chlorine	7782-50-5	0.1	Bertholite
Chloroacetic Acid	79-11-8	0.1	Monochloroacetic Acid, Chloroethanoic Acid
Chloroacetophenone, [2-]	532-27-4	0.06	Phenacyl Chloride, Chloromethyl Phenyl Ketone, Tear Gas, Mace
Chlorobenzilate	510-15-6	0.4	Ethyl-4,4'-Dichlorobenzilate, Ethyl-4,4'-Dichlorophenyl Glycollate
Chloroform	67-66-3	0.9	Trichloromethane
Chloromethyl Methyl Ether	107-30-2	0.1	CMME, Methyl Chloromethyl Ether, Chloromethoxymethane, Monochloromethyl Ether
Chloroprene	126-99-8	1	2-Chloro-1,3-Butadiene, Chlorobutadiene, Neoprene Rubber Compound
Chromic Chloride	10025-73-7	0.1	
Chromium Compounds (except Hexavalent)		5	Chromium, Chromium(II) Compounds, Chromium (III) Compounds
Chromium Compounds, Hexavalent		0.002	Chromium (VI)
Chrysene	218-01-9	0.01	
Cobalt Carbonyl	12010-68-1	0.1	

ATTACHMENT F (Continued)
Screen Modeling Action Levels for Individual HAPs

Chemical	CAS#	Screen Modeling Action Levels (tons/year)	Synonyms
Cobalt Metal (and compounds, except those specifically listed)		0.1	Cobalt (Bromide, Chloride, Diacetate, Formate, Nitrate, Oxide, Sulfamate)
Coke Oven Emissions	8007-45-2	0.03	Coal Tar, Coal Tar Pitch, Coal Tar Distillate
Cresol, [Meta-]	108-39-4	1	3-Cresol, M-Cresylic Acid, 1-Hydroxy-3-Methylbenzene, M-Hydroxytoluene
Cresol, [Ortho-]	95-48-7	1	2-Cresol, O-Cresylic Acid, 1-Hydroxy-2-Methylbenzene, 2-Methylphenol
Cresol, [Para-]	106-44-5	1	4-Cresol, P-Cresylic Acid, 1-Hydroxy-4-Methylbenzene, 4-Hydroxytoluene
Cresols/Cresylic Acid (isomers and mixture)	1319-77-3	1	
Cresol, [Para-]	106-44-5	1	4-Cresol, P-Cresylic Acid, 1-Hydroxy-4-Methylbenzene, 4-Hydroxytoluene
Cresols/ Cresylic Acid(isomers and mixture)	1319-77-3	1	
Cresols/ Cresylic Acid(isomers and mixture)	1319-77-3	1	
Cyanide Compounds (except those specifically listed)	20-09-7	5	Cyanide (Barium, Chlorine, Free, Hydrogen, Potassium, Silver, Sodium, Zinc)
DDE (p,p'-Dichlorodiphenyl Dichloroethylene)	72-55-9	0.01	
Di(2-Ethylhexyl) Phthalate, (DEHP)	117-81-7	5	Bis(2-ethylhexyl)Phthalate, Di(2-Ethylhexyl)Phthalate, DOP, Di-Sec-OctylPhthalate
Diaminotoluene, [2,4-]	95-80-7	0.02	2,4-Toluene Diamine, 3-Amino-Para-Toluidine, 5-Amino-Ortho-Toluidine
Diazomethane	334-88-3	1	Azimethylene, Diazirine
Dibenz(a,h)anthracene	53-70-3		
Dibenzofuran	132-64-9	5	Diphenylene Oxide
Dibenzopyrene, [1,2:7,8]	189-55-9		
Dibromo-3-Chloropropane, [1,2-]	96-12-8	0.01	DBCP
Dibromomethane, [1,2-]	106-93-4	0.1	Ethylene Dibromide, Ethylene Bromide, Sym-Dibromoethane
Dichlorobenzene, [1,4-]	106-46-7	3	1,4-Dichloro-P-DCB, 1-4-DCB, PDB, PDCB
Dichlorobenzidene, [3,3-]	91-94-1	0.2	4,4'-Diamino-3,3'-Dichlorobiphenyl, 3,3'-Dichlorobiphenyl-4,4'-Diamine, DCB
Dichloroethane, [1,1-]	75-34-3	1	Ethylidene Dichloride, 1,1-Ethylidene Dichloride, Asymmetrical Dichlorethane
Dichloroethane, [1,2-]	107-06-2	0.8	Ethylene Dichloride, Glycol Dichloride, Ethylene Chloride

ATTACHMENT F (Continued)
Screen Modeling Action Levels for Individual HAPs

Chemical	CAS#	Screen Modeling Action Levels (tons/year)	Synonyms
Dichloroethylene, [1,1-]	75-35-4	0.4	Vinylidene Chloride, DCE, VDC
Dichloropropane, [1,2-]	78-87-5	1	Propylene Dichloride
Dichloropropene [1,3-]	542-75-6	1	1,3-Dichloropropylene, Alpha-Chlorallyl Chloride
Dichlorvos	62-73-7	0.2	DDVP, 2,2-Dichlorovinyl dimethylphosphate
Diethanolamine	11-42-2	5	Bis(2-Hydroxyethyl)Amine, 2,2'-Dihydroxydiethylamine, Di(2Hydroxyethyl)Amine
Diethyl Sulfate	64-67-5	1	Diethyl Ester Sulfuric Acid, Ethyl Sulfate
Dimethoxybenzidine, [3,3-]	119-90-4	0.1	Fast Blue B Base, Dianisidine, O-Dianisidine
Dimethylbenz(a)anthracene, [7,12]	57-97-6	0.01	
Dimethyl Benzidine, [3,3-]	119-93-7	0.008	O-Tolidine, Bianisidine, 4,4'-Diamino-3,3'-Dimethylbiphenyl, Diaminoditoyl
Dimethyl Carbamoyl Chloride	79-44-7	0.02	DMCC, Chloroformic Acid Dimethyl Amide, Dimethyl Carbamyl Chloride
Dimethyl Formamide	68-12-2	1	DMF, Formyldimethylamine
Dimethyl Hydrazine, [1,1-]	57-14-7	0.008	Unsymmetrical Dimethylhydrazine, UDMH, Dimazine
Dimethyl Sulfate	77-78-1	0.1	Sulfuric Acid Dimethyl Ester, Methyl Sulfate
Dimethylaminoazobenzene, [4-]	60-11-7	1	N,N-Dimethyl-P-Phenylazo-Aniline, Benzeneazo Dimethylaniline
Dimethylaniline, [N,N-]	121-69-7	1	N,N-Diethyl Aniline, N,N-Dimethylphenylamine, DMA
Dinitro-O-Cresol, [4,6-] and salts	534-52-1	0.1	DNOC, 3,5-Dinitro-O-Cresol, 2-Methyl-4,6-Dinitrophenol
Dinitrophenol, [2,4-]	51-28-5	1	DNP
Dinitrotoluene, [2,4-]	121-14-2	0.02	Dinitrotoluol, DNT, 1-Methyl-2,4-Dinitrobenzene
Dioxane, [1,4-]	123-91-1	6	1,4-Diethyleneoxide, Diethylene Ether, P-Dioxane
Diphenylhydrazine, [1,2-]	122-66-7	0.09	Hydrazobenzene, N,N'-Diphenylhydrazine, N,N'-Bianiline, 1,1'-Hydrodibenzene
Diphenylmethane Diisocyanate, [4,4-]	101-68-8	0.1	Methylene Bis(Phenylisocyanate), Methylene Diphenyl Diisocyanate, MDI
Epichlorohydrin	106-89-8	2	1-Chloro-2,3-Epoxypropane, EPI, Chloropropylene Oxide, Chloromethyloxirane
Ethyl Acrylate	140-88-5	1	Ethyl Propenoate, Acrylic Acid Ethyl Ester
Ethylene Imine (Aziridine)	151-56-4	0.003	Azacyclopropane, Dimethyleneimine, Ethylenimine, Vinylamine, Azirane

ATTACHMENT F (Continued)
Screen Modeling Action Levels for Individual HAPs

Chemical	CAS#	Screen Modeling Action Levels (tons/year)	Synonyms
Ethylene Oxide	75-21-8	0.1	1,2-Epoxyethane, Oxirane, Dimethylene Oxide, Anprolene
Ethylene Thiourea	96-45-7	0.6	2-Imidazolidinethione, ETU
Fluomine	62207-76-5	0.1	
Formaldehyde	50-00-0	2	Oxymethylene, Formic Aldehyde, Methanal, Methylene Oxide, Oxomethane
Glycol Ethers (except those specifically listed)		5	
Heptachlor	76-44-8	0.02	1,4,5,6,7,8,8A-Heptachloro-3A,4,7,7A-Tetrahydro-4,7-Methanoindiene
Hexachlorobenzene	118-74-1	0.01	Perchlorobenzene, HCB, Pentachlorophenyl Benzene, Phenyl Perchloryl
Hexachlorobutadiene	87-68-3	0.9	Perchlorobutadiene, 1,3-Hexachlorobutadiene, HCB
Hexachlorocyclopentadiene	77-47-4	0.1	HCCPD, HEX
Hexachloroethane	67-72-1	5	Perchloroethane, Carbon Hexachloride, HCE, 1,1,1,2,2,2-Hexachloroethane
Hexamethylene Diisocyanate, 1,6	822-06-0	0.02	1,6-Diisocyanatohexane, 1,6-Hexanediol Diisocyanate
Hexamethylphosphoramide	680-31-9	0.01	Hexamethylphosphoric Triamide, HEMPA, Hexametapol, Hexamethylphosphoramide
Hydrazine	302-01-2	0.004	Methylhydrazine, Diamide, Diamine, Hydrazine Base
Hydrogen Fluoride	7664-39-3	0.1	Hydrofluoric Acid Gas, Fluorhydric Acid Gas, Anhydrous Hydrofluoric Acid
Hydrogen Selenide	7783-07-5	0.1	
Hydroquinone	123-31-9	1	Quinol, Hydroquinol, P-Diphenol, 1,4-Benzenediol, Hydrochinone, Arctuvine
Indeno(1,2,3-cd) Pyrene	193-39-5	0.01	
Lead and Compounds (except those specifically listed)	20-11-1	0.01	Lead (Acetate, Arsenate, Chloride, Fluoride, Iodide, Nitrate, Sulfate, Sulfide)
Lindane [Gamma-Hexachlorocyclohexane]	58-89-9	0.01	Benzene Hexachloride – Gamma Isomer
Maleic Anhydride	108-31-6	1	2,5-Furanediene, Cis-Butenedioic Anhydride, Toxic Anhydride
Manganese and Compounds (except those specifically listed)	20-12-2	0.8	Manganese (Acetate, Chloride, Dioxide, (II)-Oxide, (III)-Oxide, (II)-Sulfate
Mercury Compounds except those specifically listed)	20-13-3	0.01	Mercury Compounds (Methyl-, Ethyl-, Phenyl-)
Mercury Compounds (Inorganic)	20-13-3	0.01	Mercury (Chloride, Cyanide, (I,II)-[Bromide, Iodide, Nitrate, Sulfate], Oxide)

ATTACHMENT F (Continued)
Screen Modeling Action Levels for Individual HAPs

Chemical	CAS#	Screen Modeling Action Levels (tons/year)	Synonyms
Methyl Hydrazine	60-34-4	0.06	Monomethylhydrazine, Hydrozomethane, 1-Methylhydrazine
Methyl Iodide	74-88-4	1	Idomethane
Methyl Isocyanate	624-83-9	0.1	Isocyanatomethane, Isocyanic Acid, Methyl Ester
Methylcyclopentadienyl Manganese	12108-13-3	0.1	
Methylene Bis(2Chloroaniline), [4,4-]	101-14-4	0.2	Curene, MOCA, 4,4'-Diamino-3,3'-Dichlorodiphenylmethane
Methylenedianiline, [4,4-]	101-77-9	1	4,4'-Diaminodipheylmethane, DDM, MDA, Bis(4-Aminophenyl)Methane, DAPM
Nickel Carbonyl	13463-39-3	0.1	
Nickel Compounds (except those specifically listed)		1	Nickel (Acetate, Ammonium Sulfate, Chloride, Hydroxide, Nitrate, Oxide, Sulfate)
Nickel Refinery Dust		0.08	
Nickel Subulfide	12035-72-2	0.04	
Nitrobenzene	98-95-3	1	Nitrobenzoil, Oil of Mirbane, Oil of Bitter Almonds
Nitrobiphenyl, [4-]	92-93-3	1	4-Nitrodiphenyl, P-Nitrobiphenyl, P-Nitrophenyl, PNB
Nitrophenol, [4-]	100-02-7	5	4-Hydroxynitrobenzene, Para-Nitrophenol
Nitropropane, [2-]	79-46-9	1	Dimethylnitromethane, Sec-Nitropropane, Isonitropropane, Nitroisopropane
Nitroso-N-Methylurea, [N-]	684-93-5	0.0002	N-Methyl-N-Nitrosourea, N-Nitroso-N-Methylcarbamide
Nitrosodimethylamine, [N-]	62-75-9	0.001	Dimethylnitrosamine, DMN, DMNA
Nitrosomorpholine, [N-]	59-89-2	1	4-Nitrosomorpholine
Parathion	56-38-2	0.1	DNTP, Monothiophosphate, Diethyl-P-Nitrophenyl
PCB (Polychlorinated Biphenyls)	1336-36-3	0.009	Aroclors
Pentachloronitrobenzene	82-68-8	0.3	Quintobenzene, PCNB, Quiniozene
Pentachlorophenol	87-86-5	0.7	PCP, Penchlorol, Pentachlorophenate, 2,3,4,5,6-Pentachlorophenol
Phenol	108-95-2	0.1	Carbolic Acid, Phenic Acid, Phenylic Acid, Phenyl Hydrate, Hydroxybenzene
Phenyl Mercuric Acetate	62-38-4	0.01	
Phosgene	75-44-5	0.1	Carbonyl Chloride, Carbon Oxychloride, Carbonic Acid Dichloride

ATTACHMENT F (Continued)
Screen Modeling Action Levels for Individual HAPs

Chemical	CAS#	Screen Modeling Action Levels (tons/year)	Synonyms
Phosphine	7803-51-2	5	Hydrogen Phosphide, Phosphoretted Hydrogen, Phosphorus Trihydride
Phosphorous (Yellow or White)	7723-14-0	0.1	
Phthalic Anhydride	85-44-9	5	Phthalic Acid Anhydride, Benzene-O-Dicarboxylic Acid Anhydride, Phthalandione
Polycyclic Organic Matter (except those specifically listed)	TP15	0.01	POM, PAH, Polyaromatic Hydrocarbons,
Potassium Cyanide	151508	0.1	
Propane Sultone, [1,3-]	1120-71-4	0.03	1,2-Oxathiolane-2,2-Dioxide, 3-Hydroxy-1-Propanesulphonic Acid Sultone
Propiolactone, [Beta-]	57-57-8	0.1	2-Oxeatanone, Propiolactone, BPL, 3-Hydroxy-B-Lactone-Propanoic Acid
Propionaldehyde	123-38-6	5	Propanal, Propyl Aldehyde, Propionic Aldehyde
Propylene Oxide	75-56-9	5	1,2-Epoxypropane, Methylethylene Oxide, Methyl Oxirane, Propene Oxide
Propyleneimine, [1,2-]	75-55-8	0.003	2-Methyl Aziridine, 2-Methylazacyclopropane, Methylethyleneimine
Quinoline	91-22-5	0.006	1-Azanaphthalene, 1-Benzazine, Benzo(B)Pyridine, Chinoleine, Leucoline
Quinone	016-51-4	5	Benzoquinone, Chinone, P-Benzoquinone, 1,4-Benzoquinone
Selenium and Compounds (except those specifically listed)	7782-49-2	0.1	Selenium (Metal, Dioxide, Disulfide, Hexafluoride, Monosulfide)
Sodium Cyanide	143-33-9	0.1	
Sodium Selenate	13410-01-0	0.1	
Sodium Selenite	101020-18-8	0.1	
Styrene	100-42-5	1	Cinnamene, Cinnamol, Phenethylene, Phenylethylene, Vinylbenzene
Styrene Oxide	96-09-3	1	Epoxyethylbenzene, Phenylethylene Oxide, Phenyl Oxirane, Epoxystyrene
Tetrachlorodibenzo-P-Dioxin	1746-01-6	6.00E-07	
Tetrachloroethane, [1,1,2,2-]	79-34-5	0.3	Sym-Tetachloroethane, Acetylene Tetrachloride, Ethane Tetrachloride
Tetraethyl Lead	78-00-2	0.01	
Tetramethyl Lead	75-74-1	0.01	
Titanium Tetrachloride	7550-45-0	0.1	Titanium Chloride
Toluene Diisocyanate, [2,4]	584-84-9	0.1	TDI, Tolylene Diisocyanate, Diisocyanatoluene

ATTACHMENT F (Continued)
Screen Modeling Action Levels for Individual HAPs

Chemical	CAS#	Screen Modeling Action Levels (tons/year)	Synonyms
Toluidine, [Ortho-]	95-53-4	4	Ortho-Aminotoluene, Ortho-Methylaniline, 1-Methyl-1,2-Aminobenzene
Toxaphene	8001-35-2	0.01	Chlorinated Camphene, Camphechlor, Polychlorcamphene
Trichloroethane, [1,1,2-]	79-00-5	1	Vinyl Trichloride, Beta-Trichloroethane
Trichlorophenol, [2,4,5-]	95-95-4	1	2,4,5-TCP
Trichlorophenol, [2,4,6-]	88-06-2	6	2,4,6-TCP
Trifluralin	1582-09-8	9	2,6-Dinitro-N-N-Dipropyl-4-(Trifluoromethyl)Benzeneamine
Trimethylpentane, [2,2,4-]	540-84-1	5	Isobutyltrimethylethane, Isoctane
Urethane [Ethyl Carbamate]	51-79-6	0.8	Ethyl Urethane, O-Ethylurethane, Leucothane, NSC 746, Urethan
Vinyl Acetate	108-05-4	1	Acetic Acid Vinyl Ester, Vinyl Acetate Monomer, Ethenyl Ethanoate
Vinyl Bromide	593-60-2	0.6	Bromoethylene, Bromoethene
Vinyl Chloride	75-01-4	0.2	Chloroethylene, Chloroethene, Monochloroethylene

ATTACHMENT I
Method 9 Opacity Emissions Observations

This record keeping sheet or an equivalent form may be used for the record keeping requirements of 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*.

Method 9 Opacity Emissions Observations								
Company					Observer			
Location					Observer Certification Date			
Date					Emission Unit			
Time					Control Device			
Hour	Minute	Seconds				Steam Plume (check if applicable)		Comments
		0	15	30	45	Attached	Detached	
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
SUMMARY OF AVERAGE OPACITY								
Set Number	Time				Opacity			
	Start	End	Sum	Average				

Readings ranged from _____ to _____ % opacity.

Was the emission unit in compliance at the time of evaluation? _____
 YES NO Signature of Observer

STATEMENT OF BASIS

Voluntary Limitations

In order to qualify for this Intermediate State Operating Permit, the permittee has accepted voluntary, federally enforceable emission limitations. Per 10 CSR 10-6.065(5)(C)1.A.(VI), if these limitations are exceeded, the installation immediately becomes subject to 10 CSR 10-6.065(6) and enforcement action for operating without a valid part 70 operating permit. It is the permittee's responsibility to monitor emission levels and apply for a part 70 operating permit far enough in advance to avoid this situation. This may mean applying more than eighteen months in advance of the exceedance, since it can take that long or longer to obtain a part 70 operating permit.

Permit Reference Documents

These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

- 1) Intermediate Operating Permit Application, received December 26, 2006;
- 2) 2006 Emissions Inventory Questionnaire, received June 4, 2007; and
- 3) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.

Applicable Requirements Included in the Operating Permit but Not in the Application or Previous Operating Permits

In the operating permit application, the installation indicated they were not subject to the following regulation(s). However, in the review of the application, the agency has determined that the installation is subject to the following regulation(s) for the reasons stated.

None.

Other Air Regulations Determined Not to Apply to the Operating Permit

The Air Pollution Control Program (APCP) has determined that the following requirements are not applicable to this installation at this time for the reasons stated.

- 1) 10 CSR 3.060, *Maximum Allowable Emissions of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating*
 - a) The permittee marked this rule as applicable in the permit application. According to §(3)(E), this rule does not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070. Boilers 1 and 2 (EU0220 and EU0230) are subject to 10 CSR 10-6.070, NSPS, Subpart Dc, *New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units* and therefore are not subject to this rule. In addition, Dryers 1 and 2 (EU0170 and EU0180), Thermal Oxidizer (CE-11) and the Flare are direct heating sources and are also not subject to this rule.

- 2) 10 CSR 10-6.100, *Alternate Emission Limits*
 - a) This rule is not applicable because the installation is in an ozone attainment area.

Construction Permit Revisions

The following revisions were made to construction permits for this installation:

- 1) Air Pollution Control Program Construction Permit 022003-004
 - a) All of the special conditions of this permit were superseded by Construction Permit 102005-015.
- 2) Air Pollution Control Program Construction Permit 102005-015
 - a) Special Condition 2.F includes a table that lists Control ID CE-12 as associated with Boiler 1 (EU0220) and Control ID CE-13 as associated with Boiler 2 (EU0230). However, CE-12 is the baghouse that receives emissions from DDGS Fluid Bed Cooler (EU0190) and CE-13 is the baghouse that receives emissions from DDGS Storage Silo (EU0200). Boilers 1 and 2 (EU0220 and EU0230) do not vent to these baghouses. Therefore, Permit Condition (EU0220 and EU0230)-001 was written without references to either CE-12 or CE-13.
 - b) Special Condition 8.A(5) reads “The thermal oxidizer (CE-11), Boiler 1 and Boiler 2 shall be tested to determine the NOx emission rate when in operation. This emission rate shall not exceed the amounts listed in Special Condition 2.F.” The emissions from Boiler 1 and Boiler 2 (EU0220 and EU0230) are not controlled by the thermal oxidizer. Therefore, Permit Condition (EU0220 and EU0230)-001 was written without the phrase “The thermal oxidizer”.
 - c) Special Condition 10 has not been included since the installation has met the requirement to apply for and receive an intermediate operating permit.

New Source Performance Standards (NSPS) Applicability

- 1) 40 CFR Part 60, Subpart Dc, *New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units*
 - a) This rule requires records to be kept for two years; however, State operating permits require records to be maintained for five years for compliance demonstration purposes. Therefore, the recordkeeping requirement was changed to five years in Permit Condition (EU0220 and EU0230)-002 to be consistent with State operating permit regulations.
- 2) 40 CFR Part 60, Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984*
 - a) This rule requires records to be kept for two years; however, State operating permits require records to be maintained for five years for compliance demonstration purposes. Therefore, the recordkeeping requirement was changed to five years in Permit Condition (EU0280 through EU0320)-001 to be consistent with State operating permit regulations.
 - b) This rule does not apply to the Corrosion Inhibitor Tank (EP-TK-06) because it only has a storage capacity of 1,000 gallons.

- 3) 40 CFR Part 60, Subpart DD, *Standards of Performance for Grain Elevators*
 - a) This rule applies to each affected facility at any grain terminal elevator or any grain storage elevator, which has a permanent storage capacity of more than 88,100 m³ (ca. 2.5 million U.S. bushels). According to the New Source Review Permit Application - Project 2007-02-041, the installation has a total storage capacity of only 2,426,000 bushels. Therefore, this rule does not apply to this installation.
- 4) 40 CFR Part 60, Subpart XX, *Standards of Performance for Bulk Gasoline Terminals*
 - a) This rule does not apply because the fuel ethanol manufactured by the installation does not satisfy the Subpart XX definition of gasoline.
- 5) 40 CFR Part 60, Subpart III, *Standards of Performance for VOC Emissions from SOCM I Air Oxidation Unit Processes*
 - a) This rule does not apply to the installation because there are no air oxidation units involved in the processes.
- 6) 40 CFR Part 60, Subpart NNN, *Standards of Performance for VOC Emissions from SOCM I Distillation Operations*
- 7) 40 CFR Part 60, Subpart RRR, *Standards of Performance for VOC Emissions from SOCM I Reactor Processes*
 - a) These rules do not apply to the installation because the rule does not apply to fuel ethanol manufacturing facilities that produce ethanol through fermentation (biological synthesis).
- 8) 40 CFR Part 60, Subpart VV, *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry (SOCMI)*
 - a) Ethanol production plants are classified as Synthetic Organic Chemical Manufacturing Industry (SOCMI) facilities; therefore, this rule applies to the installation.
 - b) This rule requires records to be kept for two years; however, State operating permits require records to be maintained for five years for compliance demonstration purposes. Therefore, the recordkeeping requirement was changed to five years in Permit Condition EU0270-001 to be consistent with State operating permit regulations.

Maximum Available Control Technology (MACT) Applicability

40 CFR Part 63, Subpart Q, *National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers*

This rule applies to industrial process cooling towers that are operated with chromium-based water treatment chemicals and are either major sources hazardous air pollutants (HAP) or are integral parts of installations that are major sources of HAP. The cooling tower (EP-CWT) located at this installation does not use chromium-based water treatment chemicals, and based on the emission limitations in Permit Condition PW001; the installation is not a major source of HAP.

None of the other MACT standards applies to this installation.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability

None.

Other Regulatory Determinations

1) 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*

- a) This rule does not apply to Boilers 1 and 2 (EU0220 and EU0230) because according to §(1)(H), emission sources regulated by 40 CFR Part 60 and 10 CSR 10-6.070 are exempt.
- b) This rule applies to the following emission units; however, the no visible emission limit established by construction permit 102005-015 is more stringent than the visible emissions limitation (twenty percent opacity) required by 10 CSR 10-6.220. Therefore, in meeting the visible emission limit established by construction permit 102005-015, the emission units will always be in compliance with 10 CSR 10-6.220.

Emission Unit #	2006 EIQ EP #	Stack #	Emission Unit Description
EU0010	EP-01	SV-01	Corn Receiving
EU0020	EP-01		Corn Transfer
EU0030	EP-01		Corn Storage
EU0040	EP-01		DDGS Transfer & Loading
EU0050	EP-02	SV-02	Corn Scalper
EU0060	EP-02		Corn Conveyors
EU0070	EP-02		Corn Surge Bin
EU0080	EP-03	SV-03	Hammermill #1
EU0090	EP-04	SV-04	Hammermill #2
EU0100	EP-05	SV-05	Hammermill #3
EU0110	EP-06	SV-06	Hammermill #4
EU0120	EP-07	SV-07	Pneumatic Flour Receiver
EU0190	EP-10	SV-10	DDGS Fluid Bed Cooler
EU0200	EP-11	SV-11	DDGS Storage Silo
EU0210	EP-12	SV-12	DDGS Storage Silo Bypass

2) 10 CSR 10-6.260, *Restriction of Emission of Sulfur Compounds*

- a) This rule does not apply to DDGS Dryers 1 and 2 (EU0170 and EU0180) or Boilers 1 and 2 (EU0220 and EU0230) because according to §(1)(A)2, combustion equipment that uses exclusively pipeline grade natural gas as defined in 40 CFR 72.2 is exempt.
- b) This rule does not apply to Thermal Oxidizer (CE-11) because the unit combusts vapor stream from Centrifuges, DDGS Dryers 1 and 2 (EU0160 through EU0180) and pipeline grade natural gas as a supplemental fuel. The vapor stream will not contain any sulfur compounds, and thus, is not an emission source of sulfur compounds.

3) 10 CSR 10-6.400, *Restriction of Emission of Particulate Matter from Industrial Processes*

- a) This rule applies to the following emission units; however, as shown in the calculations below, the emission limitations established by construction permit 102005-015 are more stringent than the emission rate limitations required by 10 CSR 10-6.400.

Allowable PM Emission Rate (E)

For process weight rates of 60,000 lb/hr or less:

$$E \text{ (lb/hr)} = 4.10(P)^{0.67}$$

Where:

P = process weight rate in tons/hr

For process weight rates greater than 60,000 lb/hr:

$$E \text{ (lb/hr)} = 55.0(P)^{0.11} - 40$$

Where:

P = process weight rate in tons/hr

Emission Unit #	2006 EIQ EP #	Stack #	Emission Unit Description	Process Weight Rate (ton/hr)	Allowable PM Emission Rate (lb/hr)	PM Limits in CP #102005-015 (lb/hr)
EU0010	EP-01	SV-01	Corn Receiving	840	75.35	1.00
EU0020	EP-01		Corn Transfer	840	75.35	
EU0030	EP-01		Corn Storage	840	75.35	
EU0040	EP-01		DDGS Transfer & Loading	200	58.51	
EU0050	EP-02	SV-02	Corn Scalper	140	54.72	0.11
EU0060	EP-02		Corn Conveyors	140	54.72	
EU0070	EP-02		Corn Surge Bin	140	54.72	
EU0080	EP-03	SV-03	Hammermill #1	22	32.52	0.51
EU0090	EP-04	SV-04	Hammermill #2	22	32.52	0.51
EU0100	EP-05	SV-05	Hammermill #3	22	32.52	0.51
EU0110	EP-06	SV-06	Hammermill #4	22	32.52	0.51
EU0120	EP-07	SV-07	Pneumatic Flour Receiver	66	47.20	0.18
EU0160	EP-09	SV-09	Centrifuges	23	33.51	6.5
EU0170	EP-09		DDGS Dryer #1	23	33.51	
EU0180	EP-09		DDGS Dryer #2	23	33.51	
EU0190	EP-10	SV-10	DDGS Fluid Bed Cooler	23	33.51	1.02
EU0200	EP-11	SV-11	DDGS Storage Silo	23	33.51	0.17
EU0210	EP-12	SV-12	DDGS Storage Silo Bypass	23	33.51	0.17

4) Potential to Emit NOx Calculations

- a) The calculations below demonstrate that the installation's potential to emit Nitrogen Oxides (NOx) is less than 100 tons per year.

EU ID #	Description	NOx Emission Rate	Source of NOx Emission Rate	Annual NOx PTE (ton/yr)
EU0160 through EU0180 and CE-11	2 DDGS Dryers, 5 Centrifuges, and Thermal Oxidizer,	11.5 lb/hr	Permit Condition (EU0160 through EU0180)-001	50.37
EU0220	Boiler #1	4.0 lb/hr	Permit Condition EU0220-001	17.52
EU0230	Boiler #2	4.0 lb/hr	Permit Condition EU0230-001	17.52
NA	Flare	0.068 lbs/MMBtu	See calculations below	0.02
Total NOx Emissions				85.43

NOx Emissions from Flare

Vapor Loading Loss Emission Equation

$$L_L = 12.46 \times \frac{SPM}{T} \quad (\text{Source: EPA AP-42, Chapter 5})$$

Where:

L_L = loading loss, lb/10³ gal of liquid loaded

S = a saturation factor = 1.0 (Source: EPA AP-42, Table 5.2-1)

P = true vapor pressure of liquid loaded = 0.7165 psia (Source: EPA Tanks 4.0 for denatured ethanol)

M = molecular weight of vapors = 49.73 lb/lb-mole (Source: EPA Tanks 4.0 for denatured ethanol)

T = temperature of bulk liquid loaded = °R (°F + 460) = 514 °R (Source: EPA Tanks 4.0, Columbia MO)

$$L_L = 12.46 \times \frac{1.0 \times 0.7165 \times 49.73}{514} = 0.86 \text{ lb/1000 gallons}$$

PTE = 56 million gallons/yr x 0.86 lb/1000 gallons = 48,160 lb vapor/yr

Flare NOx emission factor = 0.068 lb/MMBtu (Source: EPA AP-42, Table 13.5-1)

Assume ethanol energy content (LHV) = 11,500 Btu/lb

$$PTE = \frac{48,160 \text{ lb ethanol vapor}}{\text{yr}} \times \frac{0.068 \text{ lb NOx}}{\text{MMBtu}} \times \frac{0.0115 \text{ MMBtu}}{\text{lb ethanol}} \times \frac{\text{ton}}{2000 \text{ lb}} = 0.02 \text{ tpy}$$

- 5) In a letter dated June 20, 2008, POET Biorefining – Laddonia requested to change their amount of CO emissions they reported in their 2007 EIQ. Initially they reported 159.92 tons per year. The corrected CO emissions are 53.32 tons per year. The basis for this correction is from changing the emission factor to 4.0 lb/hr for boilers 1 and 2 (EP-13 and EP-14) which is an engineering calculation based on performance tests on similar units. The change has been approved by the Air Program.

Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis

Any regulation which is not specifically listed in either the operating permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons.

- 1) The specific pollutant regulated by that rule is not emitted by the installation.
- 2) The installation is not in the source category regulated by that rule.
- 3) The installation is not in the county or specific area that is regulated under the authority of that rule.
- 4) The installation does not contain the type of emission unit which is regulated by that rule.
- 5) The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the Air Pollution Control Program's satisfaction, the installation's compliance with that regulation(s). If the installation is not in compliance with a regulation which was not previously cited, the installation shall submit to the Air Pollution Control Program a schedule for achieving compliance for that regulation(s).

Prepared by:

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