Missouri Department of Natural Resources
Air Pollution Control Program

PART 70
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 herein.

Operating Permit Number: OP2012-056
Expiration Date: MAR 0 3 2018
Installation ID: 095-0031
Project Number: 2011-03-006

Installation Name and Address
KCP&L Greater Missouri Operations Company - Sibley Generating Station
33200 E. Johnson Road
Sibley, MO 64141
Jackson County

Parent Company's Name and Address
Great Plains Energy, Inc.
P.O. Box 418679
Kansas City, MO 64141

Installation Description:
KCP&L Greater Missouri Operations Company owns and operates an electric energy generating station located in Sibley, Missouri. Equipment at this installation includes three (3) coal-fired and tire-derived fuel-fired boilers, coal and fly ash handling equipment, parts washer, welding equipment, storage tanks, an emergency generator and a diesel fire pump. The installation is a major source of particulate matter less than ten microns (PM_{10}), sulfur oxides (SO_x), nitrogen oxides (NO_x), volatile organic compounds (VOC), carbon monoxide (CO), hazardous air pollutants (HAP), and greenhouse gases. The installation is subject to 40 CFR Part 63 Subpart UUUUU, *National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units,* 40 CFR Part 63 Subpart ZZZZ, *National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines,* and 40 CFR Part 60 Subpart Y, *Standards of Performance for Coal Preparation Plants and Processing Plants.*

MAR 0 4 2013
Effective Date

Director or Designee
Department of Natural Resources

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I. Installation Description and Equipment Listing

INSTALLATION DESCRIPTION

KCP&L Greater Missouri Operations Company owns and operates an electric energy generating station located in Sibley, Missouri. Equipment at this installation includes three (3) coal-fired and tire-derived fuel-fired boilers, coal and fly ash handling equipment, parts washer, welding equipment, storage tanks, an emergency generator, and a diesel fire pump.

Reported Air Pollutant Emissions, tons per year					
Pollutants	2010	2009	2008	2007	2006
Particulate Matter ≤ Ten Microns (PM_{10})	387.30	252.66	185.39	39.41	39.12
Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$)	334.89	225.39	8.78	9.76	9.92
Sulfur Oxides (SO_x)	13059.50	11787.20	9181.02	11796.20	11967.00
Nitrogen Oxides (NO_x)	2532.40	2942.30	7726.32	10120.47	9261.96
Volatile Organic Compounds(VOC)	87.99	91.38	81.54	95.31	93.44
Carbon Monoxide (CO)	401.15	415.75	370.96	433.54	425.09
Lead (Pb)	0.03	0.35	-	-	-
Hazardous Air Pollutants (HAPs)	76.62	64.64	76.58	74.79	88.94
Ammonia (NH_3)	0.45	0.47	-	-	-

Note: Starting in 2009 condensable PM is included in PM_{10} and $PM_{2.5}$ emissions.

EMISSION UNITS WITH LIMITATIONS

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

Emission Unit #	Description of Emission Unit
EP3A	Coal Conveyor #18
EP3B	Coal Handling System (Except for Conveyor #18)
EP4A	Coal Crusher #1
EP4B	Coal Crusher #2
EP5A	Boiler #1
EP5B	Boiler #2
EP5C	Boiler #3
EP6	Fly Ash Handling System
EP7	Emergency Generator

EP8	Welding Machine
EP9	Welding Machine
EP10	Parts Washer
EP11	Back-up Diesel Fire Pump
EP18	Hauling and storage for off-site coal combustion by-products

EMISSION UNITS WITHOUT LIMITATIONS

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

Description of Emission Source

Coal unloading (EP1)
Coal storage pile (EP2)
Portable space heaters (EP17)
Storage tanks for volatile organic liquids
- 20,000-gallon coal yard diesel tank, installed prior to 1984 (EP15)
- 8,500-gallon waste oil tank (EP16)
- Two 1,000-gallon unleaded gasoline tanks
- 1,200-gallon emergency generator diesel tank
- 500-gallon steam jenny #1 fuel oil tank
- One 115-gallon fire water diesel tank
- Various tanks and drums for storing bearing oil, compressor fluid, diesel fuel supplement, hydraulic fluid, lube oil, mineral oil, silicon oil, solvent, transformer oil, turbine oil, and waste oil; none are over 40,000 gallons; and none have capacities of at least 75 m^3 and were constructed after July 23, 1984.

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 as of the date that this permit is issued.

None

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 as of the date that this permit is issued.

Coal Conveyor #18 and Coal Crusher #1	
Emission Unit	Description
EP3A	Conveyor #18 conveys coal from storage pile, and transfers coal to conveyor #7 in transfer house #2. The coal is then transferred to crusher. MHDR 700 ton/hr; and it was installed in 1993
EP4A	Coal Crusher #1, Installed 2007, equipped with baghouse, MHDR 350 tons/hour. Coal yard emissions are controlled by a dust collector which collects dust for the entire coal yard.

PERMIT CONDITION (EP3A and EP4A)-001

10 CSR 10-6.070, New Source Performance Regulations
40 CFR 60 Subpart Y Standards of Performance for Coal Preparation Plants

Emission Limitation

The permittee shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified on or before April 28, 2008, gases which exhibit 20 percent opacity or greater. [§60.254(a)]

Test Methods/Procedures

The permittee shall follow the applicable test methods and testing procedures according to the requirements of §60.255 and §60.257.

Recordkeeping

1. The permittee shall maintain records of any equipment malfunctions, using Attachment D or an equivalent form generated by the permittee.
2. The permittee shall maintain records of any U.S. EPA Test Method 22 and/or Method 9 opacity tests performed in accordance with this permit condition.
3. The permittee shall retain each record in either hard copy or electronic form.
4. These records shall be made available for inspection to the Department of Natural Resources' personnel upon request.
5. All records must be maintained for five years.

Reporting

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

2. The permittee shall report any deviations from the standards, compliance requirements, continuous monitoring requirements, test methods/procedures, and reporting/recordkeeping requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

Coal Crusher #2	
Emission Unit	Description
EP4B	Coal Crusher #2, Installed 2011, MHDR 350 tons/hour. Coal yard emissions are controlled by a dust collector which collects dust for the entire coal yard.

PERMIT CONDITION EP4B-001

10 CSR 10-6.070, New Source Performance Regulations
40 CFR 60 Subpart Y Standards of Performance for Coal Preparation Plants

Emission Limitation

1. The owner or operator must not cause to be discharged into the atmosphere from EP4B any gases which exhibit 10 percent opacity or greater. [§60.254(b)(1)]
2. The owner or operator must not cause to be discharged into the atmosphere from any mechanical vent associated with EP4B which contain particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf). [§60.254(b)(2)]

Test Methods/Procedures

The permittee shall follow the applicable test methods and testing procedures according to the requirements of §60.255 and §60.257.

Recordkeeping

1. The permittee shall maintain a logbook to record the following: [§60.258(a)]
   a) The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from manufacturer recommendation, if any, shall be noted. [§60.258(a)(1)]
   b) The date and time of periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted. [§60.258(a)(2)]
   c) The amount and type of coal processed each calendar month. [§60.258(a)(3)]
2. These records shall be made available to any Missouri Department of Natural Resources' personnel upon request.
3. All records shall be maintained for five years.

Reporting

1. The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded the emission limitation listed above.
2. The permittee shall report any deviations from the standards, monitoring/testing, and reporting requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit

Coal Handling System, Coal Crusher House, and Fly Ash Handling	
Emission Unit	Description
EP3B	Coal Handling System (Except for Conveyor #18) conveys and transfers coal. These coal handling units were installed prior to 1970, except for conveyor #16 and conveyor #17, which were installed in 1993
EP6	Fly ash from Boiler #3 precipitator hoppers is collected in a transfer vessel and pneumatically conveyed to silo. Dry fly ash is beneficially used offsite or sluiced in a wetted condition into holding pond. Fly ash from Boiler #1 and Boiler #2 is sluiced directly from the boilers to the holding pond. Silo equipped with fabric filter. Installed 1993.

PERMIT CONDITION (EP3B and EP6)-001

10 CSR 10-6.220, Restriction of Emission of Visible Air Contaminants

Emission Limitations

1. No owner or other person shall cause or permit emissions to be discharged into the atmosphere from any source visible emissions with an opacity greater than 20%.
2. Exception: A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 60%.

Monitoring/Recordkeeping/Reporting

As detailed in core permit requirements.

Boilers		
Emission Unit	Description	Manufacturer/Model #
EP5A	Cyclone-fired boiler; MHDR 609.6 MMBtu/hr; fired with sub-bituminous coal, bituminous coal and tire-derived fuel (TDF); equipped with dedicated electrostatic precipitator and selective non-catalytic reduction/rich reagent injection; shares stack with EP5B and EP5C; installed 1960	Babcock & Wilcox
EP5B	Cyclone-fired boiler; MHDR 627.3 MMBtu/hr; fired with sub-bituminous coal, bituminous coal and tire-derived fuel (TDF); equipped with dedicated electrostatic precipitator and selective non-catalytic reduction/rich reagent injection; shares stack with EP5A and EP5C; installed 1962	Babcock & Wilcox
EP5C	Cyclone-fired boiler; MHDR 4094.1 MMBtu/hr; fired with sub-bituminous coal, bituminous coal and tire-derived fuel (TDF); equipped with dedicated electrostatic precipitator and selective catalytic reduction; shares stack with EP5A and EP5B; installed 1969	Babcock & Wilcox

PERMIT CONDITION (EP5A through EP5C)-001

10 CSR 10-6.075, Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart UUUUU – National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units

Applicability

EP5A Boiler 1, EP5B Boiler 2, and EP5C Boiler 3 meet the definition of a coal-fired electric utility steam generating unit (EGU) within §63.10042. The boilers were constructed in 1960, 1962, and 1969, respectively, classifying them as existing coal-fired EGU and affected sources per §63.9982(a)(1). The boilers combust coal with a heat content in excess of 8,300 Btu/lb meeting the subcategory of non-low rank virgin coal in §63.9990(a)(1).

Compliance Dates

1. The permittee shall comply with this subpart no later than April 16, 2016.[CAA §112(i)(3)(B) and Air Pollution Control Program letter dated August 2, 2012]
2. The permittee shall meet the notification requirements in §63.10030 according to the schedule in §63.10030 and in 40 CFR Part 63, Subpart A. Some of the notifications must be submitted before the permittee is required to comply with the emission limits and work practice standards in this subpart. [§63.9984(c)]
3. The permittee shall demonstrate that compliance has been achieved, by conducting the required performance tests and other activities, no later than 180 days after April 16, 2016. [§63.9984(f)]

Emission Limitations and Work Practice Standards

1. The permittee shall meet the following requirements at all times: [§63.9991(a)]
   a) The permittee shall meet each emission limit and work practice standard in Tables 2 and 3 of this subpart that applies, except as provided under §63.10009. [§63.9991(a)(1)]
   b) The permittee shall meet each operating limit in Table 4 of this subpart that applies. [§63.9991(a)(2)]
2. As provided in §63.6(g), the Director may approve use of an alternative to the work practice standards in this section. [§63.9991(b)]
3. The permittee may use the alternate SO_2 limit in Table 2 of this subpart only if the EGU: [§63.9991(c)]
   a) Has a system using wet or dry flue gas desulfurization technology and SO_2 continuous emissions monitoring system (CEMS) installed on the unit; and [§63.9991(c)(1)]
   b) At all times, the permittee operates the wet or dry flue gas desulfurization technology installed on the unit consistent with §63.10000(b). [§63.9991(c)(2)]

40 CFR Part 63, Subpart UUUUU Table 2 - *Emission Limits for Existing EGUs*

[As stated in § 63.9991, the permittee shall comply with the following applicable emission limits][1]

Pollutants (a, b, and c)		**Emission Limit**
a. Filterable particular matter (PM)		0.030 lb/MMBtu or 0.30 lb/MWh[2]
OR Total non-Hg HAP metals		0.000050 lb/MMBtu or 0.50 lb/GWh
OR Individual HAP metals:	Antimony (Sb)	0.80 lb/TBtu or 0.0080 lb/GWh
	Arsenic (As)	1.1 lb/TBtu or 0.020 lb/GWh
	Beryllium (Be)	0.20 lb/TBtu or 0.0020 lb/GWh
	Cadmium (Cd)	0.30 lb/TBtu or 0.0030 lb/GWh
	Chromium (Cr)	2.8 lb/TBtu or 0.030 lb/GWh
	Cobalt (Co)	0.80 lb/TBtu or 0.0080 lb/GWh
	Lead (Pb)	1.2 lb/TBtu or 0.020 lb/GWh
	Manganese (Mn)	4.0 lb/TBtu or 0.050 lb/GWh
	Nickel (Ni)	3.5 lb/TBtu or 0.040 lb/GWh
	Selenium (Se)	5.0 lb/TBtu or 0.060 lb/GWh
AND b. Hydrogen Chloride (HCl)		0.0020 lb/MMBtu or 0.020 lb/MWh
OR Sulfur Dioxide (SO_2)[3]		0.20 lb/MMBtu or 1.5 lb/MWh
AND c. Mercury (Hg)		1.2 lb/TBtu or 0.013 lb/GWh

[1]For low emitting EGU (LEE) emissions testing for total PM, total HAP metals, individual HAP metals, and HCl, the required minimum sampling volume shall be increased nominally by a factor of two.

[2]Gross electric output.

[3]The permittee may not use the alternate SO_2 limit if the EGU does not have some form of FGD system and SO_2 CEMS installed.

40 CFR Part 63, Subpart UUUUU Table 3 – *Work Practice Standards*

[As stated in § 63.9991, the permittee shall comply with the following applicable work practice standards]

EGU	Work Practice Standards
Existing EGU	Conduct a tune-up of the EGU burner and combustion controls at least each 36 calendar months, or 48 calendar months if neural network combustion optimization software is employed, as specified in §63.10021(e).
Coal-fired EGUs during startup	The permittee shall operate all continuous monitoring systems (CMS) during startup. Startup means either the first-ever firing of fuel in a boiler for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on site use). For startup of a unit, the permittee shall use clean fuels, either natural gas or distillate oil or a combination of clean fuels for ignition. Once the permittee converts to firing coal, the permittee shall engage all of the applicable control technologies except dry scrubber and SCR. The permittee shall start the dry scrubber and SCR systems, if present, appropriately to comply with relevant standards applicable during normal operation. The permittee shall comply with all applicable emissions limits at all times except for periods that meet the definitions of startup and shutdown in this subpart. The permittee shall retain records during periods of startup. The permittee shall provide reports concerning activities and periods of startup, as specified in §63.10011(g) and § 63.10021(h) and (i).
Coal-fired EGUs during shutdown	The permittee shall operate all CMS during shutdown. Shutdown means the cessation of operation of a boiler for any purpose. Shutdown begins either when none of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on-site use) or at the point of no fuel being fired in the boiler. Shutdown ends when there is both no electricity being generated and no fuel being fired in the boiler. During shutdown, the permittee shall operate all applicable control technologies while firing coal. The permittee shall comply with all applicable emissions limits at all times except for periods that meet the definitions of startup and shutdown in this subpart. The permittee shall retain records during periods of startup. The permittee shall provide reports concerning activities and periods of startup, as specified in § 63.10011(g) and § 63.10021(h) and (i).

40 CFR Part 63, Subpart UUUUU Table 4 - *Operating Limits for Existing EGUs*

[As stated in § 63.9991, the permittee shall comply with the following applicable operating limits]

Method of Compliance	Operating Limits
PM CPMS	Maintain the 30-boiler operating day rolling average particulate matter continuous parametric monitoring system (PM CPMS) output at or below the highest 1-hour average measured during the most recent performance test demonstrating compliance with the filterable PM, total non-mercury HAP metals, individual non-mercury HAP metals emissions limitation(s).

General Requirements

1. The permittee shall be in compliance with the emission limits and operating limits in this subpart. These limits apply at all times except during periods of startup and shutdown; however, for coal-fired EGUs, the permittee is required to meet the work practice requirements in Table 3 of this subpart during periods of startup or shutdown. [§63.10000(a)]
2. At all times the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the EPA

Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.10000(b)]

3. Initial performance testing is required for all pollutants, to demonstrate compliance with the applicable emission limits. [§63.10000(c)(1)]
   a) The permittee may conduct the initial performance testing in accordance with §63.10005(h), to determine whether the unit qualifies as a low emitting EGU (LEE) for one or more applicable emissions limits, with the following exception: [§63.10000(c)(1)(i)]
      i) The permittee may not pursue the LEE option if the coal-fired EGU is equipped with an acid gas scrubber and has a main stack and bypass stack exhaust configuration, [§63.10000(c)(1)(i)(A)]
   b) For a qualifying LEE for Hg emissions limits, the permittee shall conduct a 30-day performance test using Method 30B at least once every 12 calendar months to demonstrate continued LEE status. [§63.10000(c)(1)(ii)]
   c) For a qualifying LEE of any other applicable emissions limits, the permittee shall conduct a performance test at least once every 36 calendar months to demonstrate continued LEE status. [§63.10000(c)(1)(iii)]
   d) If the coal-fired EGU does not qualify as a LEE for total non-mercury HAP metals, individual non-mercury HAP metals, or filterable particulate matter (PM), the permittee shall demonstrate compliance through an initial performance test and the permittee shall monitor continuous performance through either use of a particulate matter continuous parametric monitoring system (PM CPMS), a PM CEMS, or compliance performance testing repeated quarterly. [§63.10000(c)(1)(iv)]
      i) If the permittee elects to use PM CPMS, the permittee will establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the pollutant with which the permittee chooses to comply: total non-mercury HAP metals, individual non-mercury HAP metals or filterable PM. The permittee will use the PM CPMS to demonstrate continuous compliance with this operating limit. If the permittee elects to use a PM CPMS, the permittee shall repeat the performance test annually for the selected pollutant limit and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. [§63.10000(c)(1)(iv)(A)]
      ii) The permittee may also opt to install and operate a PM CEMS certified in accordance with Performance Specification 11 and Procedure 2 of 40 CFR Part 60, Appendices B and F, respectively, in accordance with §63.10010(i). [§63.10000(c)(1)(iv)(B)]
   e) If the coal-fired EGU does not qualify as a LEE for HCl, the permittee may demonstrate initial and continuous compliance through use of an HCl CEMS, installed and operated in accordance with Appendix B of this subpart. As an alternative to HCl CEMS, the permittee may demonstrate initial and continuous compliance by conducting an initial and periodic quarterly performance stack test for HCl. If the EGU uses wet or dry flue gas desulfurization technology (this includes limestone injection into a fluidized bed combustion unit), the permittee may apply a second alternative to HCl CEMS by installing and operating a SO_2 CEMS in accordance with 40 CFR Part 75 to demonstrate compliance with the applicable SO_2 emissions limit. [§63.10000(c)(1)(v)]
   f) If the coal-fired EGU does not qualify as a LEE for Hg, the permittee shall demonstrate initial and continuous compliance through use of a Hg CEMS or a sorbent trap monitoring system, in accordance with Appendix A of this subpart. [§63.10000(c)(1)(vi)]
4. If the permittee demonstrates compliance with any applicable emissions limit through use of a continuous monitoring system (CMS), where a CMS includes a continuous parameter monitoring

system (CPMS) as well as a continuous emissions monitoring system (CEMS), the permittee shall develop a site-specific monitoring plan and submit this site-specific monitoring plan, if requested, at least 60 days before the initial performance evaluation (where applicable) of the CMS. This requirement also applies if the permittee petitions the Director for alternative monitoring parameters under §63.8(f). This requirement to develop and submit a site-specific monitoring plan does not apply to affected sources with existing monitoring plans that apply to CEMS and CPMS prepared under Appendix B to 40 CFR Part 60 or 75, and that meet the requirements of §63.10010. Using the process described in §63.8(f)(4), the permittee may request approval of monitoring system quality assurance and quality control procedures alternative to those specified and, if approved, include those in the site-specific monitoring plan. The monitoring plan shall address all of the following provisions: [§63.10000(d)(1)]

a) The site-specific monitoring plan shall include the information specified in §63.10000(d)(5)(i) through (vii). Alternatively, the requirements of §63.10000(d)(5)(i) through (vii) as shown in d) below are considered to be met for a particular CMS or sorbent trap monitoring system if: [§63.10000(d)(2)]
    i) The CMS or sorbent trap monitoring system is installed, certified, maintained, operated, and quality-assured either according to 40 CFR Part 75, or Appendix A or B of this subpart; and [§63.10000(d)(2)(i)]
    ii) The recordkeeping and reporting requirements of 40 CFR Part 75, or Appendix A or B of this subpart, that pertain to the CMS are met. [§63.10000(d)(2)(ii)]
b) If requested by the Director, the permittee shall submit the monitoring plan (or relevant portion of the plan) at least 60 days before the initial performance evaluation of a particular CMS, except where the CMS has already undergone a performance evaluation that meets the requirements of §63.10010 (e.g., if the CMS was previously certified under another program). [§63.10000(d)(3)]
c) The permittee shall operate and maintain the CMS according to the site-specific monitoring plan. [§63.10000(d)(4)]
d) The provisions of the site-specific monitoring plan shall address the following items: [§63.10000(d)(5)]
    i) Installation of the CEMS or sorbent trap monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device). See §63.10010(a) for further details. For PM CPMS installations, follow the procedures in §63.10010(h). [§63.10000(d)(5)(i)]
    ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems. [§63.10000(d)(5)(ii)]
    iii) Schedule for conducting initial and periodic performance evaluations. [§63.10000(d)(5)(iii)]
    iv) Performance evaluation procedures and acceptance criteria (e.g., calibrations), including the quality control program in accordance with the general requirements of §63.8(d). [§63.10000(d)(5)(iv)]
    v) On-going operation and maintenance procedures, in accordance with the general requirements of §63.8(c)(1)(ii), (3), and (4)(ii). [§63.10000(d)(5)(v)]
    vi) Conditions that define a CMS that is out of control consistent with §63.8(c)(7)(i) and for responding to out of control periods consistent with §63.8(c)(7)(ii) and (8). [§63.10000(d)(5)(vi)]

vii) On-going recordkeeping and reporting procedures, in accordance with the general requirements of §63.10(c), (e)(1), and (e)(2)(i), or as specifically required by this subpart. [§63.10000(d)(5)(vii)]

5. As part of the demonstration of continuous compliance, the permittee shall perform periodic tune-ups of the EGU(s), according to §63.10021(e). [§63.10000(e)]
6. The permittee is subject to the requirements of this subpart for at least six months following the last date the emission unit met the definition of an EGU subject to this subpart (e.g., six months after a cogeneration unit provided more than one third of its potential electrical output capacity and more than 25 MW electrical output to any power distribution system for sale). The permittee may opt to remain subject to the provisions of this subpart beyond six months after the last date the emission unit met the definition of an EGU subject to this subpart. [§63.10000(f)]
7. If the emission unit no longer meets the definition of an EGU subject to this subpart the permittee shall be in compliance with any newly applicable standards on the date the permittee is no longer subject. The date the permittee is no longer subject to this subpart is a date selected by the permittee, that shall be at least six months from the date that the emission unit last met the definition of an EGU subject to this subpart. The permittee shall remain in compliance with this subpart until the date the permittee selects to cease complying. [§63.10000(g)]
8. If it has been at least six months since the emission unit was operated in a manner that caused the emission unit to meet the definition of an EGU subject to this subpart, the permittee may, consistent with §63.10000(g), select the date on which the EGU will no longer be subject to this subpart. The permittee shall be in compliance with any newly applicable Section 112 or 129 standards on the date the permittee selected. [§63.10000(i)(1)]
9. The permittee shall provide 30 days prior notice of the date the EGU will cease complying with this subpart. The notification shall identify: [§63.10000(i)(2)]
   a) The name of the owner or operator of the EGU(s), the location of the facility, the EGU(s) that will cease complying with this subpart, and the date of the notice; [§63.10000(i)(2)(i)]
   b) The currently applicable subcategory under this subpart, and any 40 CFR Part 60, 62, or 63 subpart and subcategory that will be applicable after the permittee ceases complying with this subpart; [§63.10000(i)(2)(ii)]
   c) The date on which the permittee became subject to this subpart; [§63.10000(i)(2)(iii)]
   d) The date upon which the permittee will cease complying with this subpart, consistent with §63.10000(g). [§63.10000(i)(2)(iv)]
10. All air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of operations that cause the EGU to meet the definition of an EGU subject to this subpart shall be installed and operational as of the date the source ceases to be or becomes subject to this subpart. [§63.10000(j)]
11. All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of operations that cause the EGU to meet the definition of an EGU subject to this subpart shall be installed and operational as of the date the source ceases to be or becomes subject to this subpart. All calibration and drift checks shall be performed as of the date the source ceases to be or becomes subject to this subpart. The permittee shall also comply with the provisions of §§63.10010, 63.10020, and 63.10021. Relative accuracy tests shall be performed as of the performance test deadline for PM CEMS, if applicable. Relative accuracy testing for other CEMS need not be repeated if that testing was previously performed consistent with CAA Section 112 monitoring requirements or monitoring requirements under this subpart. [§63.10000(k)]

Affirmative Defense

In response to an action to enforce Permit Condition (EP5A through EP5C)-001, the permittee may assert an affirmative defense in accordance with §63.10001.

Testing and Initial Compliance

1. *General requirements.* For each EGU, the permittee shall demonstrate initial compliance with each applicable emissions limit in Table 2 of this subpart through performance testing. Where two emissions limits are specified for a particular pollutant (e.g., a heat input-based limit in lb/MMBtu and an electrical output-based limit in lb/MWh), the permittee may demonstrate compliance with either emission limit. For a particular compliance demonstration, the permittee may be required to conduct one or more of the following activities in conjunction with performance testing: collection of hourly electrical load data (MW); establishment of operating limits according to §63.10011 and Tables 4 and 7 of this subpart; and CMS performance evaluations. In all cases, the permittee shall demonstrate initial compliance no later than the applicable date in §63.10005(f) for tune-up work practices for existing EGUs and in §63.9984 for other requirements for existing EGUs. [§63.10005(a)]
   a) To demonstrate initial compliance with an applicable emissions limit in Table 2 of this subpart using stack testing, the initial performance test generally consists of three runs at specified process operating conditions using approved methods. If the permittee is required to establish operating limits (see §63.10005(d) and Table 4 of this subpart), the permittee shall collect all applicable parametric data during the performance test period. Also, if the permittee chooses to comply with an electrical output-based emission limit, the permittee shall collect hourly electrical load data during the test period. [§63.10005(a)(1)]
   b) To demonstrate initial compliance using either a CMS that measures HAP concentrations directly (*i.e.*, an Hg or HCl CEMS, or a sorbent trap monitoring system) or an SO_2 or PM CEMS, the initial performance test consists of 30 boiler operating days of data collected by the initial compliance demonstration date specified in §63.10005 with the certified monitoring system. [§63.10005(a)(2)]
      i) The 30-boiler operating day CMS performance test shall demonstrate compliance with the applicable Hg, HCl, PM, or SO_2 emissions limit in Table 2 of this subpart. [§63.10005(a)(2)(i)]
      ii) If the permittee chooses to comply with an electrical output-based emission limit, the permittee shall collect hourly electrical load data during the performance test period. [§63.10005(a)(2)(ii)]
2. *Performance testing requirements.* If the permittee chooses to use performance testing to demonstrate initial compliance with the applicable emissions limits in Table 2 of this subpart for the EGU, the permittee shall conduct the tests according to §63.10007 and Table 5 of this subpart. For the purposes of the initial compliance demonstration, the permittee may use test data and results from a performance test conducted prior to the date on which compliance is required as specified in §63.9984, provided that the following conditions are fully met: [§63.10005(b)]
   a) For a performance test based on stack test data, the test was conducted no more than 12 calendar months prior to the date on which compliance is required as specified in §63.9984; [§63.10005(b)(1)]
   b) For a performance test based on data from a certified CEMS or sorbent trap monitoring system, the test consists of all valid CMS data recorded in the 30 boiler operating days immediately preceding that date; [§63.10005(b)(2)]

c) The performance test was conducted in accordance with all applicable requirements in §63.10007 and Table 5 to this subpart; [§63.10005(b)(3)]
d) A record of all parameters needed to convert pollutant concentrations to units of the emission standard (e.g., stack flow rate, diluent gas concentrations, hourly electrical loads) is available for the entire performance test period; and [§63.10005(b)(4)]
e) For each performance test based on stack test data, the permittee certifies, and retains documentation demonstrating, that the EGU configuration, control devices, and fuel(s) have remained consistent with conditions since the prior performance test was conducted. [§63.10005(b)(5)]

3. *CMS requirements.* If, for a particular emission or operating limit, the permittee is required to (or elects to) demonstrate initial compliance using a continuous monitoring system, the CMS shall pass a performance evaluation prior to the initial compliance demonstration. If a CMS has been previously certified under another state or federal program and is continuing to meet the on-going quality-assurance (QA) requirements of that program, then, provided that the certification and QA provisions of that program meet the applicable requirements of §63.10010(b) through (h), an additional performance evaluation of the CMS is not required under this subpart. [§63.10005(d)]
   a) The permittee may demonstrate initial compliance with the applicable SO_2 or HCl emissions limit in Table 2 of this subpart through use of an SO_2 or HCl CEMS installed and operated in accordance with 40 CFR Part 75 or Appendix B to this subpart, as applicable. The permittee may also demonstrate compliance with a filterable PM emission limit in Table 2 of this subpart through use of a PM CEMS installed, certified, and operated in accordance with §63.10010(i). Initial compliance is achieved if the arithmetic average of 30-boiler operating days of quality-assured CEMS data, expressed in units of the standard (see §63.10007(e)), meets the applicable SO_2, PM, or HCl emissions limit in Table 2 to this subpart. Use 40 CFR Part 60 Appendix A-7 Method 19 Equation 19–19 to calculate the 30-boiler operating day average emissions rate. (Note: for this calculation, the term E_{hj} in Equation 19–19 must be in the same units of measure as the applicable HCl emission limit in Table 2 to this subpart). [§63.10005(d)(1)]
   b) For affected coal-fired EGUs that demonstrate compliance with the applicable emission limits for total non-mercury HAP metals, individual non-mercury HAP metals, total HAP metals, individual HAP metals, or filterable PM listed in Table 2 to this subpart using initial performance testing and continuous monitoring with PM CPMS: [§63.10005(d)(2)]
      i) The permittee shall demonstrate initial compliance no later than the applicable date specified in §63.9984(f) for existing EGUs. [§63.10005(d)(2)(i)]
      ii) The permittee shall demonstrate continuous compliance with the PM CPMS site-specific operating limit that corresponds to the results of the performance test demonstrating compliance with the pollutant emission limits with which the permittee chooses to comply. [§63.10005(d)(2)(ii)]
      iii) The permittee shall repeat the performance test annually for the selected pollutant emissions limit and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. [§63.10005(d)(2)(iii)]
   c) For affected EGUs that are either required to or elect to demonstrate initial compliance with the applicable Hg emission limit in Table 2 of this subpart using Hg CEMS or sorbent trap monitoring systems, initial compliance shall be demonstrated no later than the applicable date specified in §63.9984(f) for existing EGUs. Initial compliance is achieved if the arithmetic average of 30-boiler operating days of quality-assured CEMS (or sorbent trap monitoring system) data, expressed in units of the standard (see §6.2 of Appendix A to this subpart), meets the applicable Hg emission limit in Table 2 to this subpart. [§63.10005(d)(3)]

4. *Tune-ups.* All affected EGUs are subject to the work practice standards in Table 3 of this subpart. As part of the initial compliance demonstration, the permittee shall conduct a performance tune-up of the EGU according to §63.10021(e). [§63.10005(e)]
5. For existing affected sources a tune-up may occur prior to April 16, 2012, so that existing sources without neural networks have up to 42 calendar months (three years from promulgation plus 180 days) or, in the case of units employing neural network combustion controls, up to 54 calendar months (48 months from promulgation plus 180 days) after the date that is specified for the source in §63.9984 and according to the applicable provisions in §63.7(a)(2) as cited in Table 9 to this subpart to demonstrate compliance with this requirement. If a tune-up occurs prior to such date, the source shall maintain adequate records to show that the tune-up met the requirements of this standard. [§63.10005(f)]
6. *Low emitting EGUs.* The provisions of §63.10005(h) as shown in a) through c) below apply to all pollutants with emissions limits from existing EGUs. The permittee may not pursue this compliance option if the existing EGU is equipped with an acid gas scrubber and has a main stack and bypass stack exhaust configuration. [§63.10005(h)]
   a) An EGU may qualify for low emitting EGU (LEE) status for Hg, HCl, filterable PM, total non-Hg HAP metals, or individual non-Hg HAP metals if the permittee collects performance test data that meet the requirements of §63.10005(h), and if those data demonstrate: [§63.10005(h)(1)]
      i) For all pollutants except Hg, performance test emissions results less than 50 percent of the applicable emissions limits in Table 2 to this subpart for all required testing for three consecutive years; or [§63.10005(h)(1)(i)]
      ii) For Hg emissions from an existing EGU, either: [§63.10005(h)(1)(ii)]
         (1) Average emissions less than ten percent of the applicable Hg emissions limit in Table 2 to this subpart (expressed either in units of lb/TBtu or lb/GWh); or [§63.10005(h)(1)(ii)(A)]
         (2) Potential Hg mass emissions of 29.0 or fewer pounds per year and compliance with the applicable Hg emission limit in Table 2 to this subpart (expressed either in units of lb/TBtu or lb/GWh). [§63.10005(h)(1)(ii)(B)]
   b) For all pollutants except Hg, the permittee shall conduct all required performance tests described in §63.10007 to demonstrate that a unit qualifies for LEE status. [§63.10005(h)(2)]
      i) When conducting emissions testing to demonstrate LEE status, the permittee shall increase the minimum sample volume specified in Table 2 nominally by a factor of two. [§63.10005(h)(2)(i)]
      ii) Follow the instructions in §63.10007(e) and Table 5 to this subpart to convert the test data to the units of the applicable standard. [§63.10005(h)(2)(ii)]
   c) For Hg, the permittee shall conduct a 30-boiler operating day performance test using Method 30B in Appendix A–8 to 40 CFR Part 60 to determine whether a unit qualifies for LEE status. Locate the Method 30B sampling probe tip at a point within the ten percent centroidal area of the duct at a location that meets Method 1 in Appendix A–1 to 40 CFR Part 60 and conduct at least three nominally equal length test runs over the 30-boiler operating day test period. Collect Hg emissions data continuously over the entire test period (except when changing sorbent traps or performing required reference method QA procedures), under all process operating conditions. The permittee may use a pair of sorbent traps to sample the stack gas for no more than ten days. [§63.10005(h)(3)]
      i) Depending on whether the permittee intends to assess LEE status for Hg in terms of the lb/TBtu or lb/GWh emission limit in Table 2 to this subpart or in terms of the annual Hg mass emissions limit of 29.0 lb/year, the permittee shall collect some or all of the following

data during the 30-boiler operating day test period (see §63.10005(h)(3)(iii)): [§63.10005(h)(3)(i)]

(1) Diluent gas (CO_2 or O_2) data, using either Method 3A in Appendix A–3 to 40 CFR Part 60 or a diluent gas monitor that has been certified according to 40 CFR Part 75. [§63.10005(h)(3)(i)(A)]

(2) Stack gas flow rate data, using either Method 2, 2F, or 2G in Appendices A–1 and A–2 to 40 CFR Part 60, or a flow rate monitor that has been certified according to 40 CFR Part 75. [§63.10005(h)(3)(i)(B)]

(3) Stack gas moisture content data, using either Method 4 in Appendix A–1 to 40 CFR Part 60, or a moisture monitoring system that has been certified according to 40 CFR Part 75. Alternatively, an appropriate fuel-specific default moisture value from §75.11(b) may be used in the calculations. [§63.10005(h)(3)(i)(C)]

(4) Hourly electrical load data (MW), from facility records. [§63.10005(h)(3)(i)(D)]

ii) If the permittee uses CEMS to measure CO_2 (or O_2) concentration, and/or flow rate, and/or moisture, record hourly average values of each parameter throughout the 30-boiler operating day test period. If the permittee opts to use EPA reference methods rather than CEMS for any parameter, the permittee shall perform at least one representative test run on each operating day of the test period, using the applicable reference method. [§63.10005(h)(3)(ii)]

iii) Calculate the average Hg concentration, in $\mu g/m^3$ (dry basis), for the 30-boiler operating day performance test, as the arithmetic average of all Method 30B sorbent trap results. Also calculate, as applicable, the average values of CO_2 or O_2 concentration, stack gas flow rate, stack gas moisture content, and electrical load for the test period. Then: [§63.10005(h)(3)(iii)]

(1) To express the test results in units of lb/TBtu, follow the procedures in §63.10007(e). Use the average Hg concentration and diluent gas values in the calculations. [§63.10005(h)(3)(iii)(A)]

(2) To express the test results in units of lb/GWh, use Equations A–3 and A–4 in §6.2.2 of Appendix A to this subpart, replacing the hourly values "C_h", "Q_h", "B_{ws}" and "$(MW)_h$" with the average values of these parameters from the performance test. [§63.10005(h)(3)(iii)(B)]

(3) To calculate pounds of Hg per year, use one of the following methods: [§63.10005(h)(3)(iii)(C)]

(a) Multiply the average lb/TBtu Hg emission rate (determined according to §63.10005(h)(3)(iii)(A)) by the maximum potential annual heat input to the unit (TBtu), which is equal to the maximum rated unit heat input (TBtu/hr) times 8,760 hours. If the maximum rated heat input value is expressed in units of MMBtu/hr, multiply it by 10^{-6} to convert it to TBtu/hr; or [§63.10005(h)(3)(iii)(C)(*1*)]

(b) Multiply the average lb/GWh Hg emission rate (determined according to §63.10005(h)(3)(iii)(B)) by the maximum potential annual electricity generation (GWh), which is equal to the maximum rated electrical output of the unit (GW) times 8,760 hours. If the maximum rated electrical output value is expressed in units of MW, multiply it by 10^{-3} to convert it to GW; or [§63.10005(h)(3)(iii)(C)(*2*)]

7. Startup and shutdown for coal-fired units. The permittee shall follow the requirements given in Table 3 to this subpart. [§63.10005(j)]
8. The permittee shall submit a Notification of Compliance Status summarizing the results of the initial compliance demonstration, in accordance with §63.10030. [§63.10005(k)]
9. The permittee shall conduct subsequent performance tune-ups as specified in §63.10006.

10. The permittee shall conduct all required performance tests as specified in §63.10007, Table 5 to 40 CFR Part 63, Subpart UUUUU, and Table 6 to 40 CFR Part 63, Subpart UUUUU.
11. The permittee may use emissions averaging as an alternate to meeting requirements as specified in §63.10009.
12. The permittee shall comply with applicable monitoring, installation, operation and maintenance requirements as specified in §63.10010.
13. The permittee shall demonstrate initial compliance with applicable emissions limits as specified in §63.10011.

Continuous Compliance

1. The permittee shall monitor and collect data to demonstrate continuous compliance as specified in §63.10020.
2. The permittee shall demonstrate continuous compliance with emission limitations, operating limitations and work practice standards as specified in §63.10021 and Table 7 to 40 CFR Part 63, Subpart UUUUU.
3. The permittee shall demonstrate continuous compliance under the emissions averaging provisions as specified in §63.10022.
4. The permittee shall establish PM CPMS operating limit and determine compliance as specified in §63.10023.

Notifications and General Provisions

1. The permittee shall submit notifications as specified in §63.10030
2. Permittee shall comply with the applicable General Provisions in §63.1 through 63.15 according to Table 9 to 40 CFR Part 63, Subpart UUUUU

Recordkeeping

1. The permittee shall maintain applicable records as specified in §63.10031 and §63.10033.
2. Records may be kept in either written or electronic form.
3. These records shall be made available for inspection to Department of Natural Resources' personnel upon request.
4. All records shall be retained for five years.

Reporting

1. Permittee shall submit applicable reports as specified in §63.10031 and Table 8 to 40 CFR Part 63, Subpart UUUUU.
2. The permittee shall notify the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after an exceedance or a malfunction which could cause an exceedance of the emission limitations.
3. The permittee shall report any deviations from the standards, compliance provisions, performance testing, test methods, recordkeeping, and reporting requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.

PERMIT CONDITION (EP5A through EP5C)-002

10 CSR 10-6.405 Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used For Indirect Heating
40 CFR Part 64 Compliance Assurance Monitoring

Note: Compliance Assurance Monitoring (CAM) applies to these units, so this permit condition incorporates parts of 40 CFR Part 64 and, through that, parts of 40 CFR Part 60. However, the Department of Natural Resources, Air Pollution Control Program, Compliance/Enforcement Section has approved a CAM plan, CAM test plan, and CAM QA/QC plan for these units. Where conflicts arise between these documents and 40 CFR Part 60, the CAM plan, CAM test plan, and CAM QA/QC plan govern. This will assure that where there is doubt, the acceptance criteria in these approved documents will be used, and not those in 40 CFR Part 60 Appendix B Performance Specification 11 (PS-11). These monitors are indicators of compliance, and not compliance monitors. The full PS-11 requirements do not apply to monitors that are only indicators of compliance.

Emission Limitation

The permittee shall not emit particulate matter in excess of 0.12 pounds per million BTU's of heat input.

Monitoring

1. The permittee shall install, calibrate, maintain and operate a PM continuous emission monitoring system (CEMS) in the stack to provide a reasonable assurance of the performance of the electrostatic precipitators (ESPs) in accordance with §60.13 and Appendix B to 40 CFR Part 60.
2. The PM CEMS shall be installed such that representative measurements of emissions are obtained and problems due to any detected flow disturbances or varying PM stratification are minimized. Prior to installation, measurements shall be made of flow dynamics and/or particulate matter to determine the existence or extent of PM stratification. Additional procedures for location of PM CEMS contained in Performance Specialization 11 (PS-11) of Appendix B to Part 60 shall be used.
3. The PM CEMS shall be installed and operational prior to conduction of any performance tests. The permittee shall perform verification procedures to confirm the operational status of the PM CEMS prior to the required monitoring start. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation and calibration of the device.
4. The permittee shall establish the indicator range as the hourly average PM CEMS reading covering the full range of measurements made during the initial calibration testing plus 25%. This indicator range shall be a calibrated instrument output and shall reflect reasonable assurance of the proper operation and maintenance of the electrostatic precipitators (ESPs).
5. Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including calibration checks and zero and span adjustments), the PM CEMS shall be in continuous operation and required sampling frequency shall be in accordance with §64.13(e)(2). The PM CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
6. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for data averages and calculations, or fulfilling a minimum data availability requirement. The permittee shall use all the data collected during all other periods in assessing the operation of the ESPs and associated monitoring system.
7. The permittee shall reduce all data to one-hour averages. One-hour averages shall be computed from four or more data points equally spaced over each one-hour period.
8. Results shall be recorded on an automatic Data Acquisition Handling System (DAHS) as follows:
   a) Record the analog output of the PM CEMS;

b) Calculate emissions values, in the units of the required standard, and according to the correlation(s) established during the PM CEMS calibration;
c) Store the hourly averages of the calculated emissions values;
d) Record the daily zero-span calibration results;
e) Initiate an alarm if any daily zero or span value exceeds the error limit of plus or minus 5%;
f) Exceedances - initiate an alarm if the hourly averaged PM CEMS emission value reaches or exceeds the lower of the following limits:
   i) A value equivalent to 1.25 times the highest PM CEMS response value reached during the correlation tests, or
   ii) A value equivalent to 0.9 times the source emission limit; and,
g) Initiate an alarm on the occurrence of a malfunction status indicator from the PM CEMS.

9. Upon detecting an exceedance, the permittee shall restore operation of EP5A through EP5C (including the ESPs and associated capture system) to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Operational checks shall be made as soon as practicable and may include:
   a) ESP field checks (T/R voltage, current, spark rate);
   b) Visual inspection of control equipment;
   c) Unusual fuel characteristics; and,
   d) Boiler upset conditions.
10. Quality Assurance and Control Practices (QA/QC)
   a) Factory supplied filter standards will be used to calibrate the instruments at a reference zero and upscale span value. These calibration standards will be maintained in accordance with manufacturer's recommendations. Following the calibration an internal zero-span cycle will be initiated, thus establishing initial values for future reference.
   b) Daily zero-span cycles will be performed with the results stored in the data system and compared with the initial values.
   c) Should either the zero or span value error exceed plus or minus five percent of the starting value, an alarm will be initiated and the permittee shall recalibrate the instrument to the factory standards.
   d) A quarterly reference calibration will be performed as described in the instrument operations manual. The factory standards will be used to measure instrument response at a zero and upscale value. Should either of these readings exceed the factory standard by more than plus or minus five percent of the full-scale measurement range, the instrument will be reset to the factory standard values.
   e) Routine scheduled maintenance procedures will be established in accordance with manufacturer's recommendations.
11. If the accumulation of exceedances or excursions exceeds five percent of operating time for a reporting period, the permittee shall develop and implement a Quality Improvement Plan (QIP) as expeditiously as practicable. The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the permittee shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:
   a) Improved preventive maintenance practices;

b) Process operation changes;
c) Appropriate improvements to control methods;
d) Other steps appropriate to correct control performance;
e) More frequent or improved monitoring.

12. The permittee shall maintain monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment, at all times.

Testing

1. The instruments shall be calibrated based on the boiler load, coal, and ESPs characteristics and any other performance or test data deemed applicable by the permittee and/or director. Reference method measurements will be conducted in accordance with accepted method standards and compared with the integrated (arithmetic average) PM CEMS output over the reference method test period.
2. Correlation/Performance Testing
   a) The PM CEMS shall be initially operated for a period of approximately 30 days under various operating conditions to identify condition necessary to produce two target concentration levels for the correlation testing. During the 30 day pre-test monitoring period the following key operating parameters will be recorded on each stack:
      i) Monitor output;
      ii) Plant load;
      iii) Fuel type;
      iv) ESP voltage and current readings.
   b) A minimum of twelve (12) valid runs (e.g. 2 loads, 2 fuel blends and 3 tests per condition) will be required to obtain the correlation equation and correlation coefficient. A run will be declared "not valid" only when performed during a time when conditions are clearly not representative of normal operations. The linear correlation will be determined according to Equation 11-3 of Performance Specification 11 of Appendix B to Part 60. The correlation coefficient will be calculated according to Equation 11-14 of Performance Specification 11 of Appendix B to Part 60.
   c) Tests shall be performed at two different PM concentration levels, with a minimum of three tests at each level, if possible. Level 1 encompasses the range from 0 to 50 percent of the maximum PM concentration available. Level 2 should range from 75 percent to 100 percent of the maximum concentration. The source should be operated over the complete range of expected conditions, so as to assure that the data produced is representative. The data gathered during the 30-day pretest monitoring period shall be used to produce the desired concentrations for the test runs.
   d) During correlation testing, the reference method data and PM CEMS measurements will be converted into units of pounds PM per MMBtu to establish limits comparable to the emission limitation of 0.12 lb PM/MMBtu. Once established, these limits will be converted into units of pounds PM per actual stack gas volume, or pounds of PM per megawatt. During operation after testing, the PM CEMS output and determination of PM levels with respect to limits will be conducted only in units of pounds per actual stack gas volume or pounds PM per megawatt.
   e) The correlation coefficient (r) resulting from the calibration testing must be greater than or equal to 0.75.
   f) Once the correlation equation has been determined, it shall be applied to PM CEMS data collected by the Data Recorder.

Recordkeeping

1. The permittee shall comply with the recordkeeping requirements specified in §70.6(a)(3)(ii) including records of required monitoring information that include the following:
   a) The date, place, and time of sampling or measurements;
   b) The date(s) analyses were performed;
   c) If applicable, the company or entity that performed the analyses;
   d) The analytical techniques or methods used;
   e) The results of such analyses; and
   f) The operating conditions as existing at the time of sampling or measurement.
2. The permittee shall maintain records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all required calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all required reports (including any written Quality Improvement Plan (QIP)).
3. The permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, instead of paper provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.
4. Following any exceedance, the permittee shall record that operations returned to normal without operator action, or any necessary follow-up actions to return operation to within the indicator range.
5. These records shall be made available to any Missouri Department of Natural Resources' personnel upon request.

Reporting

1. The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviations/exceedances of this permit condition.
2. Performance Testing.
   a) The permittee shall submit operating parameter data obtained during the conduct of any applicable compliance or performance tests.
   b) The permittee shall submit documentation that no changes to the emission units, including the control device and capture system, have taken place that could result in a significant change in the control system performance or selected indicator ranges since the last performance or compliance test.
3. If the permittee identifies a failure to achieve compliance with the PM emissions limit for which the PM CEMS did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges, the permittee shall promptly notify the MDNR and, if necessary, submit a proposed modification to the Part 70 permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
4. The permittee shall submit quarterly monitoring reports certified by a responsible official. The monitoring report shall include, as a minimum, the following information, as applicable:
   a) All instances of deviations from permit requirements must be clearly identified.
   b) Prompt reporting of deviations from permit requirements, including those attributable to upset conditions, the probable cause of such deviations, and any corrective actions or preventive measures taken.

c) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
d) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
e) A description of the actions taken to implement a Quality Improvement Plan (QIP) during the reporting period as specified in §64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

PERMIT CONDITION (EP5A through EP5C)-003

10 CSR 10-6.220, Restriction of Emission of Visible Air Contaminants

Emission Limitations

1. No owner or other person shall cause or permit emissions to be discharged into the atmosphere from any source visible emissions with an opacity greater than 20 percent.
2. Exception: A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 60 percent.

Monitoring

The permittee shall install, certify, operate and maintain a certified Continuous Opacity Monitoring System (COMS) with an automated data acquisition and handling system for measuring and recording the opacity of emissions (in percent opacity) discharged to the atmosphere.

Recordkeeping

1. A monitoring report shall include the following information as applicable:
   a) Summary information on the number, duration and cause (including unknown cause, if applicable) of exceedances, as applicable, and the corrective actions taken;
   b) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable).
2. The permittee shall retain each record in either hard copy or electronic form.
3. These records shall be made available for inspection to the Department of Natural Resources' personnel upon request.
4. All records must be maintained for five years.

Reporting

1. The permittee shall notify the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, at least ten days prior to any maintenance, start-up, or shutdown activity, which is expected to cause an excess release of emissions that exceeds one hour. If notification cannot be given ten days prior to any maintenance, start-up, or shutdown activity, which is expected to cause an excess release of emissions that exceeds one hour, notification shall be given as soon as practicable prior to the maintenance, start-up, or shutdown activity. If prior notification is not given for any maintenance, start-up, or shutdown activity which resulted in an excess release of emissions that exceeded one hour, notification shall be given within two business days of the release. Any

other condition that results in non-compliance with the permit terms stated in this section shall be reported within ten days of the permittee becoming aware of the condition.
2. The permittee shall report any deviations from the emission limitations, operational limitation, recordkeeping, and reporting requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION (EP5A through EP5C)-004

10 CSR 10-6.260, Restriction of Emission of Sulfur Compounds

Emission Limitations

1. The permittee shall not cause or allow emissions of sulfur dioxide into the atmosphere in excess of nine pounds (9 lbs) of sulfur dioxide (SO_2) per million Btus actual heat input averaged on any consecutive three (3)-hour time period.
2. No person shall cause or permit the emission of sulfur compounds from any source which causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality Standards.

Pollutant	Concentration by Volume	Remarks
Sulfur Dioxide (SO_2)	0.03 parts per million (ppm) (80 micrograms per cubic meter ($\mu g/m^3$))	Annual arithmetic mean
	0.14 ppm (365 $\mu g/m^3$)	24-hour average not to be exceeded more than once per year
	0.5 ppm (1300 $\mu g/m^3$)	3-hour average not to be exceeded more than once per year
Hydrogen Sulfide (H_2S)	0.05 ppm (70 $\mu g/m^3$)	½-hour average not to be exceeded over 2 times per year
	0.03 ppm (42 $\mu g/m^3$)	½-hour average not to be exceeded over 2 times in any 5 consecutive days
Sulfuric Acid (H_2SO_4)	10 $\mu g/m^3$	24-hour average not to be exceeded more than once in any 90 consecutive days
	30 $\mu g/m^3$	1-hour average not to be exceeded more than once in any 2 consecutive days

Monitoring

1. The permittee shall maintain and operate a continuous emission monitoring system (CEMS) in accordance with all the requirements of 40 CFR Part 75 to monitor SO_2 emissions. Results shall be recorded on an automated Data Acquisition Handling System (DAHS).
2. The permittee shall ensure that the CEMS meets the equipment, installation, and performance specifications in Appendix A to 40 CFR Part 75; and is maintained according to the quality assurance and quality control procedures in Appendix B to 40 CFR Part 75.
3. The permittee shall ensure that the CEMS is in operation and monitoring unit emissions at all times that the affected units (EP5A through EP5C) combust any fuel except during periods of calibration, quality assurance, or preventative maintenance, as well as, periods of repair, periods of backups of data from the DAHS or recertification.
4. The permittee shall ensure that the CEMS is capable of completing a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute interval. The

permittee shall reduce all SO_2 emissions data to hourly averages. Hourly averages shall be computed using at least one data point in each fifteen minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, an hourly average may be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour) if data are unavailable as a result of the performance of calibration, quality assurance, or preventive maintenance, or backups of data from the DAHS, or recertification. The permittee shall use all valid measurements or data points collected during an hour to calculate the hourly averages. All data points collected during an hour shall be, to the extent practicable, evenly spaced over the hour.

5. The permittee shall prepare and maintain a monitoring plan in accordance with §75.53. A monitoring plan shall contain sufficient information on the CEMS to demonstrate that all SO_2 emissions are monitored and reported.
6. Whenever the permittee makes a replacement, modification, or change in the certified CEMS, including a change in the automated DAHS or in the flue gas handling system, that affects information reported in the monitoring, then the permittee shall update the monitoring plan, by the applicable deadline specified in §75.62.

Recordkeeping

1. The permittee shall maintain a file on-site of all measurements, data, reports, and other information required by §75.53, §75.57 and §75.59. Records include the following:
   a) Total fuel consumed during the control period;
   b) The total heat input for each emissions unit during the control period;
   c) Reports of all stack testing conducted;
   d) All other data collected by a CEMS necessary to convert the monitoring data to the units of the applicable emission limitation;
   e) All performance evaluations conducted in the past year;
   f) All monitoring device calibration checks;
   g) All monitoring system, monitoring device and performance testing measurements;
   h) Records of adjustments and maintenance performed on monitoring systems and devices; and
   i) A log identifying each period during which the CEMS or alternate procedure was inoperative, except for zero and span checks, and the nature of the repairs and adjustments performed to make the system operative.
2. These records shall be made available to any Missouri Department of Natural Resources' personnel upon request.
3. These records shall be kept in a form suitable for inspection for at least five years.

Reporting

1. The permittee shall submit all quarterly reports required by Part 75. The reports are due within 30 days after the end of each calendar quarter. The quarterly reports must include the following essential information:
   a) Facility information in accordance with §75.64(a)(1);
   b) Hourly and cumulative emissions data;
   c) Hourly unit operating information (e.g., load, heat input rate, operating time, etc.);
   d) Monitoring plan information;
   e) Results of required quality-assurance tests (e.g., daily calibrations, linearity checks, RATAs, etc.); and

f) Certification statements from the Designated Representative or Authorized Account Representative (or the Alternate Representative), attesting to the completeness and accuracy of the data.

2. The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviations/exceedances of this permit condition.

PERMIT CONDITION (EP5A through EP5C)-005

10 CSR 10-6.270, Acid Rain Source Permits Required

Emission Limitation

The permittee shall obtain an Acid Rain Source Permit for EP5A through EP5C pursuant to Title IV of the Clean Air Act.

An acid rain permit OP2010-004 (Missouri Department of Natural Resources project number 2009-06-066) was issued to this facility on February 3, 2010. Attachment H contains a copy of this permit. The permit expires on December 31, 2014. The permittee shall submit a renewal application no later June 30, 2014.

Monitoring/Recordkeeping

The permittee shall retain the most current acid rain permit issued to this installation on-site and shall make such permit available to any Missouri Department of Natural Resources' personnel upon request.

Reporting

1. Annual Compliance Certification.
2. The permittee shall report any deviations of the emission limitation, monitoring/recordkeeping, and reporting requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION (EP5A through EP5C)-006

10 CSR 10-6.362, Clean Air Interstate Rule Annual NO_X Trading Program
10 CSR 10-6.364, Clean Air Interstate Rule Seasonal NO_X Trading Program
10 CSR 10-6.366, Clean Air Interstate Rule SO_2 Trading Program

Emission Limitation

The permittee shall obtain a CAIR Permit for the combustion units (EP5A through EP5C) pursuant to Title IV of the Clean Air Act.

A CAIR Permit is being issued to the permittee in conjunction with this Title V permit. (See Attachment I)

Monitoring/Recordkeeping

1. The permittee shall retain the CAIR permit issued to this installation onsite.
2. The permittee shall make the CAIR permit available to any Missouri Department of Natural Resources' personnel upon request

Reporting

1. Annual Compliance Certification.
2. The permittee shall report any deviations of the monitoring/recordkeeping requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

Emergency Generator Engine, Welding Machines, and Fire Pump Engine		
Emission Unit	Description	Manufacturer/Model #
EP7	No. 2 distillate-fired emergency generator engine; MHDR: 4.58 MMBtu/hr; installed 2007, manufactured in 2000	Caterpillar/TM3209-06
EP8	Gasoline fired, portable welding machine; MHDR: 0.077 MMbtu/hr; installed 2001	Onan
EP9	Gasoline fired, portable welding machine; MHDR: 0.14 MMbtu/hr; installed 2001	Airco
EP11	Backup diesel fired fire pump engine; MHDR 0.847 MMBtu/hr; installed 1988	Caterpillar

PERMIT CONDITION (EP7 through EP9 and EP11)-001

10 CSR 10-6.260, Restriction of Emission of Sulfur Compounds

Emission Limitation

1. Emissions from EP7 shall not contain more than two thousand parts per million by volume (2000 ppmv) of sulfur dioxide.
2. Emissions from EP8, EP9, and EP11 shall not contain more than five hundred parts per million by volume (500 ppmv) of sulfur dioxide.
3. Stack gasses from EP7 shall not contain more than seventy milligrams (70 mg) per cubic meter of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour time period.
4. Stack gasses from EP8, EP9, and EP11 shall not contain more than thirty-five milligrams (35 mg) per cubic meter of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour time period.
5. No person shall cause or permit the emission of sulfur compounds from any source which causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality Standards.

Pollutant	Concentration by Volume	Remarks
Sulfur Dioxide (SO_2)	0.03 parts per million (ppm) (80 micrograms per cubic meter ($\mu g/m^3$))	Annual arithmetic mean
	0.14 ppm (365 $\mu g/m^3$)	24-hour average not to be exceeded more than once per year
	0.5 ppm (1300 $\mu g/m^3$)	3-hour average not to be exceeded more than once per year
Hydrogen Sulfide	0.05 ppm (70 $\mu g/m^3$)	½-hour average not to be exceeded over 2 times per year

(H_2S)	0.03 ppm (42 µg/m^3)	½-hour average not to be exceeded over 2 times in any 5 consecutive days
Sulfuric Acid (H_2SO_4)	10 µg/m^3	24-hour average not to be exceeded more than once in any 90 consecutive days
	30 µg/m^3	1-hour average not to be exceeded more than once in any 2 consecutive days

Operational Limitation/Equipment Specification

Emission unit EP7 shall be limited to burning Number 2 diesel fuel oil with a sulfur content of 1.5 percent (%) by weight or less.

Monitoring/Recordkeeping

1. The permittee shall maintain an accurate record of the sulfur content of fuel used in EP7. Fuel purchase receipts, analyzed samples or certifications that verify the fuel type and sulfur content will be acceptable.
2. The permittee is assumed to be in compliance with this regulation as long as emission unit EP7 burns fuel oil with a sulfur content of 1.5 percent by weight or less. Calculations demonstrating this are in Attachment F. The permittee shall keep this attachment with this permit.
3. These records shall be made available to any Missouri Department of Natural Resources' personnel upon request.
4. All records shall be maintained for five years.

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.

PERMIT CONDITION EP7-002

10 CSR 10-6.075, Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart ZZZZ National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Reporting

The permittee shall submit an Initial Notification including the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (i.e., that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions). [§63.6645(f)]

PERMIT CONDITION EP11-002

10 CSR 10-6.075, Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart ZZZZ National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Operating Limitation

1. The permittee shall meet the following requirements, except during periods of startup: [§63.6602 and Table 2c to Subpart ZZZZ]

a) Change oil and filter every 500 hours of operation or annually, whichever comes first.
b) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first.
c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

2. During periods of startup the permittee shall minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [§63.6602 and Table 2c to Subpart ZZZZ]
3. The permittee shall be in compliance with the emission limitations and operating limitations that apply at all times. [§63.6605(a)]
4. At all times the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.6605(b)]
5. The permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [§63.6625(e)(2)]
6. The permittee shall install a non-resettable hour meter if one is not already installed. [§63.6625(f)]
7. The permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Table 2c to Subpart ZZZZ apply. [§63.6625(h)]

Continuous Compliance Requirements

The permittee shall demonstrate continuous compliance as specified in §63.6635 and §63.6640.

Notifications

The permittee shall submit required notifications as specified in §63.6645.

Recordkeeping

1. The permittee shall maintain applicable records as specified in §63.6655 and §63.6660.
2. Records may be kept in either written or electronic form.
3. These records shall be made available for inspection to Department of Natural Resources' personnel upon request.
4. All records shall be retained for five years.

Reporting

1. Permittee shall submit applicable reports as specified in §63.6650.
2. The permittee shall notify the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after an exceedance or a malfunction which could cause an exceedance of the emission limitations.

3. The permittee shall report any deviations from the standards, compliance provisions, performance testing, test methods, recordkeeping, and reporting requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.

Parts Washers		
Emission Unit	Description	Manufacturer/Model #
EP10	3 Parts Washers	Everclear

PERMIT CONDITION EP10-001

10 CSR 10-6.060, Construction Permits Required
Construction Permit #0897-025, Issued August 4, 1997

Emission Limitation

The permittee shall not emit more than 12.0 tons of volatile organic compounds (VOC) during any consecutive 12-month period from the Everclear parts washers identified as EP10. [Special Condition #1]

Recordkeeping

The permittee shall maintain an accurate monthly record of VOC emissions from the Everclear parts washers identified as EP10. These records shall include monthly and cumulative 12-month totals. These records shall be kept on-site for the most recent 60-month period of operation and be made available to Missouri Department of Natural Resources' personnel upon request. These records shall be on Attachment E or on any substantially conforming form that contains the same information. [Special Condition 2]

Reporting

The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of each month, if the 12-month cumulative total records show that the Source exceeded the emission limitation. [Special Condition 3]

PERMIT CONDITION EP10-002

10 CSR 10-2.210, Control of Emissions from Solvent Metal Cleaning

Equipment and Operating Parameters

1. The permittee shall not allow the operation of any cold cleaner using a cold cleaning solvent with a vapor pressure greater than 1.0 millimeters of Mercury (0.019 psi) at twenty degrees Celsius ($20^{o}C$).
2. Each cold cleaner shall have:
   a) A cover which will prevent the escape of solvent vapors from the solvent bath while in the closed position, or an enclosed reservoir that will prevent the escape of solvent vapors from the solvent bath whenever parts are not being processed in the cleaner.
   b) When one or more of the following conditions exist, the design of the cover shall be such that it can be easily operated with one hand such that minimal disturbing of the solvent vapors in the tank occurs. (For covers larger than ten square feet, this shall be accomplished by either mechanical assistance such as spring loading or counterweighing or by power systems):

i) The solvent volatility is greater than 0.3 psi measured at one hundred degrees Fahrenheit (100°F), such as in mineral spirits;
ii) The solvent is agitated; or
iii) The solvent is heated.

c) An external drainage installation which provides for the solvent to drain back into the solvent bath.
d) If an internal drainage facility cannot fit into the cleaning system and the solvent volatility is less than 0.6 psi measured at one hundred degrees Fahrenheit (100°F), then the cold cleaner shall have an external drainage facility which provides for the solvent to drain back into the solvent bath.
e) Solvent sprays, if used, shall be a solid fluid stream and operate at a pressure which does not cause any splashing above or beyond the freeboard.
f) A permanent conspicuous label summarizing the operating procedures shall be affixed to the equipment.
g) Any cold cleaner which uses a solvent that has a solvent volatility greater than 0.6 psi measured at one hundred degrees Fahrenheit (100°F) or heated above one hundred twenty degrees Fahrenheit (120°F) must use one of the following control devices:
i) A freeboard ratio of at least 0.75;
ii) Water cover (solvent must be insoluble in and heavier than water); or
iii) Other control systems with a mass balance demonstrated overall VOC emissions reduction efficiency greater than or equal to sixty-five percent (65%). These control systems must receive approval from the director prior to their use

3. Each cold cleaner shall be operated as follows:
a) Cold cleaner covers shall be closed whenever parts are not being handled in the cleaners or the solvent must drain into an enclosed reservoir.
b) Cleaned parts shall be drained in the freeboard area for at least fifteen (15) seconds or until dripping ceases, whichever is longer.
c) Whenever a cold cleaner fails to perform within the operating parameters established for it by this regulation, the unit shall be shut down immediately and shall remain shut down until trained service personnel are able to restore operation within the established parameters.
d) Solvent leaks shall be repaired immediately or the degreaser shall be shut down until the leaks are repaired.
e) Any waste material removed from a cold cleaner shall be disposed of by one of the following methods and in accordance with the Missouri Hazardous Waste Management Commission rules codified at 10 CSR 10-25, as applicable:
i) Reduction of the waste material to less than twenty percent (20%) VOC solvent by distillation and proper disposal of the still bottom waste, or
ii) Stored in closed containers for transfer to a contract reclamation service or a disposal installation approved by the director.

4. Waste solvent shall be stored in covered containers only.
5. Operators must be trained as follows:
a) Only persons trained in at least the operational and equipment requirements specified in this regulation for their particular solvent metal cleaning process shall be permitted to operate the equipment,
b) The supervisor of any person who operates a solvent metal cleaning process shall receive equal or greater operational training than the operator,

c) Refresher training shall be given to all solvent metal cleaning equipment operators at least once each twelve month period.
d) A record shall be kept of solvent metal cleaning training for each employee.

Monitoring
The permittee shall monitor the throughputs of the solvents monthly and maintain material safety data sheets (MSDS) of the cleanup solvents used at the installation. The permittee may use electronic database sources for MSDS storage and retrieval.

Recordkeeping
1. The permittee shall keep monthly inventory records of solvent types and amounts purchased and solvent consumption. These records shall include all types and amounts of solvent containing waste material transferred to either a contract reclamation service or to a disposal installation and all amounts distilled on the premises. These records also shall include maintenance and repair logs.
2. The permittee shall maintain records which include for each purchase of cold cleaning solvent:
   a) The name and address of the solvent supplier;
   b) The date of purchase;
   c) The type of solvent; and
   d) The vapor pressure of the solvent in mmHg at twenty degrees Celsius (20°C) (sixty-eight degrees Fahrenheit (68°F)).
3. A record shall be kept of solvent metal cleaning training for each employee.
4. These records shall be made available for inspection to any Missouri Department of Natural Resources' personnel upon request.
5. All records shall be maintained for five years.

Reporting
The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Hauling and Storage for Coal Combustion By-Products	
Emission Unit	Description
EP18	Hauling and storage for off-site coal combustion by-products

PERMIT CONDITION EP18-001

10 CSR 10-6.060, Construction Permits Required
Construction Permit #112011-009, Issued November 21, 2011

Emission Limitation
The permittee shall emit less than 25.0 tons of particulate matter (PM) in any consecutive 12-month period from the hauling and storing of off-site coal combustion by-products (CCB).
[Special Condition 1A]

Operating Limitation

The permittee shall only store off-site CCB that have been conditioned to a minimum of ten percent moisture content by weight. The conditioning may be performed either on-site or off-site. [Special Condition 2A]

Monitoring

1. The permittee shall perform moisture content testing to show compliance with the operating limitation. [Special Condition 2B]
   a) Testing shall be conducted according to the method prescribed by the American Society for Testing Materials (ASTM) D-2216, C-566 or another method approved by the Director.
   b) The permittee shall keep a report detailing the results of the moisture content tests. The report shall include at a minimum the raw data and moisture content of each sample, the test date, which sites the samples were taken from and the original signature of the individual performing the test.
   c) The permittee shall test one sample per month from each site that delivered CCB during that month.
   d) If any test required shows moisture content less than 10%, the permittee shall either apply for a permit modification to take into account the new moisture content or additionally condition the CCB to comply with the operating limitation.
   e) If the permittee can show compliance with the operating limitation for 12 consecutive months, then the facility can apply for a reduction in the testing requirements from the Air Pollution Control Program.

Recordkeeping

1. Attachment G or equivalent forms, such as electronic forms, shall be used to demonstrate compliance with the emission limitation. If an equivalent form is used, the facility shall base its calculations on the emission factor given in Attachment G. [Special Condition #1B]
2. The permittee shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources' personnel upon request. [Special Condition 3]

Reporting

1. The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedance of any limitation established by this permit condition.
2. The permittee shall report any deviations from the standards, monitoring/testing, and reporting requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit

IV. Core Permit Requirements

The installation shall comply with each of the following regulations or codes. Consult the appropriate sections in the Code of Federal Regulations (CFR), the 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 as of the date that this permit is issued. The following is only an excerpt from the regulation or code, and is provided for summary purposes only.

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:
      i) 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;
      ii) 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;
      iii) 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
      iv) St. Louis metropolitan area. The open burning of household refuse is prohibited;
   b) Yard waste, with the following exceptions:
      i) Kansas City metropolitan area. The open burning of trees, tree leaves, brush or any other type of vegetation shall require an open burning permit;
      ii) 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;
      iii) 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

iv) 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) KCP&L Greater Missouri Operations Company - Sibley Generating Station 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 KCP&L Greater Missouri Operations Company - Sibley Generating Station fails to comply with the provisions or any condition of the open burning permit.
   a) In a nonattainment 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 Recordkeeping. 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 10-6.050 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 1 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 in writing within two business days of the release.
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. 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(6)(B)1.A(V)] The permittee shall retain the most current operating permit issued to this installation on-site. [10 CSR 10-6.065(6)(C)1.C(II)] The permittee shall make such permit available to any Missouri Department of Natural Resources personnel upon request. [10 CSR 10-6.065(6)(C)3.B]

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 10-6.100 Alternate Emission Limits

Proposals for alternate emission limitations shall be submitted on Alternate Emission Limits Permit forms provided by the department. An installation owner or operator must obtain an Alternate Emission Limits Permit in accordance with 10 CSR 10-6.100 before alternate emission limits may become effective.

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

1) The permittee shall submit full emissions report either electronically via MoEIS, which requires Form 1.0 signed by an authorized company representative, or on Emission Inventory Questionnaire (EIQ) paper forms on the frequency specified in this rule and in accordance with the requirements outlined in this rule. Alternate methods of reporting the emissions, such as spreadsheet file, can be submitted for approval by the director.
2) The permittee may be required by the director to file additional reports.
3) Public Availability of Emission Data and Process Information. Any information obtained pursuant to the rule(s) of the Missouri Air Conservation Commission that would not be entitled to confidential treatment under 10 CSR 10-6.210 shall be made available to any member of the public upon request.
4) 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.
5) The fees shall be payable to the Department of Natural Resources and shall be accompanied by the emissions report.
6) The permittee shall complete required reports on state supplied EIQ forms or electronically via MoEIS. Alternate methods of reporting the emissions can be submitted for approval by the director. The reports shall be submitted to the director by April 1 after the end of each reporting year. If the full emissions report is filed electronically via MoEIS, this due date is extended to May 1.
7) The reporting period shall end on December 31 of each calendar year. Each report shall contain the required information for each emission unit for the twelve (12)-month period immediately preceding the end of the reporting period.
8) The permittee shall collect, record and maintain the information necessary to complete the required forms during each year of operation of the installation.

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

Emission Limitation:

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 noncompliance 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.

Recordkeeping:

The permittee shall document all readings on Attachment A, or its equivalent, noting the following:

1) Whether air emissions (except water vapor) remain visible in the ambient air beyond the property line of origin.
2) Whether the visible emissions were normal for the installation.
3) Whether equipment malfunctions contributed to an exceedance.
4) Any violations and any corrective actions undertaken to correct the violation.

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 10-6.165 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 15 minutes apart within the period of one hour. This odor evaluation shall be taken at a location outside of the installation's property boundary.

10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants

Emission Limitation:

No owner or other person shall cause or permit to be discharged into the atmosphere from any source any visible emissions in excess of the limits specified by this rule. This permit will contain the opacity limits identified (10, 20 or 40 percent) for the specific emission units.

Monitoring:

1) The permittee shall conduct opacity readings on each emission unit using the procedures contained in U.S. EPA Test Method 22. The permittee is only required to take readings when the emission unit is operating and when the weather conditions allow. If the permittee observes no visible or other significant emissions using these procedures, then no further observations are 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 permittee must maintain the following monitoring schedule:
   a) The permittee shall conduct weekly observations for a minimum of eight (8) consecutive weeks after permit issuance.
   b) Should the permittee observe no violations of this regulation during this period then-
      i) The permittee may observe once every two (2) weeks for a period of eight (8) weeks.
      ii) If a violation is noted, monitoring reverts to weekly.
      iii) Should no violation of this regulation be observed during this period then-
         (1) The permittee may observe once per month.
         (2) 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:

The permittee shall maintain records of all observation results using Attachment B (or its equivalent), noting:

1) Whether any air emissions (except for water vapor) were visible from the emission units;
2) All emission units from which visible emissions occurred;
3) Whether the visible emissions were normal for the process;
4) The permittee shall maintain records of any equipment malfunctions (See Attachment D), which may contribute to visible emissions; and,
5) The permittee shall maintain records of all U.S. EPA Method 9 (See Attachment C) opacity tests performed.

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 Resources Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Missouri Department of Natural Resources 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 recordkeeping 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 50 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.

5) 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(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(6)(C)1.C General Recordkeeping and Reporting Requirements

1) Recordkeeping
   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 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 Enforcement Section, P. O. Box 176, Jefferson City, MO 65102.
   b) The permittee shall submit a report of all required monitoring by:
      i) October 1st for monitoring which covers the January through June time period, and
      ii) April 1st for monitoring which covers the July through December time period.
      iii) Exception. Monitoring requirements which require reporting more frequently than semi-annually shall report no later than 30 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, recordkeeping, reporting, or any other requirements of the permit, this includes deviations or Part 64 exceedances.
   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.A 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 semi-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(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(6)(C)1.E Title IV Allowances

This permit prohibits emissions which exceed any allowances the installation holds under Title IV of the Clean Air Act.

No permit revisions shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program if the increases do not require a permit revision under any other applicable requirement.

Limits cannot be placed on the number of allowances that may be held by an installation. The installation may not use these allowances, however, as a defense for noncompliance with any other applicable requirement.

Any allowances held by a Title IV installation shall be accounted for according to procedures established in rules promulgated under Title IV of the Clean Air Act.

An acid rain permit OP2010-004 (Missouri Department of Natural Resources project number 2009-06-066) was issued to this facility on February 3, 2010. The permit expires on December 31, 2014.

10 CSR 10-6.065(6)(C)1.F Severability Clause

In the event of a successful challenge to any part of this permit, all uncontested permit conditions shall continue to be in force. All terms and conditions of this permit remain in effect pending any administrative or judicial challenge to any portion of the permit. If any provision of this permit is invalidated, the permittee shall comply with all other provisions of the permit.

10 CSR 10-6.065(6)(C)1.G General Requirements

1) The permittee must comply with all of the terms and conditions of this permit. Any noncompliance 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 noncompliance, 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 pursuant to 10 CSR 10-6.065(6)(C)1.

10 CSR 10-6.065(6)(C)1.H Incentive Programs Not Requiring Permit Revisions

No permit revision will be required for any installation changes made under any approved economic incentive, marketable permit, emissions trading, or other similar programs or processes provided for in this permit.

10 CSR 10-6.065(6)(C)1.I Reasonably Anticipated Operating Scenarios

None

10 CSR 10-6.065(6)(C)3 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 semi-annually (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 April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to EPA Region VII, 11201 Renner Boulevard, Lenexa, KS 66219, as well as the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and Part 64 exceedances and excursions 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(6)(C)6 Permit Shield

1) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date that this permit is issued, provided that:
   a) The applicable requirements are included and specifically identified in this permit, or
   b) The permitting authority, in acting on the permit revision or permit application, determines in writing that other requirements, as specifically identified in the permit, are not applicable to the installation, and this permit expressly includes that determination or a concise summary of it.
2) Be aware that there are exceptions to this permit protection. The permit shield does not affect the following:
   a) The provisions of Section 303 of the Act or Section 643.090, RSMo concerning emergency orders,
   b) Liability for any violation of an applicable requirement which occurred prior to, or was existing at, the time of permit issuance,
   c) The applicable requirements of the acid rain program,
   d) The authority of the Environmental Protection Agency and the Air Pollution Control Program of the Missouri Department of Natural Resources to obtain information, or
   e) Any other permit or extra-permit provisions, terms or conditions expressly excluded from the permit shield provisions.

10 CSR 10-6.065(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(6)(C)8 Operational Flexibility

An installation that has been issued a Part 70 operating permit is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described below if the changes are not Title I modifications, the changes do not cause emissions to exceed emissions allowable under the permit, and the changes do not result in the emission of any air contaminant not previously emitted. The permittee shall notify the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Boulevard, Lenexa, KS 66219, at least seven days in advance of these changes, except as allowed for emergency or upset conditions. Emissions allowable under the permit means a federally enforceable permit term or condition determined at issuance to be required by an applicable requirement that establishes an emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.

1) Section 502(b)(10) changes. Changes that, under Section 502(b)(10) of the Act, contravene an express permit term may be made without a permit revision, except for changes that would violate applicable requirements of the Act or contravene federally enforceable monitoring (including test methods), recordkeeping, reporting or compliance requirements of the permit.
   a) Before making a change under this provision, The permittee shall provide advance written notice to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Boulevard, Lenexa, KS 66219, describing the changes to be made, the date on which the change will occur, and any changes in emission and any permit terms and conditions that are affected. The permittee shall maintain a copy of the notice with the permit, and the Air Pollution Control Program shall place a copy with the permit in the public file. Written notice shall be provided to the EPA and the Air Pollution Control Program as above at least seven days before the change is to be made. If less than seven days notice is provided because of a need to respond more quickly to these unanticipated conditions, the permittee shall provide notice to the EPA and the Air Pollution Control Program as soon as possible after learning of the need to make the change.
   b) The permit shield shall not apply to these changes.

10 CSR 10-6.065(6)(C)9 Off-Permit Changes

1) Except as noted below, the permittee may make any change in its permitted operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Insignificant activities listed in the application, but not otherwise addressed in or prohibited by this permit, shall not be considered to be constrained by this permit for purposes of the off-permit provisions of this section. 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 subject to any requirements under Title IV of the Act or is a Title I modification;
   b) The permittee must provide written notice of the change to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Boulevard, Lenexa, KS 66219, no later than the next annual emissions report. This notice shall not be required for changes that are insignificant activities under 10 CSR 10-6.065(6)(B)3. 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.
   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; and
   d) The permit shield shall not apply to these changes.

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

The application utilized in the preparation of this permit was signed by Dan Rembold, Plant 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 30 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(6)(E)6 Reopening-Permit for Cause

This permit may be reopened for cause if:

1) The Missouri Department of Natural Resources (MDNR) receives notice from the Environmental Protection Agency (EPA) that a petition for disapproval of a permit pursuant to 40 CFR § 70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,
2) The Missouri Department of Natural Resources 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,
3) 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,

4) The installation is an affected source under the acid rain program and additional requirements (including excess emissions requirements), become applicable to that source, provided that, upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit; or
5) The Missouri Department of Natural Resources or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

10 CSR 10-6.065(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 A
Fugitive Emission Observations

Date	Time	Visible Emissions					Abnormal Emissions		Initial
		Beyond Boundary		Less Than Normal	Normal	Greater Than Normal	Cause	Corrective Action	
		No	Yes						

Attachment B
Opacity Emission Observations

Date	Time	Visible Emissions				Abnormal Emissions		Initial
		Emission Source	Normal	Less Than	Greater Than	Cause	Corrective Action	

Attachment C

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

Attachment D

Inspection/Maintenance/Repair/Malfunction Log

Emission Unit # or CVM # _____

Date/Time	Inspection/ Maintenance Activities	Malfunction Activities					
		Malfunction	Impact	Duration	Cause	Action	Initials

Attachment E
VOC Compliance Form

Material Used	1 Amount of Material Used (gal or lb)	2 Material Density (lb/gal)	3 VOC Content (lb/gal)	4 VOC Weight Percent (%)	5 VOC Emissions (Tons)
				Total VOC Emissions This Month (tons)	
				12-MonthTotal of VOC Emissions (tons/yr)	

If Column 1 is in gallons, then Column 5 = Column 1 X Column 3 X 0.0005
If Column 1 is in pounds, then Column 5 = Column 1 X (Column 4 ÷ 100) X 0.0005
or Column 5 = (Column 1 ÷ Column 2) X Column 3 X 0.0005
Note: A 12-Month Total of VOC Emissions less than or equal to 12.0 tons/yr indicates compliance.

Attachment F
10 CSR 10-6.260 Compliance Demonstration

This attachment may be used to demonstrate that EP8, EP9, and EP11 are always in compliance with 10 CSR 10-6.260, *Restriction of Emission of Sulfur Compounds*, and that EP7 is always in compliance with this rule when it is burning fuel with a sulfur content of 1.5% by weight or less.

General Equation

ppmv SO_2 = SO_2 Emission Factor in lb/MMBtu X F Factor in MMBtu/wscf X Conversion Factor for lb/scf to ppm X Conversion Factor for ppmw to ppmv

1) SO_2 emission factor for gasoline engines < 600 HP = 0.084 lb/MMBtu. (From AP-42 Table 3.3-1) SO_2 emission factor for diesel engines < 600 HP = 0.29 lb/MMBtu (From same table)
   SO_2 emission factor for diesel engines > 600 hp = 1.01 X % sulfur in lb/MMBtu = 1.01 X 1.5 lb/MMBtu = 1.52 lb/MMBtu (EPA AP-42 Table 3.4-1)

2) The F factor is the ratio of gas volume of products of combustion to the heat content of the fuel. For fuel oil the F factor = 1 MMBtu / 10,320 wscf (From Part 60 Appendix A Method 19 Table 19-2)

3) Conversion factor for lb/scf to ppm = ppm / 1.660E-7 lb/scf (From Part 60 Appendix A Method 19 Table 19-1)

4) Conversion factor for ppmw to ppmv = (28.8 / Molecular Weight of SO_2) ppmv / 1 ppmw = (28.8/64) ppmv / ppmw= 0.45 ppmv / ppmw (From AP-42 Appendix A)

Compliance Demonstration for EP8 and EP9 Welding Machines

$$ppmv\ SO_2 = \left(0.084\ lb/MMBtu\right)\left(MMBtu/10{,}320\ ft^3\right)\left(ppmw/1.667E^{-7}\ lb/scf\right)\left(0.45\ ppmv/ppmw\right) = 2\ ppmv$$

22 ppmv SO_2 << 500 ppmv SO_2, so EP8 and EP9 are always in compliance

Compliance Demonstration for EP11 Back-up Diesel Fire Pump

$$ppmv\ SO_2 = \left(0.29\ lb/MMBtu\right)\left(MMBtu/10{,}320\ ft^3\right)\left(ppmw/1.667E^{-7}\ lb/scf\right)\left(0.45\ ppmv/ppmw\right) = 76\ ppmv$$

76 ppmv SO_2 << 500 ppmv SO_2, so EP11 is always in compliance

Compliance Demonstration for EP7 Emergency Generator Burning 1.5% Sulfur Fuel

$$ppmv\ SO_2 = \left(1.52\ lb/MMBtu\right)\left(MMBtu/10{,}320\ ft^3\right)\left(ppmw/1.667E^{-7}\ lb/scf\right)\left(0.45\ ppmv/ppmw\right) = 398\ ppmv$$

398 ppmv SO_2 << 2000 ppmv SO_2, so EP7 is always in compliance when burning fuel with a sulfur content of 1.5% by weight or less.

Attachment G
PM Compliance Worksheet

This sheet covers the period from ____________________ to ____________________
(Month, Day Year) (Month, Day Year)

Month	Production (tons)	Emission Factor (lbs/ton)	Monthly Emissions[1] (lbs)	Monthly Emissions[2] (tons)	12-Month Total Emissions[3] (tons)
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			
		0.8118			

Note 1: Monthly Emissions (lbs) calculated by multiplying the Production (tons) by the Emission Factor (lbs/ton).
Note 2: Monthly Emissions (tons) calculated by multiplying dividing the Monthly Emissions (lbs) by 2,000.
Note 3: 12-Month Total Emissions (tons) is a rolling total calculated by summing the Monthly Emissions (tons) this month and the Monthly Emissions (tons) of the previous 11 months. A total of less than **25.0 tons** per 12-month indicates compliance.

Attachment H
Acid Rain Permit

Missouri Department of Natural Resources
Air Pollution Control Program

TITLE IV: ACID RAIN PERMIT

In accordance with Titles IV and V of the Clean Air Act and Missouri State Rule 10 CSR 10-6.270, *Acid Rain Source Permits Required*, the State of Missouri issues this Acid Rain Permit.

Installation Name:	**KCP&L – Greater Missouri Operations Co. (Sibley)**
ORIS Code:	**2094**
Project Number:	**2009-06-066**
Permit Number:	**OP2010-004**
Unit ID:	**1, 2, and 3**
Effective Dates:	**January 1, 2010 through December 31, 2014**

The permit application submitted for this source, as corrected by the State of Missouri Department of Natural Resources (MDNR), Air Pollution Control Program (APCP), Operating Permit Section, is attached. The owners and operators of this source must comply with the standard requirements and special provisions set forth in this application.

The number of allowances actually held by an affected source in a unit account may differ from the number allocated by the United States Environmental Protection Agency. Pursuant to 40 CFR 72.84, *Automatic permit amendment*, this does not necessitate a revision to any unit SO_2 allowance allocations identified in this permit.

This acid rain permit is effective for the five-year period shown above, per 40 CFR 72.69, *Issuance and effective date of acid rain permits*. The designated representative must submit an application for renewal of this permit no later than June 30, 2014, per 40 CFR 72.30, *Requirement to apply*, and in conjunction with the operating permit renewal application.

FEB 03 2010
Date

Director or Designee,
Department of Natural Resources

United States
Environmental Protection Agency
Acid Rain Program

OMB No. 2060-0258

Acid Rain Permit Application

RECEIVED
2009 JUN 18 PM 12: 17
AIR POLLUTION CONTROL PGM

For more information, see instructions and 40 CFR 72.30 and 72.31.

This submission is: ~ new ~ revised X for Acid Rain permit renewal

STEP 1

Identify the facility name, State, and plant (ORIS) code.

Facility (Source) Name Sibley	State Missouri	Plant Code 2094

STEP 2

Enter the unit ID# for every affected unit at the affected source in column "a."

A	b
Unit ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)
1	Yes
2	Yes
3	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes

Facility (Source) Name (from STEP 1) SIBLEY

Acid Rain - Page 2

Permit Requirements

STEP 3

Read the standard requirements.

(1) The designated representative of each affected source and each affected unit at the source shall:

(i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and

(ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;

(2) The owners and operators of each affected source and each affected unit at the source shall:

(i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and

(ii) Have an Acid Rain Permit.

Monitoring Requirements

(1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.

(2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.

(3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements

(1) The owners and operators of each source and each affected unit at the source shall:

(i) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and

(ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.

(3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:

(i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or

(ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).

Facility (Source) Name (from STEP 1) SIBLEY

Acid Rain - Page 3

Sulfur Dioxide Requirements, Cont'd.

STEP 3, Cont'd.

(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements

The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements

(1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
(2) The owners and operators of an affected source that has excess emissions in any calendar year shall:
(i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
(ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements

(1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
(i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;

Facility (Source) Name (from STEP 1) SIBLEY

Acid Rain - Page 4

Recordkeeping and Reporting Requirements, Cont'd.

STEP 3, Cont'd.

(ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
(iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

(2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
(4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
(5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
(6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.
(7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:
(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating

Facility (Source) Name (from STEP 1) SIBLEY

Acid Rain - Page 5

Effect on Other Authorities, Cont'd.

to applicable National Ambient Air Quality Standards or State Implementation Plans;

STEP 3, Cont'd.

(2) Limiting the number of allowances a source can hold; *provided,* that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Act;
(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

Certification

STEP 4
Read the certification statement, sign, and date.

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name **Scott Heidtbrink, D.R.**

Signature Scott Heidtbrink Date 6/16/09

EPA

United States
Environmental Protection Agency
Acid Rain Program

OMB No. 2060-0258

Phase II NO_x Compliance Plan

Page [1] of [2]

For more information, see instructions and refer to 40 CFR 76.9

This submission is: ☐ New ☒ Revised (Renewal)

STEP 1
Indicate plant name, State, and ORIS code from NADB, if applicable

Plant Name	State	ORIS Code
SIBLEY	MO	2094

STEP 2
Identify each affected Group 1 and Group 2 boiler using the boiler ID# from NADB, if applicable. Indicate boiler type: "CB" for cell burner, "CY" for cyclone, "DBW" for dry bottom wall-fired, "T" for tangentially fired, "V" for vertically fired, and "WB" for wet bottom. Indicate the compliance option selected for each unit.

	ID# 3 Type CY	ID# Type	ID# Type	ID# Type	ID# Type	ID# Type
(a) Standard annual average emission limitation of 0.40 lb/mmBtu (for Phase I dry bottom wall-fired boilers)	☐	☐	☐	☐	☐	☐
(b) Standard annual average emission limitation of 0.45 lb/mmBtu (for Phase I tangentially fired boilers)	☐	☐	☐	☐	☐	☐
(c) EPA-approved early election plan under 40 CFR 76.8 through 12/31/07 (also indicate above emission limit specified in plan)	☐	☐	☐	☐	☐	☐
(d) Standard annual average emission limitation of 0.46 lb/mmBtu (for Phase II dry bottom wall-fired boilers)	☐	☐	☐	☐	☐	☐
(e) Standard annual average emission limitation of 0.48 lb/mmBtu (for Phase II tangentially fired boilers)	☐	☐	☐	☐	☐	☐
(f) Standard annual average emission limitation of 0.68 lb/mmBtu (for cell burner boilers)	☐	☐	☐	☐	☐	☐
(g) Standard annual average emission limitation of 0.86 lb/mmBtu (for cyclone boilers)	☒	☐	☐	☐	☐	☐
(h) Standard annual average emission limitation of 0.80 lb/mmBtu (for vertically fired boilers)	☐	☐	☐	☐	☐	☐
(i) Standard annual average emission limitation of 0.84 lb/mmBtu (for wet bottom boilers)	☐	☐	☐	☐	☐	☐
(j) NO_x Averaging Plan (include NO_x Averaging form)	☐	☐	☐	☐	☐	☐
(k) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(A) (check the standard emission limitation box above for most stringent limitation applicable to any unit utilizing stack)	☐	☐	☐	☐	☐	☐
(l) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(B) with NO_x Averaging (check the NO_x Averaging Plan box and include NO_x Averaging form)	☐	☐	☐	☐	☐	☐

Plant Name (from Step 1) SIBLEY

NO_x Compliance - Page 2
Page 2 of 2

STEP 2, cont'd.

	ID# / Type	ID# / Type	ID# / Type	ID# / Type	ID# / Type	ID# / Type
(m) EPA-approved common stack apportionment method pursuant to 40 CFR 75.17 (a)(2)(ii)(C), (a)(2)(iii)(B), or (b)(2)	☐	☐	☐	☐	☐	☐
(n) AEL (include Phase II AEL demonstration Period, Final AEL Petition, or AEL Renewal form as appropriate)	☐	☐	☐	☐	☐	☐
(o) Petition for AEL demonstration period or final AEL under review by U.S. EPA or demonstration period ongoing	☐	☐	☐	☐	☐	☐
(p) Repowering extension plan approved or under review	☐	☐	☐	☐	☐	☐

STEP 3
Read the standard requirements and certification, enter the name of the designated representative, sign & date.

Standard Requirements

General. This source is subject to the standard requirements in 40 CFR 72.9 (consistent with 40 CFR 76.8(e)(1)(i)). These requirements are listed in this source's Acid Rain Permit.

Special Provisions for Early Election Units

Nitrogen Oxides. A unit that is governed by an approved early election plan shall be subject to an emissions limitation for NO_x as provided under 40 CFR 76.8(e)(2) except as provided under 40 CFR 76.8(e)(3)(ii).
Liability. The owners and operators of a unit governed by an approved early election plan shall be liable for any violation of the plan or 40 CFR 76.8 at that unit. The owners and operators shall be liable, beginning January 1, 2000, for fulfilling the obligations specified in 40 CFR Part 77.
Termination. An approved early election plan shall be in effect only until the earlier of January 1, 2006 or January 1 of the calendar year for which a termination of the plan takes effect. If the designated representative of the unit under an approved early election plan fails to demonstrate compliance with the applicable emissions limitation under 40 CFR 76.5 for any year during the period beginning January 1 of the first year the early election takes effect and ending December 31, 2007, the permitting authority will terminate the plan. The termination will take effect beginning January 1 of the year after the year for which there is a failure to demonstrate compliance, and the designated representative may not submit a new early election plan. The designated representative of the unit under an approved early election plan may terminate the plan any year prior to 2006 but may not submit a new early election plan. In order to terminate the plan, the designated representative must submit a notice under 40 CFR 72.40(d) by January 1 of the year for which the termination is to take effect. If an early election plan is terminated any year prior to 2000, the unit shall meet, beginning January 1, 2000, the applicable emissions limitation for NO_x for Phase II units with Group 1 boilers under 40 CFR 76.7. If an early election plan is terminated on or after 2000, the unit shall meet, beginning on the effective date of the termination, the applicable emissions limitation for NO_x for Phase II units with Group 1 boilers under 40 CFR 76.7.

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name SCOTT HEIDTBRINK, D.R.
Signature Scott Heidtbrink Date 6/16/09

Attachment I
CAIR Permit

TITLE V: CLEAN AIR INTERSTATE RULE (CAIR) PERMIT

In accordance with Title V of the Clean Air Act and Missouri State Rules 10 CSR 10-6.362, *Clean Air Interstate Rule Annual NO_X Trading Program*, 10 CSR 10-6.364 *Clean Air Interstate Rule Seasonal NO_X Trading Program*, and 10 CSR 10-6.366, *Clean Air Interstate Rule SO_X Trading Program*, the State of Missouri issues this CAIR Permit.

Installation Name: Sibley Generating Station, ORIS Code: 2094
Unit IDs: Units 1, 2, and 3

The permit application submitted for this source, as corrected by the State of Missouri Department of Natural Resources' Air Pollution Control Program, Operating Permit Section, is attached. The owners and operators of this source must comply with the standard requirements and special provisions set forth in this application.

This CAIR Permit applies only to Units 1, 2, and 3 at Sibley Generating Station, plant 095-0031.

This CAIR permit is being issued in conjunction with this operating permit and is effective for the same period of time as the operating permit. The permittee shall submit an application to renew this CAIR permit in conjunction with the operating permit renewal application.

Date

Director or Designee,
Department of Natural Resources

CAIR Permit Application

Page 1

(for sources covered under a CAIR SIP)

For more information, refer to 40 CFR 96.121, 96.122, 96.221, 96.222, 96.321, and 96.322

This submission is: ☐ New ☐ Revised

STEP 1
Identify the source by plant name, State, and ORIS or facility code

Sibley Generating Station	MO	2094
Plant Name	State	ORIS/Facility Code

STEP 2
Enter the unit ID# for each CAIR unit and indicate to which CAIR programs each unit is subject (by placing an "X" in the column)

Unit ID#	NO_x Annual	SO_2	NO_x Ozone Season
1	X	X	X
2	X	X	X
3	X	X	X

STEP 3
Read the standard requirements and the certification, enter the name of the CAIR designated representative, and sign and date

Standard Requirements

(a) Permit Requirements.

(1) The CAIR designated representative of each CAIR NO_x source, CAIR SO_2 source, and CAIR NO_x Ozone Season source (as applicable) required to have a title V operating permit and each CAIR NO_x unit, CAIR SO_2 unit, and CAIR NO_x Ozone Season unit (as applicable) required to have a title V operating permit at the source shall:

(i) Submit to the permitting authority a complete CAIR permit application under §96.122, §96.222, and §96.322 (as applicable) in accordance with the deadlines specified in §96.121, §96.221, and §96.321 (as applicable); and

(ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review a CAIR permit application and issue or deny a CAIR permit.

(2) The owners and operators of each CAIR NO_x source, CAIR SO_2 source, and CAIR NO_x Ozone Season source (as applicable) required to have a title V operating permit and each CAIR NO_x unit, CAIR SO_2 unit, and CAIR NO_x Ozone Season unit (as applicable) required to have a title V operating permit at the source shall have a CAIR permit issued by the permitting authority under subpart CC, CCC, and CCCC (as applicable) of 40 CFR part 96 for the source and operate the source and the unit in compliance with such CAIR permit.

(3) Except as provided in subpart II, III, and IIII (as applicable) of 40 CFR part 96, the owners and operators of a CAIR NO_x source, CAIR SO_2 source, and CAIR NO_x Ozone Season source (as applicable) that is not otherwise required to have a title V operating permit and each CAIR NO_x unit, CAIR SO_2 unit, and CAIR NO_x Ozone Season unit (as applicable) that is not otherwise required to have a title V operating permit are not required to submit a CAIR permit application, and to have a CAIR permit, under subpart CC, CCC, and CCCC (as applicable) of 40 CFR part 96 for such CAIR NO_x source, CAIR SO_2 source, and CAIR NO_x Ozone Season source (as applicable) and such CAIR NO_x unit, CAIR SO_2 unit, and CAIR NO_x Ozone Season unit (as applicable).

Sibley Generating Station
Plant Name (from Step 1)

CAIR Permit Application
Page 2

STEP 3, continued

(b) Monitoring, reporting, and recordkeeping requirements.

(1) The owners and operators, and the CAIR designated representative, of each CAIR NO_x source, CAIR SO_2 source, and CAIR NO_x Ozone Season source (as applicable) and each CAIR NO_x unit, CAIR SO_2 unit, and CAIR NO_x Ozone Season unit (as applicable) at the source shall comply with the monitoring, reporting, and recordkeeping requirements of subparts HH, HHH, and HHHH (as applicable) of 40 CFR part 96.

(2) The emissions measurements recorded and reported in accordance with subparts HH, HHH, and HHHH (as applicable) of 40 CFR part 96 shall be used to determine compliance by each CAIR NO_x source, CAIR SO_2 source, and CAIR NO_x Ozone Season source (as applicable) with the CAIR NO_x emissions limitation, CAIR SO_2 emissions limitation, and CAIR NO_x Ozone Season emissions limitation (as applicable) under paragraph (c) of §96.106, §96.206, and §96.306 (as applicable).

(c) Nitrogen oxides emissions requirements.

(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_x source and each CAIR NO_x unit at the source shall hold, in the source's compliance account, CAIR NO_x allowances available for compliance deductions for the control period under §96.154(a) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_x units at the source, as determined in accordance with subpart HH of 40 CFR part 96.

(2) A CAIR NO_x unit shall be subject to the requirements under paragraph (c)(1) of §96.106 for the control period starting on the later of January 1, 2009 or the deadline for meeting the unit's monitor certification requirements under §96.170(b)(1), (2), or (5) and for each control period thereafter.

(3) A CAIR NO_x allowance shall not be deducted, for compliance with the requirements under paragraph (c)(1) of §96.106, for a control period in a calendar year before the year for which the CAIR NO_x allowance was allocated.

(4) CAIR NO_x allowances shall be held in, deducted from, or transferred into or among CAIR NO_x Allowance Tracking System accounts in accordance with subparts FF, GG, and II of 40 CFR part 96.

(5) A CAIR NO_x allowance is a limited authorization to emit one ton of nitrogen oxides in accordance with the CAIR NO_x Annual Trading Program. No provision of the CAIR NO_x Annual Trading Program, the CAIR permit application, the CAIR permit, or an exemption under §96.105 and no provision of law shall be construed to limit the authority of the State or the United States to terminate or limit such authorization.

(6) A CAIR NO_x allowance does not constitute a property right.

(7) Upon recordation by the Administrator under subpart EE, FF, GG, or II of 40 CFR part 96, every allocation, transfer, or deduction of a CAIR NO_x allowance to or from a CAIR NO_x source's compliance account is incorporated automatically in any CAIR permit of the source that includes the CAIR NO_x unit.

Sulfur dioxide emission requirements.

(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR SO_2 source and each CAIR SO_2 unit at the source shall hold, in the source's compliance account, a tonnage equivalent of CAIR SO_2 allowances available for compliance deductions for the control period under §96.254(a) and (b) not less than the tons of total sulfur dioxide emissions for the control period from all CAIR SO_2 units at the source, as determined in accordance with subpart HHH of 40 CFR part 96.

(2) A CAIR SO_2 unit shall be subject to the requirements under paragraph (c)(1) of §96.206 for the control period starting on the later of January 1, 2010 or the deadline for meeting the unit's monitor certification requirements under §96.270(b)(1), (2), or (5) and for each control period thereafter.

(3) A CAIR SO_2 allowance shall not be deducted, for compliance with the requirements under paragraph (c)(1) of §96.206, for a control period in a calendar year before the year for which the CAIR SO_2 allowance was allocated.

(4) CAIR SO_2 allowances shall be held in, deducted from, or transferred into or among CAIR SO_2 Allowance Tracking System accounts in accordance with subparts FFF, GGG, and III of 40 CFR part 96.

(5) A CAIR SO_2 allowance is a limited authorization to emit sulfur dioxide in accordance with the CAIR SO_2 Trading Program. No provision of the CAIR SO_2 Trading Program, the CAIR permit application, the CAIR permit, or an exemption under §96.205 and no provision of law shall be construed to limit the authority of the State or the United States to terminate or limit such authorization.

(6) A CAIR SO_2 allowance does not constitute a property right.

(7) Upon recordation by the Administrator under subpart FFF, GGG, or III of 40 CFR part 96, every allocation, transfer, or deduction of a CAIR SO_2 allowance to or from a CAIR SO_2 source's compliance account is incorporated automatically in any CAIR permit of the source that includes the CAIR SO_2 unit.

Nitrogen oxides ozone season emissions requirements.

(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_x Ozone Season source and each CAIR NO_x Ozone Season unit at the source shall hold, in the source's compliance account, CAIR NO_x Ozone Season allowances available for compliance deductions for the control period under §96.354(a) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_x Ozone Season units at the source, as determined in accordance with subpart HHHH of 40 CFR part 96.

(2) A CAIR NO_x Ozone Season unit shall be subject to the requirements under paragraph (c)(1) of §96.306 for the control period starting on the later of May 1, 2009 or the deadline for meeting the unit's monitor certification requirements under §96.370(b)(1), (2), (3), or (7) and for each control period thereafter.

(3) A CAIR NO_x Ozone Season allowance shall not be deducted, for compliance with the requirements under paragraph (c)(1) of §96.306, for a control period in a calendar year before the year for which the CAIR NO_x Ozone Season allowance was allocated.

(4) CAIR NO_x Ozone Season allowances shall be held in, deducted from, or transferred into or among CAIR NO_x Ozone Season Allowance Tracking System accounts in accordance with subparts FFFF, GGGG, and IIII of 40 CFR part 96.

(5) A CAIR NO_x allowance is a limited authorization to emit one ton of nitrogen oxides in accordance with the CAIR NO_x Ozone Season Trading Program. No provision of the CAIR NO_x Ozone Season Trading Program, the CAIR permit application, the CAIR permit, or an exemption under §96.305 and no provision of law shall be construed to limit the authority of the State or the United States to terminate or limit such authorization.

(6) A CAIR NO_x allowance does not constitute a property right.

(7) Upon recordation by the Administrator under subpart EEEE, FFFF, GGGG, or IIII of 40 CFR part 96, every allocation, transfer, or deduction of a CAIR NO_x Ozone Season allowance to or from a CAIR NO_x Ozone Season source's compliance account is incorporated automatically in any CAIR permit of the source.

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(d) Excess emissions requirements.
If a CAIR NO_x source emits nitrogen oxides during any control period in excess of the CAIR NO_x emissions limitation, then:
(1) The owners and operators of the source and each CAIR NO_x unit at the source shall surrender the CAIR NO_x allowances required for deduction under §96.154(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law; and
(2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of this subpart, the Clean Air Act, and applicable State law.

If a CAIR SO_2 source emits sulfur dioxide during any control period in excess of the CAIR SO_2 emissions limitation, then:
(1) The owners and operators of the source and each CAIR SO_2 unit at the source shall surrender the CAIR SO_2 allowances required for deduction under §96.254(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law; and
(2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of this subpart, the Clean Air Act, and applicable State law.

If a CAIR NO_x Ozone Season source emits nitrogen oxides during any control period in excess of the CAIR NO_x Ozone Season emissions limitation, then:
(1) The owners and operators of the source and each CAIR NO_x Ozone Season unit at the source shall surrender the CAIR NO_x Ozone Season allowances required for deduction under §96.354(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law; and
(2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of this subpart, the Clean Air Act, and applicable State law.

(e) Recordkeeping and Reporting Requirements.
(1) Unless otherwise provided, the owners and operators of the CAIR NO_x source, CAIR SO_2 source, and CAIR NO_x Ozone Season source (as applicable) and each CAIR NO_x unit, CAIR SO_2 unit, and CAIR NO_x Ozone Season unit (as applicable) at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the permitting authority or the Administrator.
(i) The certificate of representation under §96.113, §96.213, and §96.313 (as applicable) for the CAIR designated representative for the source and each CAIR NO_x unit, CAIR SO_2 unit, and CAIR NO_x Ozone Season unit (as applicable) at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation under §96.113, §96.213, and §96.313 (as applicable) changing the CAIR designated representative.
(ii) All emissions monitoring information, in accordance with subparts HH, HHH, and HHHH (as applicable) of 40 CFR part 96, provided that to the extent that subparts HH, HHH, and HHHH (as applicable) of 40 CFR part 96 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR NO_x Annual Trading Program, CAIR SO_2 Trading Program, and CAIR NO_x Ozone Season Trading Program (as applicable).
(iv) Copies of all documents used to complete a CAIR permit application and any other submission under the CAIR NO_x Annual Trading Program, CAIR SO_2 Trading Program, and CAIR NO_x Ozone Season Trading Program (as applicable) or to demonstrate compliance with the requirements of the CAIR NO_x Annual Trading Program, CAIR SO_2 Trading Program, and CAIR NO_x Ozone Season Trading Program (as applicable).
(2) The CAIR designated representative of a CAIR NO_x source, CAIR SO_2 source, and CAIR NO_x Ozone Season source (as applicable) and each CAIR NO_x unit, CAIR SO_2 unit, and CAIR NO_x Ozone Season unit (as applicable) at the source shall submit the reports required under the CAIR NO_x Annual Trading Program, CAIR SO_2 Trading Program, and CAIR NO_x Ozone Season Trading Program (as applicable) including those under subparts HH, HHH, and HHHH (as applicable) of 40 CFR part 96.

(f) Liability.
(1) Each CAIR NO_x source, CAIR SO_2 source, and CAIR NO_x Ozone Season source (as applicable) and each NO_x unit, CAIR SO_2 unit, and CAIR NO_x Ozone Season unit (as applicable) shall meet the requirements of the CAIR NO_x Annual Trading Program, CAIR SO_2 Trading Program, and CAIR NO_x Ozone Season Trading Program (as applicable).
(2) Any provision of the CAIR NO_x Annual Trading Program, CAIR SO_2 Trading Program, and CAIR NO_x Ozone Season Trading Program (as applicable) that applies to a CAIR NO_x source, CAIR SO_2 source, and CAIR NO_x Ozone Season source (as applicable) or the CAIR designated representative of a CAIR NO_x source, CAIR SO_2 source, and CAIR NO_x Ozone Season source (as applicable) shall also apply to the owners and operators of such source and of the CAIR NO_x units, CAIR SO_2 units, and CAIR NO_x Ozone Season units (as applicable) at the source.
(3) Any provision of the CAIR NO_x Annual Trading Program, CAIR SO_2 Trading Program, and CAIR NO_x Ozone Season Trading Program (as applicable) that applies to a CAIR NO_x unit, CAIR SO_2 unit, and CAIR NO_x Ozone Season unit (as applicable) or the CAIR designated representative of a CAIR NO_x unit, CAIR SO_2 unit, and CAIR NO_x Ozone Season unit (as applicable) shall also apply to the owners and operators of such unit.

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(g) Effect on Other Authorities.
No provision of the CAIR NO_x Annual Trading Program, CAIR SO_2 Trading Program, and CAIR NO_x Ozone Season Trading Program (as applicable), a CAIR permit application, a CAIR permit, or an exemption under § 96.105, §96.205, and §96.305 (as applicable) shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_x source, CAIR SO_2 source, and CAIR NO_x Ozone Season source (as applicable) or CAIR NO_x unit, CAIR SO_2 unit, and CAIR NO_x Ozone Season unit (as applicable) from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act.

Certification

I am authorized to make this submission on behalf of the owners and operators of the source or units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Scott Heidtbrink Name	
Signature Scott Heidtbrink	Date 4/23/12

STATEMENT OF BASIS

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) Part 70 Operating Permit Application, received March 1, 2011
2) 2011 Emissions Inventory Questionnaire, received April 30, 2012; and
3) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.
4) U.S. EPA's Factor Information Retrieval (FIRE) Data System 6.25
5) Construction Permit #0393-004, Issued March 2, 1993
6) Construction Permit #0897-025, Issued August 4, 1997
7) No Construction Permit Required Project #1998-08-035, Completed September 16, 1998
8) No Construction Permit Required Project #1998-11-006, Completed December 10, 1998
9) No Construction Permit Required Project #2007-03-100, Completed April 3, 2007
10) No Construction Permit Required Project #2007-07-022, Completed July 10, 2007
11) No Construction Permit Required Project #2007-08-120, Completed September 20, 2007
12) Temporary Construction Permit #022008-003, Issued February 6, 2008
13) No Construction Permit Required Project #2008-02-010, Completed March 5, 2008
14) Temporary Construction Permit #082008-020, Issued August 26, 2008
15) Temporary Construction Permit #082008-020A, Issued December 4, 2008
16) Temporary Construction Permit #022009-007, Issued February 17, 2009
17) No Construction Permit Required Project #2010-08-018, Completed October 13, 2010
18) Construction Permit #112011-009, Issued November 21, 2011
19) Temporary Construction Permit #092011-002, Issued September 7, 2011

Other Air Regulations Determined Not to Apply to the Operating Permit
The Air Pollution Control Program (APCP) has determined the following requirements to not be applicable to this installation at this time for the reasons stated.

10 CSR 10-2.215 *Control of Emissions from Solvent Cleanup Operations*
This rule does not apply to the parts washer because cleaning solvent VOCs are emitted at less than five hundred (500) pounds per day from the unit. [10 CSR 2.215(1)(B)]

10 CSR 10-2.260, *Control of Petroleum Liquid Storage, Loading and Transfer*
This rule applies to petroleum liquid storage tanks with capacities greater than 40,000 gallons. There are no storage vessels with capacities greater than 40,000 gallons at this facility; therefore this rule is not applicable.

10 CSR 10-6.350 *Emission Limitations and Emissions Trading of Nitrogen Oxides*
This rule does not apply because the installation is implementing the requirements of 10 CSR 10-6.364 [10 CSR 10-6.350(1)(F)]

10 CSR 10-6.360 *Control of NO_X Emissions from Electric Generating Units and Non-Electric Generating Boilers*
This rule does not apply in Jackson county therefore it is not applicable to the boilers.
[10 CSR 10-6.360(1)(A)]

10 CSR 10-6.400, *Restriction of Emission of Particulate Matter from Industrial Processes*
The following emission units are not subject to this rule because, per §(1)(B)7, it does not apply to fugitive emissions.

Coal unloading (EP1)
Coal storage piles (EP2)

The following emission units are not subject to this rule because, per §(1)(B)12, it does not apply to the grinding, crushing and conveying operations at a power plant.

Coal Conveyor # 18 (EP3A)
Coal Handling System (Except for Conveyor #18) (EP3B)
Coal Crushers #1 and #2 (EP4A and EP4B)
Fly Ash Handling System (EP6)

The following emission units are not subject to this rule because, per §(1)(B)6, it does not apply to the burning of fuel for indirect heating.

Boiler #1 (EP5A)
Boiler #2 (EP5B)
Boiler #3 (EP5C)

The following emission units are not subject to this rule because, per §(2)(A), liquids and gases used solely as fuels for purposes of combustion are excluded from the definition of process weight.

Emergency Generator (EP7)
Welding Machines (EP8 and EP9)
Back-Up Fire Pump Engine (EP11)

Construction Permits

1) Construction Permit #0393-004, Issued March 2, 1993
   This permit was issued for an additional coal conveyor system and fly ash handling system to accommodate low sulfur coal. This permit contains no special conditions.
2) Construction Permit #0897-025, Issued August 4, 1997
   This permit was issued for the installation of a Safety Kleen parts washer, spray paint booth, and emergency fire protection system pump. This permit contains special conditions which appear in this operating permit as Permit Condition EP10-001. The requirements for the spray paint booth are not included because the unit was removed in 2008.
3) No Construction Permit Required Project #1998-08-035, Completed September 16, 1998
4) No Construction Permit Required Project #1998-11-006, Completed December 10, 1998
5) No Construction Permit Required Project #2007-03-100, Completed April 3, 2007
   This no construction permit required determination was issued for the replacement of a Fairbanks emergency generator with a Caterpillar emergency generator.
6) No Construction Permit Required Project #2007-07-022, Completed July 10, 2007
   This no construction permit required determination was issued for the installation of a Selective Catalytic Reduction (SCR) system on Unit 3.

7) No Construction Permit Required Project #2007-08-120, Completed September 20, 2007
This no construction permit required determination was issued for the installation of NO_X reduction systems on Units 1 and 2.
8) Temporary Construction Permit #022008-003, Issued February 6, 2008
This temporary permit was issued for the burning of biomass. This permit expired October 1, 2008
9) No Construction Permit Required Project #2008-02-010, Completed March 5, 2008
This no construction permit required determination was issued for the replacement of the boiler tubes on Boiler #3. The replacement tubes were identical to the existing tubes except for their geometry.
10) Temporary Construction Permit #082008-020, Issued August 26, 2008
11) Temporary Construction Permit #082008-020A, Issued December 4, 2008
This permit was issued for an additional trial burn of biomass. The permit was amended to allow a blend of up to 20% biomass to coal. The permit expired on April 1, 2009.
12) Temporary Construction Permit #022009-007, Issued February 17, 2009
This permit was issued for an additional trial burn of biomass. This permit expired on February 17, 2010.
13) No Construction Permit Required Project #2010-08-018, Completed October 13, 2010
This no construction permit required determination was issued for the expansion of a landfill
14) Construction Permit #112011-009, Issued November 21, 2011
This construction permit was issued for the addition of hauling and storage for off-site coal combustion by-products. This permit contains special conditions which are included in this operating permit in Permit Condition EP18-001.
15) Temporary Construction Permit #092011-002, Issued September 7, 2011
This permit was issued for the testing of a coal additive. This permit expired on December 31, 2011.

New Source Performance Standards (NSPS) Applicability

40 CFR Part 60 Subpart D, *Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971*
40 CFR Part 60 Subpart Da, *Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978*
40 CFR Part 60 Subpart Db, *Standards of Performance for Industrial, Commercial, Institutional Steam Generating Units for Which Construction is Commenced After June 19, 1984*
These subparts do not apply to this installation because the boilers were constructed prior to the subparts' applicability dates.

40 CFR Part 60 Subpart K, *Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978*
40 CFR Part 60 Subpart Ka, *Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984*
These subparts apply to storage vessels with capacities greater than 40,000 gallons that are used to store petroleum liquids. There are no storage vessels with capacities greater than 40,000 gallons at this facility; therefore these subparts are not applicable.

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*

This subpart applies to storage vessels with capacities greater than or equal to 75 m^3 (19,813 gallons) that are used to store volatile organic liquids and were constructed after July 23, 1984. There are no storage vessels with capacities greater than or equal to 19,813 gallons that were constructed after July 23, 1984, at this facility; therefore this subpart is not applicable.

40 CFR Part 60 Subpart Y, *Standards of Performance for Coal Preparation Plants*

This subpart applies to thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems constructed after October 24, 1974.

a) EP3A Coal Conveyor #18 is subject to the requirements of Subpart Y because this unit was constructed after October 24, 1974, and is used to transport coal to the Coal Crusher House.
b) EP3B Coal Handling System (Except for Conveyor #18) was constructed prior to October 24, 1974, and therefore is not subject to the requirements of Subpart Y.
c) EP4A Coal Crusher #1 was installed in 2007, and is subject to the requirements of Subpart Y for equipment that was constructed after October 24, 1974, and before April 28, 2008.
d) EP 4B Coal Crusher #2 was installed in 2011, and is subject to the requirements of Subpart Y for equipment that was constructed after May 27, 2009.
e) Conveyor #16 and Conveyor #17 were constructed after October 24, 1974. However, these units only convey coal to a coal storage pile. They do not meet the definition of coal conveying equipment (i.e. equipment used to convey coal to or remove coal and refuse from coal processing machinery). Therefore, these units are not subject to the requirements of Subpart Y.

This regulation may be referenced at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr;sid=032e902341db8873af7fe153511e9f67;rgn=div6;view=text;node=40%3A7.0.1.1.1.40;idno=40;cc=ecfr

40 CFR Part 60 Subpart IIII *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*

This rule does not apply to the emergency generator engine because it was manufactured in 2000 which is before the April 1, 2006 applicability date. [§60.4200(a)(2)(i)]
This rule does not apply to the fire pump engine because it was manufactured before July 1, 2006. [§60.4200(a)(2)(ii)]

Maximum Achievable Control Technology (MACT) Applicability

40 CFR Part 63, Subpart T, *National Emission Standards for Halogenated Solvent Cleaning*

This subpart does not apply to the Parts Washer (EP10) because the facility does not use any cleaning solvents in the list of applicable solvents for subpart T.

40 CFR Part 63 Subpart ZZZZ *National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

The emergency generator engine is only subject to the initial notification requirements of §63.6645 because it is a new emergency stationary RICE with a site rating of more than 500 brake horsepower located at a major source of HAP. [§63.6590(b)(i)]

The fire pump engine is subject to the requirements for emergency engines less than 500 horsepower located at major sources of HAP.
This regulation may be referenced at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr;rgn=div6;view=text;node=40%3A14.0.1.1.1.1;idno=40;sid=e94dcfde4a04b27290c445a56e635e58;cc=ecfr

40 CFR Part 63 Subpart UUUUU – *National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units*
EP5A, EP5B, and EP5C are subject to this rule. The standards applied within this operating permit are those promulgated February 16, 2012, as corrected April 19, 2012. If these standards should later be delayed, amended, or replaced, the permittee shall comply with the delayed, amended, or replacement standards. If the standards are rescinded the permittee shall no longer be required to comply with Permit Condition (EP5A through EP5C)-001. On August 2, 2012, the Air Pollution Control Program approved a one year extension of the compliance date for this rule. The compliance date is now April 16, 2016.
This rule may be referenced at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr;rgn=div2;view=text;node=20120216%3A1.39;idno=40;sid=2f855bec0f4672d6c1d1a215692c69e1;cc=ecfr;start=1;size=25

National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability
40 CFR Part 61, Subpart M – *National Emission Standards for Asbestos* is applicable to the installation and has been applied within this permit (see Section IV. Core Permit Requirements).

Compliance Assurance Monitoring (CAM) Applicability
40 CFR Part 64, *Compliance Assurance Monitoring (CAM)*
The CAM rule applies to each pollutant specific emission unit that:

- Is subject to an emission limitation or standard, and
- Uses a control device to achieve compliance, and
- Has pre-control emissions that exceed or are equivalent to the major source threshold.

The boilers (EP5A through EP5C) meet the applicability criteria for this part because these units each have the uncontrolled potential to emit particulate matter above the major source threshold levels (as defined by Part 70) and utilize control devices (as defined by 40 CFR §64.1) to comply with 10 CSR 10-6.405.

The permittee submitted original and modified CAM Plans, CAM Test Plans, and CAM Quality Assurance/Quality Control (QA/QC) Plans at various times. The latest versions of each approved by the Missouri Department of Natural Resources Air Pollution Control Program, Compliance and Enforcement Section, were submitted August 1, 2006, August 16, 2006, and July 28, 2006, respectively. This accepted Compliance Assurance Monitoring has been incorporated into Permit Condition (EP 5A through EP5C)-002.

Where conflicts arise between 40 CFR Part 60 and the approved CAM plan, CAM test plan, and CAM QA/QC plan and 40 CFR Part 60, the CAM plan, CAM test plan and CAM QA/QC plan govern. This will assure that where there is doubt, the acceptance criteria in these approved documents will be used, and not those in 40 CFR Part 60 Appendix B Performance Specification 11 (PS-11). These monitors are indicators of compliance, and not compliance monitors. The full PS-11 requirements do not apply to monitors that are only indicators of compliance.

Greenhouse Gas Emissions

This installation is a major source for greenhouse gases. Major stationary sources are required by the Clean Air Act (CAA) to obtain Part 70 operating permits. While Part 70 permits generally do not establish new emissions limits, they consolidate applicable requirements, as defined in Missouri State Regulations 10 CSR 10-6.020(2)(A)23, into a comprehensive air permit. At the time of permit issuance, there were no applicable GHG requirements for this source.

Note that this source is subject to the Greenhouse Gas Reporting Rule. However, the preamble of the GHG Reporting Rule clarifies that Part 98 requirements do not have to be incorporated in Part 70 permits operating permits at this time. In addition, Missouri regulations do not require the installation to report CO_2 emissions in their Missouri Emissions Inventory Questionnaire; therefore, the installation's CO_2 emissions were not included within this permit. An estimate of CO_2 emissions is included in table below. The applicant is required to report the data directly to EPA. The public may obtain CO_2 emissions data for this installation by visiting EPA's Clean Air Markets website at: http://camddataandmaps.epa.gov/gdm/index.cfm.

Updated Potential to Emit for the Installation

Pollutant	Potential to Emit (tons/yr)[1]
CO	704.94
CO_2e	6,805,615
HAP	2,011.92
NO_x	46,422.98
PM_{10}	218.13
PM_{25}	100.22
SO_x	49,234.28
VOC	166.73

[1]Each emission unit was evaluated at 8,760 hours of uncontrolled annual operation unless otherwise noted. The emergency engines were evaluated at 500 hours. PM10 and PM2.5 include only filterable PM.

Other Regulatory Determinations

10 CSR 10-2.210, *Control of Emissions from Solvent Metal Cleaning*
The Parts Washer (EP10) is subject to this rule, per 10 CSR 10-2.210(1).

10 CSR 10-6.220, *Restriction of Emissions of Visible Air Contaminants*
The following emission units are not subject to this rule because, per §(1)(A), it does not apply to internal combustion engines.

Emergency Generator (EP7)
Welding Machines (EP8 and EP9)
Back-Up Fire Pump Engine (EP11)

This rule is not applied to EP3A Coal Conveyor #18, EP4A Coal Crusher #1, and EP 4B Coal Crusher #2 because the opacity limitation is superseded by the more stringent limitation in 40 CFR Part 60 Subpart Y. 10 CSR 10-6.220 allows an exception of 60% opacity for no more than 6 minutes in any 60 minutes. Subpart Y provides no exception to the opacity limitation.

10 CSR 10-6.405, *Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used For Indirect Heating*
The coal fired boilers (EP5A through EP5C) are subject to this rule. The total heat input of the facility is over 5,000 MMBtu/hr and the boilers are considered existing units because they were installed before February 15, 1979. Therefore the emission limitation for the boilers is 0.12 lb PM/MMBtu. [§(2)(D)]

These units have an uncontrolled potential to emit particulate matter above major source thresholds and utilize a control device to comply with this rule and are therefore subject to 40 CFR Part 64, *Compliance Assurance Monitoring (CAM).* The CAM plan can be found on pages SB-9 through SB-50 and the requirements appear in this operating permit as Permit Condition (EP5A through EP5C)-002.

Note: The applicable requirement in the CAM plan is 10 CSR 10-2.040, *Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating*. This rule was rescinded and replaced by 10 CSR 10-6.405 on October 30, 2011. The emission limitations for EP5A through EP5C are identical in both rules and therefore the existing CAM plan for 10 CSR 10-2.040 is being used to meet the requirements of 10 CSR 10-6.405.

40 CFR Part 97 *Cross-State Air Pollution Rule (CSAPR):*
- On December 30, 2011, the United States Court of Appeals for the D.C. Circuit issued its ruling to stay the CSAPR pending judicial review. The court's decision is not a decision on the merits of the rule.
- On January 10, 2012, EPA returned the vintage 2012 CAIR allowances to allowance accounts. Additional allocations of 2012 allowances will be done as soon as the allocation files are submitted to EPA by the states. If market participants wish to use the CAMD Business System to record transfers of the CSAPR allowances or to record other CSAPR related information, they may do so although they are not required to at this time.
- On January 26, 2012, EPA signed a notice, which will be published in the Federal Register, indicating that the Agency will not require compliance with the CSAPR supplemental rule while the stay is in effect. EPA finalized the supplemental rule on December 15, 2011 to include Missouri in the ozone season NO_x program in the CSAPR.
- On February 7, 2012, EPA issued two sets of minor adjustment to the CSAPR. The adjustments provide flexibility to states by increasing budgets in seventeen states and easing limits on market-based compliance options.
- On March 1, 2012, EPA filed its brief on the merits of the legal challenges to the CSAPR. EPA's brief defends the rule and sets forth the reasons why the rule should be upheld by the court.
- On April 20, 2012, EPA announced it had reviewed the comments submitted in response to the Direct Final Revisions Rule. EPA intends to withdraw the Direct Final Revisions Rule prior to its effective date and take final action on the proposed revisions rule expeditiously.
- On May 10, 2012, EPA withdrew the Direct Final Revisions Rule (77 FR 10342, February 21, 2012). The Agency issued a parallel proposal (77 FR 10350, February 21, 2012) along with the direct final rule proposing the same revisions and will take final action on the proposed revisions rule expeditiously. The withdrawal does not affect the Final CSAPR Revisions Rule (77 FR 10324, February 21, 2012).
- On June 5, 2012, EPA issued the final set of minor adjustments to the Cross-State Air Pollution Rule (CSAPR). This final rule will help sources comply with the program by increasing state budgets for Arkansas, Georgia, Indiana, Kansas, Louisiana, Mississippi, Missouri, Nebraska, New York, Ohio,

Oklahoma, South Carolina, and Texas. This rule also revises new unit set-asides for Arkansas, Louisiana, and Missouri.

- On August 21, 2012, the U.S. Court of Appeals for the D.C. Circuit issued its ruling on CSAPR. EPA is reviewing the court decision. CAIR remains in place.
- On October 3, 2012, the United States filed a petition seeking en banc rehearing of the U.S. Court of Appeals for the D.C. Circuit's August 21, 2012 decision regarding EPA's Cross-State Air Pollution Rule.
- For the latest information on the implementation of CSAPR visit: http://www.epa.gov/crossstaterule/bulletins.html

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).

Copy of Compliance Assurance Monitoring (CAM) Documents

The following forty-two pages contain four CAM-related attachments:

1) The approved eight-page CAM Plan for the Aquila - Sibley Generating Station submitted, August 1, 2006 (although still dated December 23, 2004 internally); [SB-9 through SB-16]
2) Sixteen pages (all but the Appendix B) of the approved CAM Test Plan for the Aquila – Sibley Generating Station, submitted August 16, 2006; and [SB-17 through SB-32]
3) Eighteen pages (all but the appendices) of the CAM Quality Assurance and Quality Control Plan for the Particulate Matter Continuous Emissions Monitoring Systems for the Aquila – Sibley Generating Station, submitted July 28, 2006. [SB-33 through SB-50]

COMPLIANCE ASSURANCE MONITORING PLAN
Aquila – Sibley Generating Station

A. Background

1. Emissions Unit:

Description:	Boiler #1 – Babcock & Wilcox Cyclone, 609.6 MMBtu/hr Boiler #2 – Babcock & Wilcox Cyclone, 627.3 MMBtu/hr Boiler #3 – Babcock & Wilcox Cyclone, 4094.1 MMBtu/hr (All 3 Units exhaust through Common Stack)
Facility:	Sibley Generating Station 33200 E. Johnson Road Sibley, MO 64088

2. Applicable Requirement:

Regulation:	10 CSR 10-2.040, *Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used For Indirect Heating*
Pollutants:	Particulate Matter ("PM")
Emission Limits:	0.12 lb PM per MMBtu for each Boiler
Monitoring Requirements:	Per 10 CSR 10-2.040: None. Per Operating Permit: Current gap-filling compliance demonstration method is a calculation based on coal throughput and emission factor. Per Proposed CAM: A Teledyne Analytical Instruments (TAI) Laserhawk 360 particulate monitor installed in the common stack to serve as an indicator of precipitator performance.

3. Control Technology: Electrostatic precipitator (ESP)

B. Monitoring Approach

The key elements of the monitoring approach are presented in Table 1. The CAM performance indicator is a continuous Particulate Monitor, Model Laserhawk 360 ("CEMS"), manufactured by Teledyne Analytical Instruments. The Monitor output will be used to provide a reasonable level of compliance assurance by indicating ESP performance. The CEMS readings shall not be used to directly demonstrate compliance with 10 CSR 10-2.040 limits.

COMPLIANCE ASSURANCE MONITORING PLAN
Aquila – Sibley Generating Station

TABLE 1. MONITORING APPROACH

I.	Indicator	Particulate Level of common stack exhaust, as measured by the output of a Continuous PM Monitor, TAI Model Laserhawk 360. The monitor output will be recorded in units of pounds PM per cubic feet or pounds PM per megawatt. Correlation between the monitor output and a Reference Method will be established during a performance test.
	Measurement Approach	PM CEMS in common stack exhaust. When the hourly average PM CEMS reading reaches or exceeds a value equivalent to 1.25 times the highest PM CEMS response value reached during the correlation tests, or 0.9 times the source emissions limit (an "Excursion"), then corrective action must be taken to bring the Unit back within these Limits (see Section 4 below).
II.	Indicator Range	The Particulate Monitor indicator range is an hourly average reading covering the full range of measurements made during the initial calibration plus 25% (minimum). The indicator range is a calibrated instrument output that offers reasonable assurance of compliance with the PM emissions limit. An Excursion (defined above and in Section 4) triggers corrective action.
III.	Performance Criteria	
A.	Data Representativeness	The PM CEMS is installed at a location in the common stack, chosen to minimize problems due to flow disturbances or varying PM stratification. Prior to installation, measurements shall be made of flow dynamics and/or particulate matter to determine the existence or extent of PM stratification.
B.	Verification of Operational Status	Initial correlation tests will be conducted as specified in this document, with a minimum of 12 valid test runs at 2 different PM concentration levels. The results of these tests will be used to determine the correlation equation and correlation coefficient. See Section C.3.b. below for definition of "valid" test run.
C.	QA/QC Practices and Criteria	Daily Zero and Span checks will be made, and the results documented. The instrument will be recalibrated if the Zero or Span value exceeds ± 5% of the reference value. In addition, quarterly Reference Calibrations, routine and recommended periodic maintenance procedures will be performed in accordance with the Manufacturer's instructions.
D.	Monitoring Frequency	The PM concentration of the common stack is monitored continuously.
E.	Data Collection Procedures	The DAS retains all hourly average PM concentration data, plus all daily Zero-Span calibrations. Alarms will signal an instrument malfunction or Excursion.
F.	Averaging period	One minute average PM concentration data are used to calculate hourly block averages.

C. Monitoring Approach Justification

1. Background

The pollutant-specific emission units (PSEU) are three cyclone-fired boilers that route exhaust to a common stack and have a combined heat input rating above 5,000 MMBtu/hr. Each boiler has a dedicated ESP, which controls particulate emissions. All three boilers were constructed before February 15, 1979, and are therefore considered "Existing" per 10 CSR 10-2.040.

COMPLIANCE ASSURANCE MONITORING PLAN
Aquila – Sibley Generating Station

2. Rationale for Selection of Performance Indicators

The CAM indicator selected is an "In-Situ" Particulate Matter CEMS based on light scattering principles, Model Laserhawk 360, manufactured by Teledyne Analytical Instruments. The rationale for the choice of this specific approach is as follows:

a) Continuous PM monitors are widely used to measure and report PM emissions in many parts of the world, and are considered to be the best real-time indicators of actual mass concentrations.

b) Rather than using a COMS as a precursor to further action (i. e. calculation of PM emissions via TAI model evaluation) the continuous PM monitor output can directly trigger the need for corrective action and/or reporting obligations.

c) The TAI instrument has been used as both a performance and regulatory monitor in a wide variety of applications, with more than 600 field installations.

d) The TAI instrument has a good record for reliability and low maintenance.

e) The TAI instrument has been used in a number of officially sponsored test programs, and has met preliminary PS-11 specifications in two of them.[1,2]

f) The TAI instrument is compatible with the existing DAHS system, which can readily be set up to record the appropriate averages, calibrations and signals for instrument malfunction or PM exceedances.

COMPLIANCE ASSURANCE MONITORING PLAN
Aquila – Sibley Generating Station

3. Instrument Calibration

a) *General and Pre-Test Monitoring Period.* The instrument will be calibrated based on the boiler load, coal, ESP characteristics and any other performance or test data deemed applicable. Reference method measurements will be conducted in accordance with accepted method standards (normally EPA Methods 5 or 17) and compared with the integrated (arithmetic average) PM CEMS output over the reference method test period as described below.

The Laserhawk 360 will be installed at a vertical stack location recommended by Aquila. From a practical perspective, this would be a location with existing platforming, access and power. The Monitor will be initially operated for a period of approximately 30 days under various operating conditions to identify conditions necessary to produce the two target concentration levels for the correlation testing (see below). During the 30-day pre-test monitoring period, the following key operating parameters will be recorded:

A. Monitor Output
B. Plant Load
C. Fuel Type
D. ESP Voltage and Current Readings

b) *Correlation/Performance Testing.* A minimum of twelve (12) valid runs (e.g. 2 loads, 2 fuel blends and 3 tests per condition) will be required to obtain the correlation equation and correlation coefficient. A run will be declared "not valid" only when performed during a time when conditions are clearly not representative of normal operations. The correlation will be determined according to equation 11-3 of PS-11, and the correlation coefficient will be calculated according to equation 11-14 of the referenced document[3].

c) Tests should be performed at two (2) different PM concentration levels, with a minimum of three (3) tests at each level, if possible. Level 1 encompasses the range from 0 to 50% of the maximum PM concentration available. Level 2 should range from 75% to 100% of the maximum concentration. The source should be operated over the complete range of expected conditions, so as to assure

COMPLIANCE ASSURANCE MONITORING PLAN
Aquila – Sibley Generating Station

that the data produced is representative. The data gathered during the 30-day pre-test monitoring period (see Section 3.A above) shall be used to produce the desired concentrations for the test runs. The Sibley Generating Station anticipates operating with a fuel mix of 70% - 100% sub-bituminous coal (such as PRB), 0-30% bituminous, and approximately 1% tire-derived fuel (TDF). The attached coal crush sizing chart provides rough values as recommended by Babcock and Wilcox . Heating values range from 8,350 to 12,500 btu/lb.

d) During correlation testing, the reference method data and PM CEMS measurements will be converted into units of pounds PM per MMBtu to establish limits comparable to the regulatory standard (0.12 lbs/MMBtu). Once established, these limits will be converted into units of pounds PM per actual stack gas volume, or pounds of PM per megawatt. During operation after testing, the CEMS output, and determination of PM levels with respect to limits, will be conducted only in units of pounds per actual stack gas volume or pounds PM per megawatt.

e) The correlation coefficient (r) resulting from the calibration testing must be $\geq .75$.

f) Once the correlation equation has been determined, it will be applied to PM CEMS data collected by the Data Recorder.

g) Based on the results of the reference method measurements, the data will be documented in a manner similar to that shown in Table 2, and plotted as shown in Figure 1. The point at which an alarm occurs, as well as a reporting requirement and corrective action, will be determined when the hourly average of the PM CEMS output reaches the **lower** of the following limits:

   i. A value equivalent to 1.25 times the highest PM CEMS response value reached during the correlation tests.
   ii. A value equivalent to 0.9 times the source emissions limit.

4. Inspection/Corrective Action

In the event of an Excursion (1-hour CEMS reading indicative of 1.25 times the highest PM CEMS response value reached during the correlation tests, or 0.9 times the source emissions limit, Aquila will take steps to identify and correct any

operational conditions that may be contributing to the Excursion. The operational checks will be made as soon as practicable and may include

- ESP field checks (T/R voltage, current, spark rate)
- Visual Inspection of Control Equipment
- Unusual Fuel Characteristics
- Boiler Upset Condition

5. QA/QC Criteria

Factory supplied filter standards will be used to calibrate the instrument at a reference Zero and upscale Span value. These calibration standards will be maintained in accordance with manufacturer's recommendations. Following this calibration, an internal "Zero-Span" cycle will be initiated, thus establishing initial values for future reference. Daily "Zero-Span" cycles will follow, with the results stored in the data system and compared with the initial values. Should either the "Zero" or Span" value error exceed ± 5% of the starting value, an alarm will be initiated to signal the need for recalibration of the instrument to the factory standards. In addition, a quarterly reference calibration will be performed as described in the instrument operations manual. The factory standards will be used to measure instrument response at a Zero and Upscale value. Should either of these readings exceed the factory standard by more than ± 5% of the full scale measurement range, the instrument will be reset to the factory standard values. Finally, routine and scheduled maintenance procedures will be established in accordance with manufacturer's recommendations.

6. Data Acquisition Needs

The data system will be set up to perform the following tasks:

a) Record the Analog output of the PM CEMS.
b) Calculate emissions values, in the units of the required standard, and according to the correlation(s) established during the PM CEMS calibration.
c) Store the hourly averages of the calculated emissions values.

COMPLIANCE ASSURANCE MONITORING PLAN
Aquila – Sibley Generating Station

d) Record the daily "Zero-Span" calibration results.

e) Initiate an alarm if any daily Zero or Span value exceeds the error limit of ± 5%.

f) Initiate an alarm if the hourly averaged PM CEMS emission value reaches or exceeds the limit value, as defined in section 3. above.

g) Initiate an alarm on the occurrence of a malfunction status indicator from the Laserhawk 360.

References

iii. *Notice of Data Availability and Request for Comments,* **FRL-5941-4, Federal Register, Vol. 2, No.249 (December 30, 1997).**

2. *Results of Continuous PM Monitor Testing at Pleasant Prairie Power Plant,* **Ralph L Roberson, Jon Konings and Charles E. Dene, EPRI CEM Users Group Meeting, May 16-18, 2001, Charlotte, NC.**

3. *40 CFR 60, Appendix B, Performance Specification 11 – Specification and Test Procedure for Particulate Matter Continuous Monitoring Systems at Stationary Sources.*

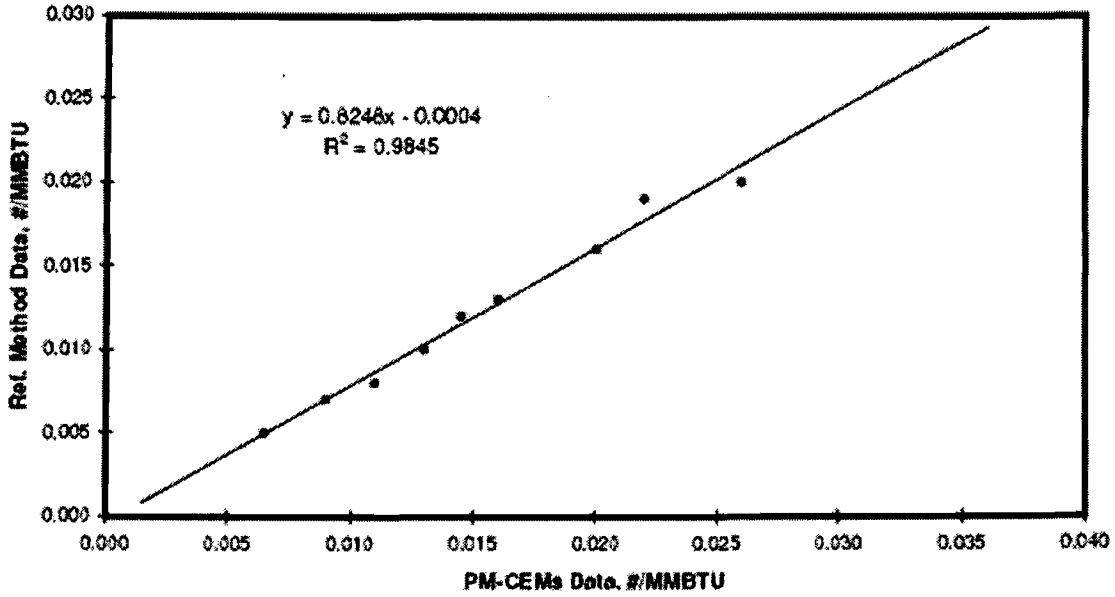
COMPLIANCE ASSURANCE MONITORING PLAN
Aquila – Sibley Generating Station

Table 2.

Date	Run #	PM Level	Reference Method Data	PM CEMS Data
	1	1	0.0050	0.0065
	2	1	0.0070	0.0090
	3	1	0.0080	0.0110
	4	2	0.0100	0.0130
	5	2	0.0120	0.0145
	6	2	0.0130	0.0160
	7	3	0.0160	0.0200
	8	3	0.0190	0.0220
	9	3	0.0200	0.0260

Correlation Equation:		y = .8248x - 0.0004
Highest PM CEMS Reading:		0.0260
Limit 1 (Highest PM CEMS X 1.25):		0.0325
Limit 2 (0.9 X Emissions Limit):		Calculated

Figure 1. Calibration Graph Example



Compliance Assurance Monitoring
Test Plan for Determining Particulate Matter

Aquila–Sibley Generating Station
33200 E. Johnson Road
Sibley, MO 64088

August 16, 2006

Prepared by

Aquila, Inc.
and
Burns & McDonnell Engineering Company

Compliance Assurance Monitoring Test Plan – August 2006

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FIGURES

Note: This figure is not on page 5 as was indicated above. It is irrelevant at this point, since the test plan is already complete.

1.0 INTRODUCTION

The Aquila-Sibley Generating Station located in Sibley, MO has an approved Compliance Assurance Monitoring (CAM) plan for particulate emissions. The scope of work set forth in this CAM Test Plan is designed to gain acceptance of Teledyne's continuous particulate monitor (Laserhawk 360) for Aquila's CAM obligations to Missouri Department of Natural Resources and Region VII EPA. The CAM performance indicator is a continuous Particulate Monitor, (Laserhawk 360) ("PM CEMS"), manufactured by Teledyne Analytical Instruments. The CEMS output will be used to provide a reasonable level of compliance assurance by indicating ESP performance. The PM CEMS readings shall not be used to directly demonstrate compliance with 10 CSR 10-2.040 limits.

2.0 BACKGROUND

The pollutant-specific emission units (PSEU) are three cyclone-fired boilers that route exhaust to a common stack and have a combined heat input rating above 5,000 MMBtu/hr. Each boiler has a dedicated ESP, which controls particulate emissions. All three boilers were constructed before February 15, 1979, and are therefore considered "Existing" per 10 CSR 10-2.040.

1. Emissions Unit:

Description:	Boiler #1 – B&W Cyclone, 609.6 MMBtu/hr Boiler #2 – B&W Cyclone, 627.3 MMBtu/hr Boiler #3 – B&W Cyclone, 4094.1 MMBtu/hr (All 3 Units exhaust through Common Stack)
Facility:	Aquila-Sibley Generating Station 33200 E. Johnson Road Sibley, MO 64088

2. Applicable Requirement:

Regulation:	10 CSR 10-2.040, *Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used For Indirect Heating*
Pollutants:	Particulate Matter ("PM")
Emission Limits:	0.12 lb PM per MMBtu for each Boiler

	Monitoring Requirements:	Per 10 CSR 10-2.040: None. Per Operating Permit: Current gap-filling compliance demonstration method is a calculation based on coal throughput and emission factor. Per Proposed CAM: A Teledyne Analytical Instruments Laserhawk 360 particulate monitor installed in the common stack to serve as an indicator of precipitator performance.
3.	Control Technology:	Electrostatic precipitator (ESP)

3.0 TEST PLAN METHODOLOGY AND IMPLEMENTATION SCHEDULE

The CAM Test Plan is comprised of the following five components:

3.1 Monitor Siting and Preliminary Stratification Testing (already performed by TEOM)
3.2 30-Day Pre-Test Monitoring Period. Monitor Range Determination
3.3 7-Day Drift Test
3.4 Correlation Testing

The overall CAM Test Plan implementation schedule is depicted in Figure 3-1. The schedule for tasks and subtasks are detailed for each of the five major components. The specific test methods and procedures that will be employed to successfully execute each component of the CAM Test Plan are described in detail in the following sections.

3.1 MONITOR SITING AND PRELIMINARY STRATIFICATION TESTING

This portion of the CAM Test Plan was completed July 20, 2005, by Thermo using two TEOM sampling units simultaneously as described in this section. Acceptable stratification test results were submitted to MDNR with subsequent installation of an ESC P-5B particulate monitor at the sampling platform. After a few months of operation the P-5B was determined to be inadequate for Sibley operational conditions. Teledyne's Laserhawk 360 was then purchased to replace the ESC P5b as a CAM indicator.

The PM CEMS (P-5B) was installed at an accessible location downstream of all pollution control equipment. The PM CEMS concentration measurements were conducted from a location considered representative or be able to provide data that can be corrected to be representative of the total PM emissions as determined by the TEOM reference method. A measurement location was selected that minimized problems due to flow disturbances, cyclonic flow, and varying PM stratification (refer to EPA Reference Method 1 for guidance). The PM CEMS was installed at a vertical stack location recommended by

Aquila. From a practical perspective, this was a location with existing platforms, access and power.

Since higher emissions will be created for correlation test purposes by adjusting the performance of the air pollution control device, the PM CEMS measurement location was located as far downstream from the control device as possible in accordance with EPA Reference Method 1 in order to minimize PM stratification that may be created in these cases.

For the selection of an installation location, flow disturbances were minimized and if possible avoided in accordance with the upstream/downstream minimum distances set forth in EPA Reference Method 1. The TEOM reference method measurements were conducted at locations that satisfy the measurement site selection criteria specified in EPA Method 1 of at least eight duct diameters downstream and at least two duct diameters upstream of any flow disturbance. If necessary, testing may be conducted at a location that is two diameters downstream and 0.5 diameters upstream of any flow disturbances. Cyclonic flow will also be minimized and if possible avoided in accordance with the test procedures set forth in EPA Reference Method 2.

A potential installation location was identified utilizing EPA Reference Methods 1 and 2. This potential installation location was then checked for cyclonic flow and for varying PM stratification in accordance with the test procedures set forth in ASTM Method D6831, Determination of Particulate Mass Concentration Using an Automated In-stack Test Method. In accordance with ASTM Method D6381, a TEOM Series 7000 Source Particulate Monitor was used to provide gravimetric particulate measurements in near "real-time". Three, 1-hour ASTM Method D6381 test runs were conducted at the potential installation location for each of 2 different conditions. A total of six (6) test runs were conducted for the 2 different conditions. A traverse of the stack at the installation location was conducted using the TEOM Series 7000 in accordance with EPA Reference Methods 1 & 2. During the traverse real-time particulate matter stratification data was collected at each of the traverse points. After the TEOM testing was completed, the particulate matter stratification data was evaluated for each of the 2 different conditions in order to choose an acceptable measurement point location. Real time particulate data is subject to short-term variability due primarily to ESP rapping. Such temporal variations may be incorrectly identified as evidence of stratification. During evaluation of the TEOM stratification data, an effort was made to account for rapping spikes by, for example, averaging traverse point data over multiple rapping sequences, or by deleting obvious rapping spikes.

3.2 30-DAY PRE-TEST MONITORING PERIOD

After completing the initial field installation of the Teledyne Laserhawk 360, the PM CEMS will be operated in accordance with manufacturer's instructions. In this way, Aquila personnel will be able to familiarize themselves with its operation prior to beginning correlation testing. During this initial 30-Day Pre-test Monitoring Period, daily checks (zero and upscale drift, as appropriate) will be performed, and, when any

check exceeds the daily specification (per QA/QC plan), adjustments will be made and any necessary maintenance performed to ensure reliable operation.

The PM CEMS will be adjusted to respond consistently to PM present in the stack under different conditions of boiler load, coal, ESP characteristics and any other performance or test data deemed applicable. The purpose of the 30-Day Pre-test Monitoring Period is to identify the full range of operating conditions and PM emissions to be used in the PM CEMS correlation test.

The relationships between operating conditions and PM CEMS response will be identified, especially those conditions that produce the highest PM CEMS response over 15-minute averaging periods, and the lowest PM CEMS response as well. The objective will be to be able to reproduce these conditions for purposes of the actual correlation testing. The response range of the PM CEMS will be set such that the instrument measures the full range of responses that correspond to the range of source operating conditions that will be implemented during correlation testing. The preliminary reference method testing will be conducted after the 30-day pre-test monitoring period. During this preliminary testing, the PM emission concentration will be measured corresponding to the highest PM CEMS response observed during the full range of normal operation and when perturbing the control equipment. During ESP perturbation, select ESP fields will be turned off for approximate 15-minute periods to observe PM response. MDNR Air Pollution Control Program Enforcement Section will be notified at least 24 hours in advance of any ESP perturbation.

The PM CEMS will be initially operated for a period of approximately 30 days under various operating conditions to identify conditions necessary to produce the two target concentration levels for the correlation testing (see below). During the 30-day pre-test monitoring period, the following key operating parameters will be recorded:

A. Monitor Output
B. Plant Load
C. Fuel Type
D. ESP Secondary Voltage, Current, and Spark Rate for each field

3.3 SEVEN (7)-DAY DRIFT TEST

After (or during, if allowed by MDNR) the 30-Day Pre-test Monitoring Period and before performing correlation testing, a 7-day zero and upscale drift test will be performed. The purpose of the 7-day drift test is to demonstrate that the system is capable of operating in a stable manner and maintaining its calibration for at least a 7-day period. The magnitude of the drift will be determined once each day, at 24-hour intervals, for 7 consecutive days while the plant is operating normally. Once the response range has been set and the drift test successfully completed, the response range of the monitor cannot be changed.

The zero (or low-level value between 0 and 20 percent of the response range of the instrument) and upscale (between 50 and 100 percent of the instrument's response range) drift will be checked daily over 7 consecutive days. The PM CEMS will quantify and record the zero and upscale measurements and the time of the measurements. The drift test will be conducted immediately before any automatic or manual adjustments to the PM CEMS zero and upscale settings. Drift will be calculated in accordance with the calculation procedures in section 12.1 of PS 11 and the acceptance criteria for allowable drift will be 4% of the upscale span check value for both zero and span.

3.4 CORRELATION TESTING

The standard APCP Proposed Test Plan will be prepared and submitted a minimum of thirty days prior to the test date. This test date will be mutually agreed to by all parties involved.

A minimum of twelve (12) valid runs (e.g. 2 loads, 2 fuel blends and 3 tests per condition) will be required to obtain the correlation equation and correlation coefficient. A run will be declared "not valid" only when performed during a time when conditions are clearly not representative of normal operations. The correlation will be determined according to equation 11-3 of PS 11, and the correlation coefficient will be calculated according to equation 11-14 of PS 11.

Tests will be performed at two (2) or more different PM concentration levels, with a minimum of three (3) tests at each level, if possible. Level 1 encompasses the range from 0 to 50% of the maximum PM concentration available. Level 2 should range from 75% to 100% of the maximum concentration. The source will be operated over the complete range of expected conditions, so as to assure that the data produced is representative. The data gathered during the 30-day pre-test monitoring period will be used to produce the desired concentrations for the test runs. The Aquila-Sibley Generating Station anticipates operating with a fuel mix of 70% - 100% sub-bituminous coal (such as PRB), 0-30% bituminous, and approximately 1% tire-derived fuel (TDF). Heating values range from 8,350 to 12,500 Btu/lb. Actual fuel blend information will be included in the Correlation Test Report.

During correlation testing, the reference method data measurements will be converted into units of pounds PM per MMBtu to establish limits comparable to the regulatory standard (0.12 lbs/MMBtu). The reference method data will be correlated the PM CEMS output using the PS-11 Spreadsheet. The reference method data will be correlated to the mg per actual cubic meter output from the PM CEMS. During operation after testing, the CEMS output, and determination of PM levels with respect to limits, will be conducted only in units of milligrams per actual cubic meter.

The correlation coefficient (r) resulting from the calibration testing must be $\geq .75$. Once the correlation equation has been determined, it will be applied to PM CEMS data collected by the Data Recorder. The point at which an alarm occurs, as well as a reporting requirement and corrective action, will be determined when the hourly average of the PM CEMS output reaches the lower of the following limits:

i. A value equivalent to 1.25 times the highest PM CEMS response value reached during the correlation tests.

ii. A value correlated to 0.9 times the source emissions limit in lb/MMBTU.

The specific stack gas constituents that will be determined as part of the correlation testing include the following:

A. Total suspended particulate (TSP)
B. Flue gas composition (O_2, CO_2, H_2O)
C. Flue gas temperature
D. Flue gas flow rate

The testing methodology to be used for TSP emissions determination is EPA Reference Method 1-4 and 17 for coal-fired boilers.

Each run will include the following measurements:

- average particulate concentration and mass emission rates as measured by USEPA Reference Method 17
- oxygen and carbon dioxide concentrations measured by USEPA Method 3A procedures;
- flue gas moisture measured by USEPA Method 4 procedures;
- flue gas temperature, velocity and volumetric flow rate using USEPA Method 2 procedures.

For each test run coordination will be done for process operations, reference method sampling, and PM CEMS operations. For example, a check will be made to make sure the process is operating at the targeted conditions, reference method sampling is being performed, and the PM CEMS and data logger are operating properly.

The start and stop times of each run will be coordinated between the reference method sampling and the PM CEMS operation. The times for port changes (and other periods when the reference method sampling may be suspended) will be noted on the data sheets so that the PM CEMS data can be adjusted accordingly, if necessary. The time periods for the PM CEMS will be aligned with the reference method measurements to account for the PM CEMS response time.

A minimum of 12 valid runs must be conducted each consisting of simultaneous PM CEMS and reference method measurement sets.

(i) More than 12 sets of CEMS and reference method measurements may be conducted. In this case, certain test results may be rejected so long as the total number of valid test results used to determine the correlation is greater than or equal to 12.

(ii) All data must be reported, including the rejected data.

(iii) The results of up to five test runs may be rejected if shown to be non-representative data ("not valid").

(iv) The basis for rejecting the results of the additional test runs must be explicitly stated in the reference method, PS 11, Procedure 2 of appendix F, or the quality assurance plan.

Simultaneous PM CEMS and reference method measurements will be performed in a manner to ensure that the range of data that will be used to establish the correlation for the PM CEMS is maximized.

An attempt to maximize the correlation range will be performed by following the procedures described in paragraphs (4)(i) through (iv) of PS 11. If the two levels of PM mass concentration can not be obtained as described in paragraphs (i) through (iv), then the procedure described in section 8.6(5) of PS 11 will be used.

(i) Two different levels of PM mass concentration will be obtained by varying process operating conditions, varying PM control device conditions, or by means of PM spiking.

(ii) The two PM concentration levels used in the correlation tests must be distributed over the complete operating range experienced by your source.

(iii) At least 20 percent of the minimum 12 measured data points used should be contained in each of the following levels:
-Level 1: From no PM (zero concentration) emissions to 50 percent of the maximum PM concentration;
-Level 2: 75 to 100 percent of the maximum PM concentration.

If two distinct levels of PM concentration as described can not be obtained, correlation testing must be performed over the maximum range of PM concentrations that is practical for the PM CEMS. To ensure that the range of data used to establish the correlation for the PM CEMS is maximized, one or more of the steps in paragraphs (5)(i) through (iv) of PS 11 must be followed.

(i) Zero point data for in-situ instruments should be obtained, to the extent possible, by removing the instrument from the stack and monitoring ambient air on a test bench.

(ii) Zero point data for extractive instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

(iii) Zero point data also can be obtained by performing TEOM reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas).

(iv) If none of the steps in paragraphs (5)(i) through (iii) of this section are possible, you must estimate the monitor response when no PM is in the flue gas (e.g., 4 mA = 0 mg/acm).

Appendix A

USEPA REFERENCE METHOD 17 - PARTICULATE

Testing Equipment High-Volume Source Sampling Train. An Acurex Corp., aerotherm high-volume stack sampler (Model HVSS-045) will be used at the sampling location(s). The HVSS particulate sampling train consisted basically of an appropriate length aluminum probe with a calibrated Type K (chromel/alumel) thermocouple; a stainless steel, in-stack filter holder; a standard lexan/stainless steel impinger assembly with a calibrated Type K (chromel/alumel) thermocouple located at the impinger outlet; a 3/4-hp, shaft-sealed, carbon vane vacuum pump assembly with a vacuum gauge; a control unit with an elapsed time indicator, a temperature selector switch, a temperature indicator (potentiometer), temperature controllers, calibrated magnehelic gauges, a calibrated dry gas meter, and a calibrated variable-diameter orifice; and umbilical and various interconnecting hoses, fittings, and valves. An appropriately sized stainless steel nozzle, a calibrated Type K (chromel/alumel) temperature sensor, a static pressure tube, and a calibrated S-type pitot tube are integral parts of the probe assembly.

The vacuum pump unit will be used to control gas sampling rates. The control unit will be also used to monitor elapsed sampling times, temperatures, velocities, static pressure, gas sampling rates, and sampled gas volumes.

Integrated Gas Sampling Train. Flue gas will be collected at the sampling location(s) for analysis with an integrated gas sampling train. The sample will be collected at the outlet of the particulate control meter.

Sampling Procedures

Prior to field testing, the following procedures will be performed:

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All instruments will be checked and calibrated. Teyo-Roshi filters No. 86R 30 x 100 millimeter, glass-fiber thimble filters with a 99.9 percent retention of 0.25 micron particles will be individually numbered, placed separately in similarly numbered aluminum mailing cartons, oven-dried at 220°F for two to three hours, cooled in a desiccator for two hours, and individually weighed on a Sartorious analytical balance to the nearest 0.1 milligram, then weighed every six hours, minimum, until two consecutive weights within ±0.5 milligram will be obtained. Several 250 milliliter crucibles will be dessicated for a minimum of 24 hours and weighed in the same manner as the filters and mailing cartons. Also, several 350-gram quantities of Type 6-16 mesh indicating silica gel will be weighed out on a Mettler top-loader electric balance and individually placed into separate airtight polypropylene storage bottles.

The number of sampling points and positions of the points in the flue at the sampling locations(s), and the sampling time at each point will be determined prior to the particulate testing. The sampling procedures will be performed in accordance with the Environmental Protection Agency's Reference Method 17, "Determination of Particulate Emissions from Stationary Sources," in the Title 40, *Code of Federal Regulations*, Part 60, Appendix A.

An HVSS sampling train will be prepared in part at the sampling location(s), before each test run, in the following manner:

An appropriately sized sampling nozzle will be installed onto the inlet of a filter holder and capped. The probe will be then dimensioned and marked with glass-cloth tape at increments that corresponded with the predetermined sampling point positions in the flue. A standard impinger assembly will be prepared by adding 250 milliliters of three percent concentration hydrogen peroxide, in lieu of distilled water, to each of the first two lexan impingers. This will be done to partially trap sulfur dioxide and sulfuric acid mist carryover, and to prevent a strong concentration of these contaminants from contacting and possibly damaging the vacuum pump or dry gas meter. The third lexan impinger will be left dry and the fourth will be filled with 350 grams of Type 6-16 mesh indicating silica gel. This entire impinger assembly will be then placed into an ice bath. A glass-fiber thimble will be removed from its carton and placed inside a filter holder. The filter holder will be then attached to the sampling probe inlet. Next, umbilical and sampling hoses will be connected to the sampling probe, impinger unit, vacuum pump, and control unit, accordingly. All magnehelic gauges will be checked and zeroed. The entire sampling train assembly will be leak-checked at 15 inches of mercury vacuum, minimum, for one minute and the leakage rate recorded. A leakage rate less than 0.02 cfm and no vacuum loss will be considered acceptable. After the HVSS particulate sampling train had been assembled, and the entire system leak-checked, as previously described, the particulate sampling will be performed. Prior to the particulate sampling, a preliminary temperature and velocity traverse, orsat analysis, and calculations will be performed to determine a correct nozzle and orifice size, and these factors will be used in calculating the isokinetic sampling rate for each sampling point. Knowing the actual pressure differential across the pitot tube used, the isokinetic sampling rate will be calculated at each sampling point using a Texas Instrument Model 74 pocket computer.

Three test runs will be performed at the sampling location(s). A total of 16 points (four points from each of the four sampling ports) will be sampled. Each point will be sampled for a period of three minutes at a

calculated isokinetic sampling rate. The sampling data for each test run will be recorded on a field test form during each of the sampling period.

After the completion of a test run, the following procedures will be performed:

A final leak-check will be performed at 15 inches of mercury vacuum, minimum, for one minute and the leakage rate recorded. The flue gas moisture collected in the first three impingers will be measured and recorded. The moisture laden silica gel in the fourth impinger will be transferred to an appropriately marked, airtight polypropylene storage bottle and retained for later weighing. The weight gain of the silica gel moisture collection will be added to the measured moisture condensed during the test run to determine the total moisture collected for that run. The sampling nozzle and filter holder will be capped and taken to a clean area for sample recovery. At the recovery area, the filter will be carefully removed from the filter holder and transferred to its carton for later desiccation and weighing. The sampling nozzle and filter holder inlet will be washed with nanograde acetone. The acetone washing and an acetone blank will be collected in appropriately labeled polypropylene sample bottles and retained for later evaporation, desiccation, and weighing. Flue gas composition (percent CO_2, and percent O_2) will be determined by taking, throughout each test run, by an integrated gas sampling train several samples of the gas collected, simultaneously, with the particulate sampling. The integrated gas sample will be collected from the discharge of the particulate control unit. The sampling train will be set at a predetermined constant flow rate to obtain an adequate sample. The integrated bags will then be analyzed by the O2 and CO2 monitors in the Burns & McDonnell testing trailer. The required quality assurance checks and calibration of the monitors will be recorded as required by Method 3A.

Analytical Procedures

After the field testing will be completed, the following procedures will be performed:

> The silica gel, filters, carton, acetone washings, and acetone blank(s) from the test runs will be analyzed by Burns & McDonnell Engineering Company, Inc., Kansas City, Missouri. The analytical procedures will be performed in accordance with the Environmental Protection Agency's Reference Method 17, "Determination of Particulate Emissions from Stationary Sources," in the Thursday, August 18, 1977, ***Federal Register***, "Standards of Performance for New Stationary Sources."

Each silica gel moisture collection will be weighed directly out of its polypropylene storage bottle on a Mettler electronic balance with a sensitivity of 0.1 gram. Each filter and carton will be oven dried at 220°F for two to three hours, cooled in a desiccator for two hours before weighing, and weighed every six hours, minimum, until two consecutive weights within ±0.5 milligram are obtained. Each acetone washing and acetone blank will be transferred from its sample bottle to a preweighed aluminum tin for evaporation on a low-temperature hot plate at 130°F. When the acetone in a crucible has completely evaporated, the crucible will be transferred to a desiccator for further drying at room temperature for a minimum of 24 hours before weighing, and weighed every six hours, minimum, until two consecutive weights within ±0.5 milligram are obtained. Each acetone blank collected will be used to determine the amount of residual weight each aluminum tin retained due to acetone impurities. Each filter and carton, acetone washing and acetone blank will be individually weighed on a Sartorious analytical balance with a sensitivity of 0.1 milligram.

All test instruments will be recalibrated to determine the deviation percentage.

QUALITY ASSURANCE & QUALITY CONTROL PLAN

PARTICULATE MATTER CONTINUOUS EMISSIONS MONITORING SYSTEMS

Aquila
Sibley Generating Station

Prepared by:

Aquila Environmental Services

Revision Number:_____
Date of Revision:_____

PM-CEMS SPECIFICATIONS	**APPENDIX A**
PERFORMANCE SPECIFICATION 11	**APPENDIX B**
CALCULATIONS	**APPENDIX C**
BLANK FORMS	**APPENDIX D**

SECTION 1 – THE QUALITY ASSURANCE PLAN

This Quality Assurance (QA) Plan is the basis for assessing and maintaining the quality of particulate matter continous emission monitoring system ("PM-CEMS") data. The QA Plan has been prepared for Aquila, operators of one (1) PM-CEMS at the Sibley Generating Station. The PM-CEMS are installed pursuant to 40 CFR Part 64, Compliance Assurance Monitoring ("CAM"). As such, the PM-CEMS is not to be used for direct compliance demonstration for any applicable regulation. Per Part 64.3(a), the purpose of the PM-CEMS is to "provide a reasonable assurance of compliance with emission limitations or standards for the anticipated range of operations at a pollutant-specific emissions unit." Specifically, the PM-CEMS will provide data to help in the operation and maintenance of the electrostatic precipitators ("ESP") installed at this facility. Similarly, 40 CFR Part 60, Appendix F, Procedure 2 has been partly utilized to develop this QA Plan, but is not directly applicable to Sibley's PM-CEMS per Appendix F, Procedure 2, Section 1.0. Also, Two documents related to Sibley's CAM have been developed and approved by the Missouri Department of Natural Resources ("MDNR"). The two documents are Sibley's CAM Plan and CAM Test Plan. Where conflicts arise between the Sibley CAM Plan/Test Plan and 40 CFR Part 60 regulations, the MDNR-approved Plans will be followed.

Table I below illustrates the PM-CEMS that have been installed at the facility.

Table I. PM-CEMS installed and certified at Aquila's Sibley Generating Station

Mfr/Model	Serial Number	Measurement Range	Location	Correlation Test Date
Teledyne Monitor Labs / LaserHawk 360	TBD	TBD	Common Stack	TBD

1.1 QUALITY ASSURANCE POLICY, GOAL, AND OBJECTIVES

Quality Assurance (QA) and Quality Control (QC) are two independent and interrelated functions. Quality Assurance can be defined as the system of activities to provide assurance that the QC is performing adequately.

A QA Plan has two functions:

(1) QA – the assessment of the quality of the data (accuracy and precision) and, (2) QC – activities that maintain or improve data quality. Both functions form a control loop. When accuracy or precision is unacceptable, QC must increase until the quality of data is acceptable.

Quality control functions are usually a series of frequent internal checks, such as system inspections, periodic calibrations, and routine maintenance. Quality assurance, on the other hand, involves less frequent external checks on data quality. These external checks may include independent system audits, third party sampling and analysis for accuracy and precision, comparison to known calibration standards or inter-laboratory audits. This Quality Assurance Plan encompasses both QA and QC functions, and whenever possible, specific activities are identified by the function that is fulfilled by the activity.

1.2 DISTRIBUTION AND DOCUMENT CONTROL

This QA Plan will be reviewed on an annual basis. Revision tracking system will be provided on the front page of this document and includes revision number and date of revision.

1.2.1 MAINTENANCE OF THE QA/QC PLAN

To properly maintain the QA Plan, the following activities are monitored:

(1) Maintain a current list of QA/QC plan holders.

(2) Prepare revisions and updates of the QA/QC Plan as a result of the following:

- Changes in regulations.
- Modifications or improvements of QA/QC procedures.
- Changes in personnel or organization.
- Replacement of PM-CEMS components.
- Modifications to operating permit.

1.3 ORGANIZATION AND RESPONSIBILITY

Specific facility personnel are assigned responsibility for the PM-CEMS operational status instrument maintenance and system control. The following are provided as a guideline, which organize responsibilities for the operation and maintenance of a PM-CEMS.

1.3.1 RESPONSIBLE OFFICIAL AND DESIGNEE

The Title V Permit Responsible Official or designee is responsible for reviewing and signing all quarterly reports.

1.3.2 SIBLEY INSTRUMENTS AND CONTROLS DEPARTMENT

Has overall responsibility for the operation and maintenance of the PM-CEMS, and generation of appropriate reports. The department reports all major problem associated with the PM-CEMS to the Plant Manager and Environmental Services.

1.3.3 ENVIRONMENTAL SERVICES DEPARTMENT

Environmental Services is responsible for corresponding with regulatory agencies, including reviewing/submitting all required reports, and maintaining compliance with Sibley's Title V Permit.

1.4 FACILITIES, EQUIPMENT, AND SPARE PARTS INVENTORY

The Sibley Generating Station consists of three (3) steam generating units, with each unit equipped with a dedicated ESP to control particulate emissions. All three units exhaust through a common stack, where the PM-CEMS is located.

The PM-CEMS is wired to a programmable logic controller located in the CEM shelter and will record data in the Continuous Emission Monitoring System DAHS.

1.4.1 PARTICULATE MATTER CONTINOUS EMISSION MONITORING SYSTEM

The particulate monitoring system utilized is a Teledyne Monitor Labs 360 particulate monitor, located on the Sibley common stack. Measurement of particulate concentration is accomplished by passing a beam of laser light into the duct and measuring the intensity of the backscattered light.

1.4.2 RECOMMENDED SPARE PARTS AND STACK DRAWINGS

A list of spare parts is included in the instrument operations manual. Stack drawings and process diagrams are also kept on site and available for review.

1.5 METHODS AND PROCEDURES – ANALYSIS AND DATA ACQUISITION

The PM-CEMS data acquisition system (DAS) is an automated system that records PM-CEMS data and provides readouts as one-minute averages, which are used in subsequent calculations and report preparation. Reports prepared by the system include alarm, calibration, and emission reports.

The DAS is capable of reading all values over the full range of each measurement device and creates a permanent record of all required measured and calculated data for storage, review, and reporting. A continuous readout in units allowed by the Sibley CAM Plan is recorded.

1.6 CALIBRATION AND QUALITY CONTROL CHECKS

A set of operation and maintenance manuals for all systems components is maintained in the CEMS shelter. These manuals provide complete descriptions of the PM-CEMS including theory, installation, operation, and maintenance.

Factory supplied filter standards are used to calibrate the instrument at a reference zero and upscale span value. These calibration standards will be maintained in accordance with the manufacturer's recommendations. Following this calibration an internal "zero-span" cycle will be initiated, thus establishing initial values for future reference. Daily "zero-span" cycles will follow with the results stored in the data system and compared with the initial values. Should either of the "zero or span" value error exceed plus or minus 4% of the starting value, an alarm will be initiated to signal the need for recalibration of the instrument to the factory standards.

In addition a quarterly reference calibration will be performed as described in the instrument operations manual. The factory standards will be used to measure instrument response at a zero and upscale value. Should either of these readings exceed the factory standard by more than plus or minus 4% of the full-scale measurement range, the instrument will be reset to the factory standard values. Finally, routine scheduled maintenance procedures will be established in accordance with the manufacturer's recommendations.

1.7 MAINTENANCE - PREVENTIVE

The preventive maintenance program for the PM-CEMS is based on the equipment manufacturers recommended procedures.

1.8 SYSTEMS AUDITS

A systems audit involves a general inspection of the monitoring system. It is intended as a walk through audit and used to provide a quick assessment of the availability of data, general effectiveness of operation and maintenance, and the completeness of recordkeeping procedures. Systems audit involves the following areas:

- Administrative
  - Maintenance logs – timely, complete
  - Recordkeeping – completeness, available
  - Verify correct range values entered into the data acquisition system
- Technical
  - Printer – operational, legible printouts consistent with process conditions
  - Data system – cabinets clean, areas maintained

- Monitor enclosure – clean, all systems operational
- Purge air blowers – operational

1.9 PERFORMANCE AUDITS

The following performance audits are required to quality assure PM-CEMS data. These audits are based upon 40 CFR 60, Appendix F, Procedure 2, however Appendix F is not directly applicable to the PM-CEMS.

1.9.1 ABSOLUTE CORRELATION AUDIT (ACA)

An Absolue Correlation Audit is required once each calendar quarter but no sooner than 2 months after the previous ACA. ACAs are not required in quarters in which a Response Correlation Audit (RCA) is performed.

- Challenge the PM-CEMS three times at each audit point and use the average of the three responses in determining accuracy at each audit point. Audit points are audit filters that produce particulate levels of known values.

Audit Point	Audit Range
1	0 - 20 percent of measurement range
2	40 -60 percent of measurement range
3	70 -100 percent of measurement range

- Challenge the PM-CEMS at each audit point for a sufficient period of time to ensure that the PM-CEMS response has stabilized.
- Alternate filter insertions so that no filter is measured twice in succession during the audit.
- The difference between the actual known value of the audit standard and the response of the monitor is used to assess the accuracy of the PM-CEMS.
- The beginning of the out of control period is the time corresponding to the completion of an unsuccessful ACA. The end of the out of control period is the time corresponding to the completion of the subsequent successful calibration test.
- During an out of control period the CEMS data may not be used in calculating emission compliance nor be counted towards meeting minimum data availability.
- The PM-CEMS is considered out of control if the required quarterly absolute correlation audit is not conducted during a calendar quarter.

The criteria for excessive inaccuracy are:

- ± 10% of the average audit value or 7.5% of the applicable standard, whichever is greater.

- Repeated excessive inaccuracies (i.e., out of control) conditions resulting from the quarterly audits, indicates the QC procedures are inadequate or that the CEMS is incapable of providing quality data.

NOTE: The ACA must be conducted using the calibration kit with the same serial number as the particulate monitor.

1.9.2 RELATIVE RESPONSE AUDIT (RRA)

Perform a Relative Response Audit (RRA) annually. Perform a RRA by collecting three (3) sets of simultaneous Reference Method data and Particulate Monitor data. Determine compliance with the RRA using the criteria specified in 40CFR60, Appendix F. If failed RRA tests trigger the need to conduct an RCA and/or new correlation test, performance and acceptance criteria will be based on the MDNR-approved Sibley CAM Plan and CAM Test Plan.

The RRA will be performed annually and will replace the Absolute Correlation Audit in the quarter when both audits are due.

1.9.3 RESPONSE CORRELATION AUDIT (RCA)

An RCA is required to be performed at least once during each Title V Operating Permit renewal cycle (i.e. once per 5-year period). The RCA is conducted by collecting a minimum of twelve (12) sets of simultaneous Reference Method data and Particulate Monitor data. To pass an RCA the following criteria must be met

- For all 12 data points, the PM-CEMS response value can be no greater than the greatest PM-CEMS response value used to develop the correlation curve;
- For 9 of the 12 data points, the PM-CEMS response value must lie within the PM-CEMS output range used to develop the correlation curve.

The criteria for excessive inaccuracy are:

- At least 75% of a minimum number of 12 sets of PM-CEMS/reference method measurements from the test must fall within a specified area on a graph developed by the calibration relation regression line over the calibration range and the tolerance interval set at ± 25% of the emission limit.
- The specified area on a graph is (a) bounded by two lines parallel with the calibration regression line, and offset at a distance ±25% of the numerical emission limit from the calibration regression line on the y-axis and (b) traversing across the calibration range bounded by the lowest and the highest CEMS reading of the calibration test on the x-axis.

The PM-CEMS is considered out of control if the required RCA is not performed during the permit renewal interval (once every 5 years). See 2.6.2 Relative Correlation Audit for details on failure of an RCA. The RCA will replace the Absolute Correlation Audit and Relative Response Audit when done in the same quarter. In the event that a new correlation test is required, the performance and acceptance criteria will be based on the MDNR-approved Sibley CAM Plan and CAM Test Plan.

1.10 CORRECTIVE ACTION PROGRAM

Whenever the PM-CEMS is found to be "out of control" the data generated from the system will not be used to demonstrate a reasonable level of compliance assurance with permit limits or data capture requirements. Corrective action is performed "as soon as possible" after determining the PM-CEMS is not operating according to manufacturer's specifications or is "out of control."

Corrective action is defined as the resolution of problems that occur on a non-routine basis.

1.10.1 SUGGESTED CORRECTIVE ACTION

References to specific PM-CEMS troubleshooting procedures are listed in the Instrument's Operation Manual.

1.11 REPORTS

Documentation of QA/QC data and information is an integral part of any QA Plan. This section describes reports and other records that provide adequate documentation of QA/QC activities. The two primary means of documentation used are:

- Data Acquisition System (DAS).
- Manually prepared QA/QC forms, logs and reports.

During QA audits, the DAS will be operated to collect data in a normal fashion, and will print all instantaneous emissions values for real time comparison with audit standards. The DAS is used not only to document QA/QC data and information, but it also serves as the PM-CEMS data acquisition and processing system.

A number of written QA/QC reports are needed to provide supporting documentation of the continued operation of the PM-CEMS in an acceptable manner. All reports are used to notify individuals of problems related to operation of the PM-CEMS. Completion of these reports is intended to assist in identifying the need for remedial maintenance, training, or supply action, as well as the need to revise operating procedures for this QA Plan.

SECTION 2 – STANDARD OPERATING PROCEDURES

Quality control checks may be defined as those checks performed on a routine basis such as system inspections, periodic calibrations and routine maintenance.

LASER SAFETY WARNING: Any person working on or auditing the particulate monitoring equipment must be adequately trained in Laser Safety and have thoroughly reviewed the operations manual due to the inherent dangers in working with Laser equipment.

2.1 START-UP AND OPERATION

The Instrument and Controls Department maintains a detailed written procedure for start-up of the equipment at the facility. The document contains the step-by-step procedures for starting up and shutting down all equipment at the facility.

2.2 PM-CEMS INSPECTION AND PREVENTIVE MAINTENANCE

A CEMS maintenance log is maintained in the Unit 3 computer room to document system operational status and record any maintenance performed. An electronic file contains a record of the PM-CEMS calibration activities.

The routine inspection begins with a visual inspection of the electrical systems and components. This procedure allows early detection of accidental damage to the PM-CEMS.

The plant technician will examine the data acquisition system's computer screens and files to verify the computer has the correct time, date, and settings as applicable. A calibration history of the calibrations is reviewed for excessive calibration drift on a weekly basis or more often as needed.

Indicator lights and alarms on the system or monitor control panel are examined next. The system indicator lights notify the plant Technician of out-of-range conditions or other potential problems associated with the PM-CEMS. Action is initiated immediately if an indicator light is illuminated; subsequent data acquired may be suspect and will be flagged accordingly.

2.3 CALIBRATION PROCEDURES

The 360 calibration cycle automatically checks and corrects zero and span drift. The calibration cycle can be programmed to activate at selectable hourly intervals, manually activated from either the control room or stack, or externally activated from the programmable logic controller or data acquisition system.

2.3.1 DAILY CALIBRATION CHECK

A daily calibration is performed for the PM-CEMS that is measuring and reporting particulate concentration. Typically the zero and span calibration are programmed to be performed once every 24-hours. The zero calibration is conducted at a measurement level between zero and twenty (0 – 20) percent of instrument measurement range. The span calibration is conducted at a measurement level between fifty and one hundred (50 – 100) percent of instrument measurement range. A copy of the daily calibration for the PM-CEMS will be filed or electronically archived. Table II below illustrates calibration ranges of the PM-CEMS.

Table II. Recommended zero and high level calibration levels

Emission Point	ZERO VALUE (0 – 20% RANGE)	SPAN VALUE (50 – 100% RANGE)
Common stack	TBD	TBD

2.3.2 DAILY PM-CEMS DRIFT ASSESSMENT AND CORRECTIVE ACTION

The PM-CEMS typically performs a calibration once every 24 hours. The PM-CEMS shall be adjusted when the drift exceeds twice the performance specificaion. The PM-CEMS are considered out-of-control when:

(1) Either the zero or span calibration drift exceeds 4 percent the applicable performance specification in 40 CFR 60 for five (5) consecutive days, or

(2) Either the zero or span calibration drift exceeds 8 percent the applicable performance specification in 40 CFR 60 for any single calibration.

Table III below illustrates out-of-control calibration drift criteria for the PM-CEMS.

Table III. Calibration Drift Criteria

Monitor	Level at which CEM shall be adjusted	Level at which CEM is Out-of-Control	
		Any one day	Any five consecutive days
Common stack	4%	8%	4%

If an out-of-control condition exists, corrective action will be initiated immediately. Corrective action steps are identified in the Teledyne Monitor Labs Operation and Maintenance Manual or the Analyzer Operator Manual. Corrective action steps may include: adjustment of the electronics and potentiometers, care of the optics, replacement of the dessicator and/or purge blower air filter. Calibration drift checks will

be repeated following corrective action to verify the PM-CEMS meets calibration requirements and is no longer out-of-control.

During an out-of-control period, the data collected by the PM-CEMS will not be used in determining particulate emissions compliance; nor will it be counted toward meeting the minimum data availability requirements.

2.4 PREVENTIVE MAINTENANCE PROCEDURES

The recommended maintenance schedule is used initially as a guideline and then adjusted for the application following actual field experience. Preventive maintenance checks and procedures are identified in the Maintenance and Trouble Shooting Section of the analyzer Operator Manual.

Some items in the recommended periodic maintenance chart, such as filter changes, will not exhibit a failure condition until probable damage to other components has resulted. These items require special attention for determining replacement frequency. Close and continuous observation of the operating characteristics of the system, with particular notation of any shift, either sudden or prolonged, in one direction of any of the many visual indicators in the system, should prompt a maintenance response and prevent loss of data and/or equipment damage.

The system's equipment alarms are indications that maintenance is required. They do not necessarily indicate the data is invalid. However, they do indicate that the system is operating outside of a design tolerance and inaccurate data and equipment damage will occur if the system is allowed to continue operation with the problems. For this reason, the alarms are exercised on a regular basis to assure that they are operational.

One of the best indications of system performance is the validity of the data it is generating. Scrutiny of the daily calibration results will indicate whether or not there is a need for maintenance.

2.5 CORRECTIVE MAINTENANCE PROCEDURES

A trouble-shooting section is included in each analyzer Operator Manual.

Zero and calibration drift checks will be conducted immediately prior to any maintenance, if possible. Additionally, zero and calibration drift checks will be conducted immediately following any maintenance. If the post-maintenance zero or calibration drift checks show drift in excess of twice the applicable performance specifications, recalibration is conducted in accordance with the Operator Manual.

2.6 PERFORMANCE AUDIT PROCEDURES

2.6.1 ABSOLUTE CORRELATION AUDIT (ACA)

ACAs are required on a quarterly basis, unless an RRA or RCA is conducted in that quarter. The audit is completed and the results are determined using the procedures contained in 40 CFR 60, Appendix F. Acceptable ranges for the ACA filters are included in Table IV.

TABLE IV. ACA Audit Filters

Emission Point	LOW (0 – 20% of Range)	MID (40 – 60% of Range)	HIGH (70 – 100% of Range)
Common stack	TBD	TBD	TBD

For EACH Audit

1. Record the requested data in the appropriate blocks on the data sheet(s) for the analyzer(s) being checked. Each analyzer should have its own data sheet.
2. Open the optical head on the particulate monitor.
3. Install the calibration jig onto the optical head.
4. Alternately insert each of the 3 known particulate standards into the calibration jig. Leave each filter in place for 5 minutes to ensure stable readings. Repeat this process until 3 readings have been made with each filter.
5. Uninstall the calibration jig from the optical head.
6. Close the optical head so that the instrument is reading process conditions again.
7. Calculate and record the average of the monitor's responses (A) for each level of calibration filter (high-, mid- and low-).
8. Using the equations in Appendix D, calculate the mean value and and correlation accuracies for each particulate level.

The monitor passes the ACA if, at all three levels of filters, the percentage difference is less than or equal to 10.0 percent of the average audit value or the percentage difference is less than or equal to 7.5 percent of the applicable particulate standard. If these criteria are not met at any level, the monitor is considered out-of-control. Indication will be made on the data sheet(s) whether the monitor(s) passed or failed the calibration error test.

2.6.2 RELATIVE RESPONSE AUDIT (RRA)

The Relative Response Audit requires the support of an independent stack sampling team. Three (3) simultaneous measurements are taken by the contracted test team and the particulate monitor in accordance with 40CFR60, Appendix F, Performance Specification 2. It is recommended that the test team perform duplicate measurements to ensure the maximum accuracy of the sampling.

The RRA will be conducted annually unless an RCA is completed during that same period then an RRA will not be required.

The monitor passes the RRA if all of the following occur:

(1) The response from all three measurements is less than the highest response used to generate the correlation curve,
(2) At least two of the three responses lie within the PM-CEMS output range used to develop the correlation curve, and
(3) At least two of the three responses fall within the area specified in the correlation curve and defined as the regression line ± 25% of the numerical emission limit.

2.6.3 RELATIVE CORRELATION AUDIT (RCA)

The Relative Response Audit is conducted in accordance with 40 CFR Part 60, Appendix F, Performance Specification 2, and requires the support of an independent stack sampling team. The MDNR-approved Sibley CAM Plan and CAM Test Plan shall be followed where conflicts arise between 40 CFR Part 60 and the Sibley CAM Plan and CAM Test Plan.

The correlation test includes:

(1) Paired reference method trains are recommended for collecting manual PM data to identify and screen the reference method data for imprecision and bias;
(2) test runs may be shorter than 60 minutes in duration (e.g., 20 to 30 minutes);
(3) convert the reference method results to units consistent with the conditions of the PM CEMS measurements (e.g., mg/acm);
(4) during each test run coordinate process operations, reference method sampling and PM CEMS operations to ensure that the process is operating at the targeted conditions
   a. coordinate the start and stop times of each run between the reference method sampling (if batch sampling start the reference method at the same time as the PM CEMS sampling);
   b. note the times for port changes (and other periods when the reference method sampling may be suspended) on the data sheets (to make any required adjustments);
   c. properly align the time periods for the PM CEMS and the reference method measurements to account for the PM CEMS response time;

i. conduct a minimum of 12 sets of CEMS and reference method measurements – additional measurements may be completed and rejected but a minimum of 12 sets is required;
ii. report all data, including rejected data;
iii. up to five test runs may be rejected without explanation;
iv. explicit explanations are required for greater than five rejected runs;

(5) simultaneous PM CEMS and reference method measuremens must be performed in a manner to ensure that the range of data that will be used to establish the correlation for the PM CEMS is maximized. First attempt to maximize the correlation range by following the procedures described in 5 (i) through (iv) (this section). If the three levels described in (i) through (iv) cannot be achieved, use the procedures in section 8.6(5);

i. attempt to obtain the three different levels of PM mass concentration by varying process operating conditions, varying PM control device conditions, or by means of PM spiking;
ii. the three PM concentration levels used in the correlation tests must be distributed over the complete operating range experienced by the source;
iii. at least 20 percent of the minimum 12 measured data points should be contained in each of the following levels:

Correlation Test /RCA	
Level 1	from no PM (zero concentration) emissions to 50 percent of the maximum PM concentration
Level 2	25 yo 75 percent of the maximum PM concentration
Level 3	50 to 100 percent of the maximum PM concentration

iv. although the above levels overlap, only apply individual run data to one level;

(6) if three distinct levels of PM concentration cannot be obtained, perform correlation testing over the maximum range of PM concentrations that is practical for the PM CEMS;

(7) ensure that the range of the data used to establish the correlation for the PM CEMS is maximized by the following:
a. zero point data for in-situ instruments is obtained by removing the instrument from the stack and monitoring ambient air on a test bench or
b. perform a manual reference method measurement when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when the process is not operating, but the fans are operating) or
c. if neither of the steps are possible, estimate the monitor response when no PM is in the flue gas (e.g., 4 mA =) mg/acm).

(8) Failure of an RCA requires the following actions:
a. Combine RCA data with data from the active PM-CEMS correlation and perform the mathematical evaluations defined in PS-11 for development

of a PM-CEMS correlation, including examination of alternate correlation models (i.e., linear, polynomial, logarithmic, exponential, and power). If the expanded data base and revised correlation meet PS-11 statistical criteria or Sibley CAM Plan/Test Plan criteria, whichever is less stringent, then use the revised correlation;

b. If the criteria specified above (in a. above) are not achieved, develop a new PM-CEMS correlation based on revised data. The revised data set must consist of the test results from only the RCA. The new data must meet all requirements of the MDNR-approved Sibley CAM Plan and Test Plan to develop a revised PM-CEMS correlation for 12 sets. The PM-CEMS is considered to be back in controlled status when the revised correlation meets all of the performance criteria specified in the MDNR-approved Sibley CAM Plan and Test Plan;
c. If the actions specified above (in a. and b.) do not result in an acceptable correlation, evaluate the cause(s) and comply with the actions below within 90 days after the completion of the failed RCA:
    i. Completely inspect the PM CEMS for mechanical or operational problems, repair the PM CEMS and repeat the RCA;
    ii. If you must relocate the PM CEMS to a more appropriate measurement location, perform a new correlation test according to the MDNR-approved CAM Plan and Test Plan;
    iii. The characteristics of the PM or gas in the flue gas stream may have changed such that the PM CEMS technology is no longer appropriate. If this is the case, install a PM CEMS with measurement technology that is appropriate for the flue gas characteristics. Perform a new correlation test according to the MDNR-approved Sibley CAM Plan and Test Plan;
    iv. If the corrective actions above (3i through 3iii) were not successful, petition the regulators for approval of alternative criteria or an alternative for continuous PM monitoring.

2.7 SYSTEM AUDIT PROCEDURES

System audits will be performed and recorded in the maintenance logbook. The following checks will be recorded during the system audit and may be revised as operating experience dictates.

(1) Multiday calibration reports for the previous seven (7) days for all PM-CEMS. Check for trends in drift.
(2) Verification that correct span values are entered into the computer.
(3) Examination of the PM-CEMS, noting any alarms displayed and/or that the readings are consistent with monitor operation.

Quarterly system audits will be performed to:

(1) Check maintenance logbooks for timely and completed repairs.

(2) Determine the printer is operational and printout is legible, readings are consistent with process conditions.
(3) Acknowledge that the computer and monitor areas are clean and well maintained.
(4) Determination that the purge air blower is operational and alignment of monitor is correct.

2.8 DATA BACKUP PROCEDURES

The PM-CEMS data are retained on a data acquisition and handling system (DAS). Particulate Emissions Data is backed up as part of the network or tape backup procedures used for all emissions data collected at the facility.

2.9 DATA REPORTING PROCEDURES

The results from each audit or the routinely generated particulate data are reviewed prior to it being included into reports submitted to the regulatory agencies.

As part of the operating permit requirements, all PM-CEMS data are made available for review, in the form of a computerized database or printed opacity logs, for 24 months. Quarterly compliance reports are submitted to the MDNR within 30 days of the ending quarter as defined in the operating permit. All data will be maintained for the life of the current Title V Operating Permit (5 years).

Note that Appendix B of the CAM Test Plan is not included above. Appendices A through D of the CAM QA/QC Plan are not included either.

Prepared by:

Colin Janssen, EIT

Mr. Paul M. Ling
Environmental Manager
P.O. Box 418679
Kansas City, MO 64141

Re: KCP&L Greater Missouri Operations Company - Sibley Generating Station, 095-0031
Permit Number: OP2012-056

Dear Mr. Ling:

Enclosed with this letter is your Part 70 operating permit. Please review this document carefully. Operation of your installation in accordance with the rules and regulations cited in this document is necessary for continued compliance. It is very important that you read and understand the requirements contained in your permit.

You may appeal this permit to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.078.16 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you have any questions or need additional information regarding this permit, please do not hesitate to contact the Colin Janssen at the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Michael J. Stansfield, P.E.
Operating Permit Unit Chief

MJS:cjk

Enclosures

c: Kansas City Regional Office
PAMS File: 2011-03-006

MEMORANDUM

DATE: November 19, 2012

TO: 2011-03-006, KCP&L – Sibley Generating Station (095-0031)

FROM: Colin Janssen, EIT

SUBJECT: Response to Public Comments

The draft Part 70 Operating Permit for KCP&L – Sibley Generating Station (095-0031) was placed on public notice as of August 31, 2012 for a 30-day comment period. The public notice was published on the Department of Natural Resources' Air Pollution Control Program's web page at: http://www.dnr.mo.gov/env/apcp/PermitPublicNotices.htm. On September 26, 2012 the Air Pollution Control Program received comments from EPA Region 7's Mark A. Smith, Air Permitting and Compliance Branch Chief. On October 5, 2012 the Air Pollution Control Program received comments jointly from Great Rivers Environmental Law Center and the Sierra Club. The comments will be addressed within this Response to Public Comments document.

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The comments submitted by EPA Region 7 shall be addressed first. The comments are addressed in the order in which they appear within the letter.

EPA Region 7 Comment #1:

The draft Part 70 operating permit identifies emission units as EP with a one or two digit number. Theses identifiers appear to be emission point numbers and not emission unit numbers. This approach is not in step with what MDNR has customarily used. Additionally, the current Part 70 operating permit, issued to this facility on August 31, 2006, identifies the emission units as "EU" with a four digit number. This approach has been the customary practice employed by MDNR.

Therefore EPA recommends MDNR consider returning to its customary practice of using the terms EUxxxx in lieu of the EPx or EPxx identification for emission units.

Missouri Air Pollution Control Program Response to Comment #1:

The Air Pollution Control Program believes identifying emission units in Title V operating permits with the same number that they are identified with in emission inventories and construction permitting will aid both the facility and the program in achieving compliance with applicable regulations. The emission unit numbers used in the draft Part 70 permit are the same numbers used in the facility's 2011 Emission Inventory Questionnaire. Therefore, the draft has not been changed.

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EPA Region 7 Comment #2:

The ***Emission Limitation*** requirement in Permit Condition (EP3A through EP4A)-001, in the draft Part 70 operating permit, begin with the statement, "On and after the date on which the performance test is conducted or required to be completed under §60.8, whichever date comes first," This opening state would indicate the performance test is to be conducted in the future. However, this permit condition is a carryover from the Part 70 operating permit issued on August 31, 2006 and §60.8 requires the performance test to be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after the initial startup of the facility.

Therefore it appears as the performance test should have already been conducted and that this opening statement is not necessary and EPA suggests that MDNR revise the permit condition language accordingly.

Missouri Air Pollution Control Program Response to Comment #2:

The statement, "On and after the date on which the performance test is conducted or required to be completed under §60.8, whichever date comes first" has been removed from this condition.

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EPA Region 7 Comment #3:

The ***Test Methods/Procedures*** requirement in Permit Condition (EP3A and EP4A)-001 in the draft Part 70 operating permit says: "For 40 CFR Part 60, Subpart Y test methods and testing procedures refer to §60.255 and §60.257." This statement, as written, does not bind the permittee to any requirement and does not adequately incorporate the referenced regulation into the permit.

Therefore, EPA suggests that MDNR modify the wording to say "Permittee shall follow the applicable test methods and testing procedures according to the requirements of §60.255 and §60.257."

Missouri Air Pollution Control Program Response to Comment #3:

This change has been made.

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EPA Region 7 Comment #4:

The ***Test Methods/Procedures*** requirement in Permit Condition EP4B-001 in the draft Part 70 operating permit says: "For 40 CFR Part 60, Subpart Y test methods and testing procedures refer to §60.255 and §60.257." This statement, as written, does not bind the permittee to any requirement and does not adequately incorporate the referenced regulation into the permit.

Therefore, EPA suggests that MDNR modify the wording to say "Permittee shall follow the applicable test methods and testing procedures according to the requirements of §60.255 and §60.257."

Missouri Air Pollution Control Program Response to Comment #4:

This change has been made.

****

EPA Region 7 Comment #5:

Permit Condition (EP5A through EP5C)-001, in the draft part 70 operating permit, incorporates the requirements of the National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units; 40 CFR Part 63, Subpart UUUUU. Based on our review, EPA has several suggestions to offer for MDNR's consideration.

a) This permit condition references Table 2, Table 3 Table 4, Table 5, Table 7, and Table 9. MDNR's draft Part 70 permit includes annotated versions of Tables 2, 3, and 4, but not Tables 5, 7 and 9. EPA suggests that MDNR consider including Table 2, Table 3 and Table 4, along with annotated versions of Table 5, Table 7 and Table 9, as attachments in lieu of inclusion within the emission limitations and work practice standards, and refer to the attachments as appropriate.
b) MDNR should consider removing the words "in this subpart/of this subpart/with this subpart/under this subpart" that appears 28 times within the ***General Requirements*** section.
c) Item 3. a) i) under the ***General Requirements*** section includes a superfluous "and" at the end of the requirement that MDNR should consider revising.
d) Item 3. e) includes a reference to "Appendix B of this subpart" and a more helpful reference would be "Appendix B of 40 CFR 63, Subpart UUUUU." Also, Item 3. f) includes a reference to "Appendix A of this subpart and a more helpful reference would be "Appendix A of 40 CFR 63, Subpart UUUUU."
e) Item 4. a) directs the permittee to see §63.10000(d)(5)(i) through (vii), for information to be included in the site-specific monitoring plan. However these requirements are included

in item 4. d). Therefore, EPA recommends that the words "as shown in d) below," be added following §63.10000(d)(5)(i) through (vii).

f) Items 4. a) i) and 4. a) ii) included a reference to "Appendix A or B of this subpart" and a more helpful reference would be to "Appendix A or B of 40 CFR 63, Subpart UUUUU."

g) EPA suggests the wording under the ***Affirmative Defense*** section be modified to : "In response to an action to enforce Permit Condition 007, the permittee may assert an affirmative defense in accordance with §63.10001."

h) MDNR should consider removing the words "in this subpart/of this subpart/to this subpart/with this subpart" that appear 27 times in the ***Initial Compliance*** section.

j) Item 6, in the ***Initial Compliance*** section, incorporates by reference (IBR) the provisions of §63.10005(h) and then redundantly includes those provisions in subparts a), b), and c). EPA recommends that the words "as shown in i) through iii) below," be added following §63.10005(h).

k) The words "as provided in" should be replaced with the words "in accordance with" in Item 8. under the ***Initial Compliance*** section.

l) EPA commends MDNR for their increased use of incorporating by reference (IBR) many of the appropriate sections of the standards which readily lend themselves to the IBR approach. However, several of the statements, as written, do not bind the permittee to any requirement and do not adequately incorporate the referenced regulation into the permit. To that end, EPA recommends the following additional IBR modifications.

i) In the section titled ***Initial Compliance***, we recommend changing to ***Testing and Initial Compliance*** and adding the following subparts.

9) Permittee shall conduct subsequent performance tune-ups as specified in §63.10006.
10) Permittee shall conduct all required performance tests as specified in §63.10007
11) Permittee may use emissions averaging as an alternate to meeting requirements as specified in §63.10009.
12) Permittee shall comply with applicable monitoring, installation, operation and maintenance requirements as specified in §63.10010.
13) Permittee shall demonstrate initial compliance with applicable emissions limits as specified in §63.10011.

in place of the sections titled ***Subsequent Performance Tests and Tune-ups; Test Methods and Procedures; Emissions Averaging; Monitoring, Installation, Operation and Maintenance; and Initial Compliance***.

ii) Add a section titled ***Continuous Compliance*** with the subparts:

1) Permittee shall monitor and collect data to demonstrate continuous compliance as specified in §63.10020.
2) Permittee shall demonstrate continuous compliance with emission limitations, operating limitations and work practice standards as specified in §63.10021.
3) Permittee shall demonstrate continuous compliance under the emissions averaging provisions as specified in §63.10022.

4) Permittee shall establish PM CPMS operating limit and determine compliance as specified in §63.10023.

in place of sections titled ***Monitoring and Data Collection; Continuous Compliance; Continuous Compliance using Emission Averaging; and PM CPMS.***

iii) Add a section titled ***Notifications, Reports and Recordkeeping*** with the subparts:
1) Permittee shall submit notifications as specified in §63.10030
2) Permittee shall comply with the applicable General Provisions in §63.1 through 63.15 according to Table 9, Attachment ( )

in place of sections titled ***Notifications and General Provisions***

iv) Modify ***Recordkeeping*** section item 1. to say "Permittee shall maintain applicable records as specified in §63.10031 and §63.10033."

v) Modify ***Reporting*** item 1. to say "Permittee shall submit applicable reports to MDNR as specified in §63.10031."

Missouri Air Pollution Control Program Response to Comment #5:

The program's response to comment 5 is broken down below:

a) Tables 5, 7, and 9 have not been included because they refer to sections of the rule which have been incorporated by reference. Therefore, the program believes that it is appropriate to incorporate the tables by reference as well and no change has been made.
b) The program believes that since "in this subpart/of this subpart/with this subpart/under this subpart" appears in text of 40 CFR Subpart UUUUU it is appropriate to include the language in this part 70 operating permit. Therefore, no change has been made.
c) This change has been made.
d) The program believes that since "Appendix B of this subpart" appears in text of 40 CFR Subpart UUUUU it is appropriate to include the language in this part 70 operating permit. Therefore, no change has been made.
e) This change has been made.
f) The program believes that since "Appendix A or B of this subpart" appears in text of 40 CFR Subpart UUUUU it is appropriate to include the language in this part 70 operating permit. Therefore, no change has been made.
g) This change has been made.
h) The program believes that since "in this subpart/of this subpart/with this subpart/under this subpart" appears in text of 40 CFR Subpart UUUUU it is appropriate to include the language in this part 70 operating permit. Therefore, no change has been made.
i) This change has been made.
j) This change has been made.
k) This change has been made.
l) The draft has been changed to include the following subparts under ***Testing and Initial Compliance:***
9. The permittee shall conduct subsequent performance tune-ups as specified in §63.10006.

10. The permittee shall conduct all required performance tests as specified in §63.10007, Table 5 to 40 CFR Part 63, Subpart UUUUU, and Table 6 to 40 CFR Part 63, Subpart UUUUU.
11. The permittee may use emissions averaging as an alternate to meeting requirements as specified in §63.10009.
12. The permittee shall comply with applicable monitoring, installation, operation and maintenance requirements as specified in §63.10010.
13. The permittee shall demonstrate initial compliance with applicable emissions limits as specified in §63.10011.

This section is followed by the following sections:

Continuous Compliance

1. The permittee shall monitor and collect data to demonstrate continuous compliance as specified in §63.10020.
2. The permittee shall demonstrate continuous compliance with emission limitations, operating limitations and work practice standards as specified in §63.10021 and Table 7 to 40 CFR Part 63, Subpart UUUUU.
3. The permittee shall demonstrate continuous compliance under the emissions averaging provisions as specified in §63.10022.
4. The permittee shall establish PM CPMS operating limit and determine compliance as specified in §63.10023.

Notifications and General Provisions

1. The permittee shall submit notifications as specified in §63.10030
2. Permittee shall comply with the applicable General Provisions in §63.1 through 63.15 according to Table 9 to 40 CFR Part 63, Subpart UUUUU

Recordkeeping

1. The permittee shall maintain applicable records as specified in §63.10031 and §63.10033.
2. Records may be kept in either written or electronic form.
3. These records shall be made available for inspection to Department of Natural Resources' personnel upon request.
4. All records shall be retained for five years.

Reporting

1. Permittee shall submit applicable reports as specified in §63.10031 and Table 8 to 40 CFR Part 63, Subpart UUUUU.
2. The permittee shall notify the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after an exceedance or a malfunction which could cause an exceedance of the emission limitations.
3. The permittee shall report any deviations from the standards, compliance provisions, performance testing, test methods, recordkeeping, and reporting requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.

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EPA Region 7 Comment #6:

Permit Condition (EP5A through EP5C)-002 incorporates the applicable requirements of 40 CFR Part 64, Compliance Assurance Monitoring (CAM). Item 13 in the ***Monitoring*** section indicates a table summarizing the CAM plan is contained in the Statement of Basis on page SB-8. However, there is no table summarizing the CAM plan on page SB-8. However, Page SB-8 identifies three (3) CAM related documents which are included within the Statement of Basis, on the "following forty-two pages." 10 CSR 10-6.065(6)(E)1.C, Statement of Basis in **Section V General Permit Requirements** indicates that while referenced by the permit, the Statement of Basis is not an actual part of the permit. However, the CAM is an applicable requirement that is included in the permit. Therefore, EPA recommends that MDNR move the CAM plan documents from the Statement of Basis and include as an attachment to the permit such that the CAM plan becomes an actual part of this Part 70 operating permit.

Missouri Air Pollution Control Program Response to Comment #6:

The program believes that since the applicable requirements from the CAM plan are included in the body of the permit it is not necessary to include to a copy of the original CAM document that was submitted and approved as an attachment. It has been included in the Statement of Basis for reference.

Since the table summarizing the CAM plan is not on page SB-8, Item 13 in the ***Monitoring*** section has been removed.

****

EPA Region 7 Comment #7:

The ***Testing*** section Permit Condition (EP5A through EP5C)-002 is written as general information without any requirements placed against the permittee. EPA questions the need for this in a permit condition and suggests that MDNR either modify the wording to reflect a permit requirement or remove from the permit condition.

Missouri Air Pollution Control Program Response to Public #7:

The program believes this information should remain in the permit in the event that instruments need to be calibrated in the future. Therefore, the draft has not been changed.

****

EPA Region 7 Comment #8:

The seven (7) requirements within the Operating Limitation of Permit Condition EP11-002 all use the wording "the permittee must." It is customary practice for MDNR to use the word "shall" and not "must" and for consistency, EPA suggests that MDNR change the "must" to "shall."

Missouri Air Pollution Control Program Response to Comment #8:

This change has been made.

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EPA Region 7 Comment #9:

EPA commends MDNR for their use of incorporating by reference (IBR) within Permit Condition EP11-002 as many of the appropriate sections of 40 CFR Part 63, Subpart ZZZZ lend themselves to the IBR approach. However some of the statements, as written, do not bind the permittee to any requirement and do not adequately incorporate the referenced regulation into the permit.
Therefore, to enhance the effectiveness of the IBR approach, EPA recommends the following additional IBR modifications:

i) Modify ***Continuous Compliance Requirements*** section to say "Permittee shall demonstrate continuous compliance as specified in §63.6635 and §63.6640."
v) Modify ***Notifications*** to say "Permittee shall submit required notification to MDNR as specified in §63.6645.
iv) Modify ***Recordkeeping*** section item 1. to say "Permittee shall maintain applicable records as specified in §63.6655 and §63.6660."
v) Modify ***Reporting*** item 1. to say "Permittee shall submit applicable reports to MDNR as specified in §63.6650."

Missouri Air Pollution Control Program Response to Comment #9:

The draft has been changed. These sections now appear as shown below:

Continuous Compliance Requirements
The permittee shall demonstrate continuous compliance as specified in §63.6635 and §63.6640.

Notifications
The permittee shall submit required notifications as specified in §63.6645.

Recordkeeping
1. The permittee shall maintain applicable records as specified in §63.6655 and §63.6660.
2. Records may be kept in either written or electronic form.

3. These records shall be made available for inspection to Department of Natural Resources' personnel upon request.
4. All records shall be retained for five years.

Reporting

1. Permittee shall submit applicable reports as specified in §63.6650.
2. The permittee shall notify the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after an exceedance or a malfunction which could cause an exceedance of the emission limitations.
3. The permittee shall report any deviations from the standards, compliance provisions, performance testing, test methods, recordkeeping, and reporting requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.

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EPA Region 7 Comment #10:

The United States Environmental Protection Agency, Region 7 offices are relocating from Kansas City, Kansas to Lenexa, Kansas in October, 2012. This draft permit is likely to be issued after the agency moves to its new offices. Therefore, EPA recommends that MDNR modify the EPA address in the **General Permit Requirements** sections 10 CSR 10-6.065(6)(C)3, 10 CSR 10-6.065(6)(C)8 and 10 CSR 10-6.065(6)(C)9 to reflect an office location at 11201 Renner Boulevard; Lenexa, KS 66219

Missouri Air Pollution Control Program Response to Comment #10:

This change has been made.

****

EPA Region 7 Comment #11:

The Statement of Basis includes a "bullet-point" list regarding the history of 40 CFR Part 97, Cross-State Air Pollution Rule (CSAPR). However, the list does not include the latest activity associated with the August 21, 2012 vacatur of the rule by the United State Court of Appeals for the District of Columbia Circuit.

Therefore, EPA recommends MDNR update the listing under the discussion of 40 CFR Part 97 Cross-State Air Pollution Rule in the Statement of Basis

Missouri Air Pollution Control Program Response to Comment #11:

The draft has been changed to include an updated list on the history of 40 CFR Part 97.

****

EPA Region 7 Comment #12:

The section in the Statement of Basis titled **Copy of Compliance Assurance Monitoring (CAM) Documents** refers to the documented facility as Aquila-Sibley Generating Station. Additionally, the three (3) documents included in the Statement of Basis also identify the facility as Aquila-Sibley Generating Station. However, the facility associated with the draft Part 70 operating permit on public notice is KCP&L Greater Missouri Operations Company-Sibley Generating Station. This name change has occurred sometime within the past 6 years.

Therefore, EPA recommends that MDNR encourage the facility to update their documentation to reflect the current facility name and EPA suggests that MDNR modify the Statement of Basis to reflect the current facility name.

Missouri Air Pollution Control Program Response to Comment #12:

The program believes that since the applicable requirements of the CAM plan are included within the permit as permit conditions for KCP&L Greater Missouri Operations Company-Sibley Generating Station and the original CAM documents are just included for reference purposes it is not necessary to make changes to the originals. Therefore, the draft has not been changed.

The comments submitted by Great Rivers Environmental Law Center and the Sierra Club shall now be addressed. Comments have been summarized, abbreviated, or paraphrased for clarity and brevity.

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Great Rivers Environmental Law Center Comment #1:

The following permit conditions do not contain adequate reporting requirements and therefore improperly limit the ability of citizens to enforce the permit's requirements:

- Permit Condition (EP3A and EP4A)-001
- Permit Condition EP4B-001
- Permit Condition (EP3B and EP6)-001
- Permit Condition (EP5A through EP5C)-002
- Permit Condition (EP5A through EP5C)-003
- Permit Condition (EP5A through EP5C)-004
- Permit Condition (EP5A through EP5C)-005
- Permit Condition (EP5A through EP5C)-006
- Permit Condition (EP7 through EP9 and EP11)-001
- Permit Condition EP18-001

Missouri Air Pollution Control Program Response to Comment #1:

Submittal of the monitoring data in question more than semi-annually would be burdensome not only on the installation, but to the permitting authority as well. It is not the goal of the Clean Air Act to be overly burdensome. The permittee is required to retain this information on site for a minimum of five years should this information need to be reviewed. Missouri Department of Natural Resources' employees may review it at any time upon request. Citizens may request to review this data as well, so long as the data is not entitled to confidential treatment under 10 CSR 10-6.210 [10 CSR 10-6.110(3)(C)]. Citizens may request to review any of the recordkeeping data required by this permit by submitting a request to Missouri's Air Pollution Control Program under Missouri's Sunshine Law. Air Pollution Control Program personnel will then request the information from the facility in order to complete the Sunshine request. If the installation fails to provide the information to Missouri's Air Pollution Control Program, the installation will be in direct violation of the provisions of the operating permit and a Notice of Violation shall be issued.

This method of record retention has been proven effective over the past 30 years. Requiring the installation to submit this data more than semi-annually would require unnecessary usage of resources by both the installation and the Missouri Air Pollution Control Program. The permit requires the installation to report all issues of exceedances or possible exceedances semi-annually. This allows the Missouri Air Pollution Control Program to respond quickly to violations of the standards without having these exceedances obscured by copious amounts of compliant data.

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Great Rivers Environmental Law Center Comment #2:

The coal unloading (EP1) and coal storage pile (EP2) of this facility are designated as "Emission Units Without Limitations." The permit should include a method to control these sources of pollution. The Core Permit Requirement that references 10 CSR 10-6.170 states that "[t]he permittee shall not cause or allow to occur any handling, transporting or storing of any material…without applying reasonable measures as may be required to prevent…fugitive particulate matter emissions to go beyond the premises of origin…" This emission limitation should be applied to the facility's coal unloading and coal storage pile emission units because of the potential for fugitive particulate matter emissions to go beyond the premises of origin. Reasonable control measures, such as application of water, should be applied as an operational limitation. Monitoring, recordkeeping and reporting requirements should also be included in the permit for these units.

Missouri Air Pollution Control Program Response to Comment #2:

All sources of fugitive emissions at this facility, including coal unloading (EP1) and the coal storage pile (EP2) are regulated under 10 CSR 10-6.170 which is listed in the Core Permit Requirements and includes standard wording for this rule.

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Great Rivers Environmental Law Center Comment #3:

The following permit conditions contain inadequate periodic monitoring requirements to ensure compliance with opacity limits:

- Permit Condition (EP3A and EP4A)-001
- Permit Condition EP4B-001
- Permit Condition (EP3B and EP6)-001

Missouri Air Pollution Control Program Response to Comment #3:

The program agrees that there should be monitoring frequency requirements included for Permit Condition (EP3A and EP4A)-001 and Permit Condition EP4B-001 and the same monitoring requirements used for 10 CSR 10-6.220 have been added.

The only emission units required by 10 CSR 10-6.220(3)(E) to demonstrate compliance with continuous opacity monitoring systems are coal-fired steam generating units with a maximum heat input rate greater than 250 MMBtu/hr, Portland cement calcining kiln operations, and any source required to operate a continuous opacity monitoring system under 40 CFR Part 60. The emission units in question are EP3A Coal Conveyor #18, EP4A Coal Crusher #1, EP4B Coal Crusher #2, EP3B Coal Handling System, and EP6 Fly Ash Handling - as such these emission units are not required to operate and maintain a continuous opacity monitoring system. The monitoring schedule included within Permit Condition (EP3B and EP6) – 001 has been

employed by the Missouri Air Pollution Control Program for many years. The schedule provides an incentive (i.e. reduced monitoring) for remaining in compliance. The schedule begins with weekly monitoring to ensure compliance with the opacity limitation. After eight readings (8 weeks ~ 2 months) demonstrating compliance at this monitoring frequency, the installation is allowed to decrease monitoring to once every two weeks. After four readings (8 weeks ~ 2 months) demonstrating compliance at this monitoring frequency, the installation is allowed to decrease monitoring to once each month. If at any time the installation exceeds the opacity standard they are required to revert back to weekly monitoring beginning the schedule again. This schedule has been proven effective by its many years of practical implementation. Increased monitoring would reduce the incentive to remain in compliance and prove unnecessarily burdensome to the installation. The installation does not have a history of habitually violating this schedule for these emission units. If the installation should demonstrate frequent violations, the Missouri Air Pollution Control Program's Enforcement Section has the right to issue Notice of Violations and require a compliance plan.

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Great Rivers Environmental Law Center Comment #4:

The permit should be revised to include an individual baghouses with a bag leak detection systems for Coal Crushers #1 and #2.

Missouri Air Pollution Control Program Response to Comment #4:

40 CFR Part 60 Subpart Y does not specifically require the use of baghouses on coal crushers. Unlike New Source Review, operating permits can only include existing regulatory requirements, and any voluntary requirements agreed to by the applicant. The permit remains unchanged.

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Great Rivers Environmental Law Center Comment #5:

The following permit conditions fail to ensure that the plant will not cause or contribute to violations of the new one-hour NAAQS for SO_2:

- Permit Condition (EP5A through EP5C)-004
- Permit Condition (EP7 through EP9 and EP11)-001

Missouri Air Pollution Control Program Response to Comment #5:

The new SO_2 NAAQS does not by itself impose any obligation on the installation. Missouri must first evaluate the state and determine which areas are in attainment and nonattainment. Areas designated as nonattainment by Missouri and approved by the EPA will be subject to SO_2 emission reduction standards as promulgated by Missouri for incorporation into Missouri's EPA-approved State Implementation Plan. If Missouri promulgates any new standards to reach attainment with the new SO_2 NAAQS which are applicable to the installation the permit shall be

reopened/revised no later than 18 months after the standards promulgation unless the effective date of the newly applicable requirement is later than the date on which the permit is due to expire per the requirements of §70.7(f)(1)(i).

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Great Rivers Environmental Law Center Comment #6:

The monitoring requirements for Permit Condition EP18-001 are insufficient. There is no monitoring requirement in place for the 25.0 tons of particulate matter emission limitation.

Missouri Air Pollution Control Program Response to Comment #6:

Item 1 of the ***Recordkeeping*** section of Permit Condition EP18-001 requires the installation to maintain records of PM emissions from this emission unit for a rolling 12 month period. This condition was established in Missouri Department of Natural Resources Construction Permit #112011-009. The facility is required to report to the department no longer than 10 days following the end of the month that the records indicate that the emission unit exceeded the 25.0 tons per year particulate matter limitation. We believe that that the monitoring, recordkeeping, and reporting is adequate to ensure that the permittee is not exceeding the emission limitation in the permit.

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Great Rivers Environmental Law Center Comment #7:

The Title V permit contains the terms or phrases listed below that are vague and therefore, lack practical enforceability.

(1) “Manufacturer’s Recommended Procedures/Requirements/Instructions”:

- Permit Condition EP4B-001 Recordkeeping Requirement 1.a
- Permit Condition (EP5A through EP5C)–002, Monitoring Requirement 3:
- Permit Condition (EP5A through EP5C)-002 Monitoring Requirement 10(a)
- Permit Condition (EP5A through EP5C)-002 Monitoring Requirement 10(e)
- Permit Condition EP11-002 Operating Limitation 5

(2) “Normal” operating conditions:

- Permit Condition (EP5A through EP5C)-001, Table 3 to 40 CFR Part 63, Subpart UUUUU
- Permit Condition (EP5A through EP5C)–002, Monitoring Requirement 9
- Permit Condition (EP5A through EP5C)–002, Testing Requirement 2(b)
- Permit Condition (EP5A through EP5C)–002, Recordkeeping Requirement 4
- Core Permit Requirement, 10 CSR 10-6.170 Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin
- Core Permit Requirement, 10 CSR 10-6.220 Restriction of Emissions of Visible Air Contaminants

(3) “As soon as practicable”:

- Permit Condition (EP5A through EP5C)–002, Monitoring Requirement 9
- Permit Condition (EP5A through EP5C)–002, Monitoring Requirement 11
- Permit Condition (EP5A through EP5C)–003, Reporting Requirement 1
- Permit Condition (EP5A through EP5C)-004, Monitoring Requirement 4
- Core Permit Requirement 10 CSR 10-6.050 Start-up, Shutdown and Malfunction Conditions Condition 2
- General Permit Requirement 10 CSR 10-6.065(6)(C)1.C General Record Keeping and Reporting Requirements 2)d)ii

(4) “Reasonable steps”:

- General Permit Requirement 10 CSR 10-6.065(6)(C)1.C General Record Keeping and Reporting Requirements 2)d)i
- General Permit Requirement 10 CSR 10-6.065(6)(C)7 Emergency Provisions 1)c

(5) “Good air pollution practice” and/or “good professional practice”

- Permit Condition (EP5A through EP5C)-001, General Requirement
- Permit Condition (EP5A through EP5C)-002, Monitoring Requirement 9
- Permit Condition EP11-002 Operating Limitation
- Permit Condition EP11-002 Operating Limitation 5
- Core Permit Requirement 10 CSR 10-6.180 Measurement of Emissions of Air Contaminants Requirement 1

(6) “Approved by the director”:

- Core Permit Requirement 10 CSR 10-6.170 Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin, Emission Limitation 1

Missouri Air Pollution Control Program Response to Comment #7:

The Missouri Air Pollution Control Program has been using the permit language in question for close to 30 years without any detrimental effect to the quality of Missouri’s air. Practical implementation over the past 30 years has proven the effectiveness of the wording and proven to be protective of the standards they were intended for; however, if inspectors should note improper adherence within any of the provisions, the permit can be reopened to incorporate more specific wording.

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Great Rivers Environmental Law Center Comment #8:

Between 2008 and 2011, the plant’s PM and SOx emissions jumped drastically. During the same time period, a number of construction projects occurred, for some of which the DNR required construction permits and for some of which the agency did not. A reader of the draft permit is left with the impression that these construction projects may have led to an appreciable spike in emissions. Some of these construction projects, such as the replacement of boiler tubes in 2008,

may have also extended the life of the plant. Accordingly, DNR should: (1) include a discussion of what, specifically, caused this recent spike in emissions, and (2) ensure that all recent modifications comply with the Clean Air Act's New Source Review requirements.

Missouri Air Pollution Control Program Response to Comment #8:

A note has been added to the emissions table on page 4 of the draft permit to state that starting in 2009 condensable PM was included in the reported PM_{10} and $PM_{2.5}$ emissions. No discussion of the SOx emissions has been added because the emissions appear to be within expected variations.

It is not the purpose of this operating permit to reevaluate previously issued New Source Review construction permits or determinations. All applicable construction permit requirements have been included in the draft operating permit.

CJ/kjc