

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: OP2017-088
Expiration Date: DEC 08 2022
Installation ID: 125-0001
Project Number: 2015-03-094

Installation Name and Address

Kingsford Manufacturing Company-Belle
21200 Maries Road 314
Belle, MO 65013
Maries County

Parent Company's Name and Address

The Clorox Company
P.O. Box 24305
Oakland CA, 94623

Installation Description:

This installation manufactures and packages Kingsford® brand charcoal briquets in several bag sizes. The plant receives wood, which is processed in a wood dryer and retort furnace to produce char. The char is mixed with other additives including a starch binder and pressed into briquets. The briquets are then dried in three briquet dryers, cooled, and then stored in silos prior to bagging and packaging. The plant also has a solvent treated briquet operation to produce MatchLight® brand products. The Belle plant is classified as an existing major source for construction permitting, and is a Named Installation (#25 Charcoal Production Facilities). The installation is classified under SIC 2861 and NAICS 325194.

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Operating Permit Unit

Kyra L Moore

Director for Designee
Department of Natural Resources

DEC 08 2017

Effective Date

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I. Installation Equipment Listing

EMISSION UNITS WITH SPECIFIC 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. These units are subject to plant wide permit conditions.

Char Production	
EP #	Description
04	Single Pass Sawdust Dryer
	Single Pass Sawdust Dryer bypass
04	Retort furnace

Briquet Production	
Raw Material Receiving	
EP #	Description
07	Truck dumping station
12A	Sawdust silo and pneumatic conveyance system
09	2 lignite storage silos (bin vent)
10	Coal unloading, storage, and handling
34	Roll crusher (hammer mill crusher in coal receiving)
38	Raw Material Silo #6
39	Raw Material Silo #7
41	Raw Material receiver bin (bin vent)
11	Lime unloading, storage, and handling
Briquet production	
20	Mixer & Muller
21	Conveyor to 2 briquet roll presses
22	Briquetting-2 briquet roll presses
23	Briquet dryer auxiliary burner
19	Boiler
Solvent Treated Briquet system (STB)	
26	Matchlight pretreat curtain coater (ACC bypass)

Miscellaneous	
EP-42	80 HP Emergency Power Generator – No. 2 Fuel Oil
TBD	182 HP Fire Pump Engine #3-Diesel fired (2014)
EP-44	240HP Caterpillar 3208T Fire Pump Engine No. 2 – No. 2 Fuel Oil
EP-45	Retort Emergency Power Generator-No. 2 Fuel Oil (2012)
TBD	Gasoline Tank (560 gallon)– Vehicles
TBD	Gasoline Tank (50 gallon)– Equipment
	11 Maintenance Heaters – Kerosene

EMISSION UNITS WITHOUT SPECIFIC LIMITATIONS

The following list provides a description of the equipment that does not have unit specific limitations at the time of permit issuance. These units are subject to plant wide permit conditions.

Char Production	
EP #	Description
01	Truck Traffic
02	Hog fuel unloading/storage pile
03	Hog fuel handling
	Char Silo
	Wood screening and grinding system

Briquet Production	
Raw Material Receiving	
EP #	Description
06	Charcoal/Sawdust unloading, storage, and handling
06	Charcoal unloading, storage, handling-storage pile
07	Material handling to hopper
	Ringmill crusher
08	2 char silos (sealed, no emissions)
	Lignite unloading to silo (pneumatic)
11	Lime unloading, storage, and handling
Minors Metering System	
	Starch unloading to silo (pneumatic)
15	Starch storage silo (bin vent)
30	Starch conveying system
	Bagged borax unloading
	Bagged borax storage
17	Borax bag handling to hopper
32	Borax conveying system
33	Minors mixing/metering
Briquet production	
13	Hammer mill crusher
14	Conveyor to surge bin
14	Briquetting surge bin
28	5 briquet coolers
24	Briquet screening
24	3 Briquet storage silos
24	Briquet silo feeder/screener
35	Mesquite briquete handling
27	2 packaging lines
36	Ink jet coding
	warehouse
18	Fuel oil storage tank
	Propane tank

37	Parts washer
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Solvent Treated Briquet system (STB)	
25	Matchlight Solvent storage tanks

Miscellaneous	
	QC Burn Ovens (used to test the quality of the charcoal briquets)
	Portable wood grinder
	Diesel Tank – Dozer Fuel
	Diesel Tank – Fire Pump No. 1
	Diesel Tank – Fire Pump No. 2
	Diesel Tank – Equipment
	Used Oil Tank
	Kerosene tank-200 gallon capacity
	Make-up Fluid for Packaging Bag Coders
	Portable Vacuum Dust Collectors
	Packaging Central Vacuum System
	Packaging Bag Top Catcher

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. The plant wide conditions apply to all emission units at this installation. This section applies to regulations that apply on an entire-installation wide basis. The following general conditions apply to all units contained in this permit, unless stated otherwise.

Monitoring:

The permittee shall calibrate, maintain and operate all pollution control devices and pollution monitoring related instruments according to the manufacturer's recommendations, or maintenance and operational history of similar units. All calibrations, maintenance, and operations shall occur according to good engineering practices. All manufacturing specifications and operational/maintenance histories shall be kept on site.

Recordkeeping:

1. The permittee shall record all required record keeping in an appropriate format.
2. Records may be kept electronically using database or workbook systems, as long as all required information is readily available for compliance determinations.
3. The permittee shall keep a copy of this operating permit and review, copies of all issued construction permits and reviews, and copies of all Safety Data Sheets (SDS) on site.
4. All records must be kept for a minimum of 5 years and be made available to department personnel upon request.

Reporting:

1. The permittee shall report any exceedance of any of the terms imposed by this permit, or any malfunction which could cause an exceedance of any of the terms imposed by this permit, no later than ten days after the exceedance or event causing the exceedance (unless otherwise specified in the specific condition).
2. The permittee shall report any deviations from the monitoring, recordkeeping, and reporting requirements of this permit condition in the semi-annual monitoring report and annual compliance certification.
3. All reports and certifications shall be submitted to the Air Pollution Control Program's Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102.

Permit Condition PW1

10 CSR 10-6.065(6)(C)2.A. Voluntary Limitation(s)

Emission Limitation:

1. The permittee shall emit less than ten tons of any individual Hazardous Air Pollutant (HAP) from the entire installation in any consecutive 12-month period.
2. The permittee shall emit less than twenty-five tons of any combination of HAPs from the entire installation in any consecutive 12-month period.

Monitoring/Recordkeeping:

The permittee shall maintain an accurate record of HAP emissions from the entire installation. Example forms are attached as Attachments A and B. The permittee may use these forms, or equivalents, to demonstrate compliance with the HAPs emission limitation.

Permit Condition PW2

10 CSR 10-6.060 Construction Permits Required
Construction Permit Number 0697-010A
10 CSR 10-6.260, Restriction of Emission of Sulfur Compounds

Operational Limitation:

All fuel oil fired at this facility shall contain less than 0.5% sulfur. [Special Condition #I-C]

Monitoring/Recordkeeping:

The permittee shall maintain records of the fuel type used verifying sulfur content no more than 0.5% by weight. Purchase receipts, analyzed samples or certifications of the sulfur content of the fuel will be acceptable.

Permit Condition PW3

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

Emission Limitation:

1. The permittee shall not cause or permit to be discharged into the atmosphere from any new source of emission, not exempted under this rule, any visible emissions with an opacity greater than 20%.
2. Exception: The permittee may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six minutes in any 60 minutes air contaminants with an opacity up to 60%.

Note: The Single Pass Sawdust Dryer (EP-04) and Retort furnace (EP-04) have more stringent opacity limitations imposed by Permit Condition 1. The coal unloading, storage, and handling operations (EP-10) and the roll crusher (EP-34) also have a 20% opacity limitation imposed Permit Condition 10. The limitation presented here as Plant Wide Permit Condition PW3 applies to all other sources of opacity at the installation, except during PRD periods when EP-04 is subject to the emission limits in Permit Condition 2.

Monitoring:

Note: This monitoring applies to all units except EP-04, which is equipped with a COMS. See Permit Condition 1.

1. The permittee shall conduct visible emissions observations on each emission unit using the procedures contained in USEPA Test Method 22. The permittee is only required to make observations 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. Issuance of this renewal operating permit does not restart this schedule.
 - a. The permittee shall conduct weekly observations for a minimum of eight 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 weeks for a period of eight weeks.
 - ii. If a violation is noted, monitoring reverts to weekly.
 - iii. Should no violation of this regulation be observed during this period then-
 - A. The permittee may observe once per month.
 - B. 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 Attachments C and D, or equivalents, 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, which may contribute to visible emissions; and,
5. The permittee shall maintain records of all USEPA Method 9 opacity tests performed.

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.

Equipment subject to Permit Condition 1		
Description	Control Device	EIQ #
Single Pass Sawdust Dryer, installed 1993. ¹	Two high efficiency cyclones that vent to the After Combustion Chamber (ACC). ACC has two Low NO _x fuel oil burners (for startup) total rated 56.5 MMBtu/hr each. ACC may also use propane as fuel. ACC installed 1993. (EP-04)	EP-04
Multi-hearth Retort Furnace, 5 Hearths, burners rated 1.48 MMBtu/hr total, combusts fuel oil. Installed 1993. ¹	Four high efficiency cyclones that vent to the After Combustion Chamber (ACC). ACC has two Low NO _x fuel oil burners (for startup) total rated 56.5 MMBtu/hr each. ACC may also use propane as fuel. ACC installed 1993. (EP-04) Six Low NO _x fuel oil burner (used for startups only)	EP-04
Briquet Dryers #1, #2 and #3, connected in parallel, with a single briquet dryer furnace, rated 30 MMBtu/hr, combusts fuel oil #2. Installed 1993. ¹	Low NO _x fuel oil burner	EP-23
Boiler fueled by fuel oil #2 and waste heat, MHDR 16.8 MMBtu/hr, installed 1993.	Low NO _x fuel oil burner	EP-19

¹Production maximum hourly design rates are not included in this table as they may change with the emissions testing which is required every five years.

Permit Condition 1
 10 CSR 10-6.060 Construction Permits Required
 Construction Permit Number: 0697-010A

Note: This permit was written to consider three different operating scenarios for this system:
 Scenario #1: The ACC and briquet dryers operating simultaneously. In this operating scenario, some ACC gasses are routed through the briquet dryers and the briquet dryer furnace is not combusting fuel. The particulate loading from the ACC is effectively filtered by the charcoal bed conveyed through the briquet dryers. During this scenario the retort may or may not be operating.
 Scenario #2: The ACC is in operation and the briquet dryers are down. In this operating scenario, all ACC gasses exhaust through the ACC stack. The briquet dryer furnace is not combusting fuel, as the briquet dryers are not in operation.

Scenario #3: The briquet dryers are in operation and the ACC is down. In this operating scenario, the briquet dryer furnace and waste heat recovery boiler are used to provide heat to the briquet dryers, with emissions vented through EP-23 (Stack 10). When the ACC is down, both the sawdust dryer and the retort furnace are down.

Emission Limitation:

1. Operating Scenario #1: the ACC and briquet dryers are operating simultaneously (retort is optional):
 - a. The NO_x emission rate, expressed as nitrogen dioxide (NO₂), from the ACC and briquet dryers combined shall not exceed 77.9 pounds per hour and 13.0 pounds per ton of char produced. NO_x concentration from the ACC and dryer exhaust shall not exceed 160 parts per million dry volumes (ppmdv) for all three hour rolling averages. The ACC concentration shall be corrected to 12% CO₂. [Special Condition #II-A]
 - b. The maximum particulate matter less ten microns (PM₁₀) emission rates allowed from the ACC and briquet dryers combined are 36.73 pounds per hour and 6.12 pounds per ton of char produced. [Special Condition #II-B]
 - c. The opacity of the ACC stack exhaust shall not exceed ten percent, as determined by a Continuous Opacity Monitoring System (COMS). [Special Condition #II-C]
 - d. Total organic carbon (TOC) emissions from the ACC and briquet dryers combined shall not exceed 15 parts per million dry volume (ppmdv). The ACC concentration shall be corrected to 12% CO₂. [Special Condition #II-E]
 - e. To ensure continual adequate combustion, the carbon monoxide (CO) concentration in the ACC exhaust gas and in the briquet dryer exhaust gases shall not be greater than 50 ppmdv for all three hour rolling averages. The ACC concentration shall be corrected to 12% CO₂. [Special Condition #II-F]
 - f. The sulfur dioxide (SO₂) emission rate from the ACC and briquet dryers combined shall be less than 9.13 pounds per hour and 500 ppmdv, with compliance to be determined according to Missouri State Rule 10 CSR 10-6.260, *Restriction of Emission of Sulfur Compounds*. [Special Condition #II-G]
2. Operating Scenario #2: the ACC is operating and the briquet dryers are down:
 - a. The maximum ACC PM₁₀ emissions rates allowed are 38.15 pounds per hour and 6.36 pounds per ton of char produced. [Special Condition #II-B]
 - b. The opacity of the ACC stack exhaust shall not exceed 12%, as determined by COMS. [Special Condition #II-C]
 - c. To ensure continual adequate combustion, the CO concentration in the ACC exhaust gas and in the briquet dryer exhaust gases shall not be greater than 50 ppmdv for all three hour rolling averages. The ACC concentration shall be corrected to 12% CO₂. [Special Condition #II-F]
3. Operating Scenario #3: the briquet dryers are operating and the retort and ACC are down
 - a. The maximum briquet dryer PM₁₀ emission rate allowed is 7.38 pounds per hour. [Special Condition #II-B]
 - b. The opacity of dryer exhaust plumes shall not exceed five percent, as determined by Method 9. [Special Condition #II-D]
 - c. To ensure continual adequate combustion, the CO concentration in the ACC exhaust gas and in the briquet dryer exhaust gases shall not be greater than 50 ppmdv for all three hour rolling averages. The ACC concentration shall be corrected to 12% CO₂. [Special Condition #II-F]

Operational Limitation/Equipment Specifications:

1. The high efficiency cyclones shall be equipped with gauges or meters which indicate the pressure drop across them. The pressure drop across the cyclones shall be indicated in the same units as reported in the performance test report required below. The gauges or meters shall be located such that they may be easily observed by Missouri Department of Natural Resources' personnel. Failure to maintain the appropriate range of pressure drop shall result in the triggering of an alarm or other signal. The pressure drop across the cyclones shall be continuously recorded. The pressure drop shall not deviate by more than ten percent below the low end pressure drop figure in the range demonstrated during performance testing which shows compliance with emission limits. [Special Condition #I-A]
2. The pyrolysis of sawdust in the retort shall not occur prior to achieving a temperature of at least 1600°F (Fahrenheit) at or after the exit of the ACC at a point that has been determined to be at least two seconds downstream from the entrance of the ACC. [Special Condition #I-B]
3. Low oxides of nitrogen (NO_x) burners shall be employed on the waste heat and recovery boiler and the duct burner. [Special Condition #I-D]
4. Exhaust gas shall not be vented out of the waste heat recovery boiler stack unless the briquet dryers are out of service. [Special Condition #I-E]

Performance Testing:

1. The permittee shall conduct performance testing for PM₁₀, from both the ACC and briquet dryers in order to demonstrate compliance with Special Condition II B. Performance testing conditions shall be consistent with historical testing conducted by the permittee and consistent with conditions set forth in Special Conditions 17, 18, 23, 24, 25, and 27 through 36 of Construction Permit No. 0697-010. This performance test for PM₁₀ shall be conducted at least once every five years, with the first test, for this revised schedule to be completed no later than 2006. [Modified Special Condition #III-A]
2. Construction Permit #0697-010 Special Conditions 17, 18, 23, 24, 25, and 27 through 36:
 - a. PM₁₀ from both the ACC exhaust stack and the dryer exhaust vents are to be determined in lb/hr and lb/ton char produced. This testing shall be conducted while maintaining the ACC exhaust gas temperature as close to 1600°F as is practical and possible. [Modified Special Condition # 17]
 - b. The opacity of the ACC exhaust and briquet dryer exhausts shall be determined. [Special Condition #18]
 - c. The actual ACC retention time shall be calculated or determined and included in the written report of the performance test results. [Special Condition #23]
 - d. The temperature in the ACC shall be determined a minimum of 2 seconds downstream from the entrance of the ACC and included in the written report of the performance test results. [Special Condition #24]
 - e. Compliance will be considered shown for the feed stock used during the performance testing that demonstrates compliance with the emission limitations. [Modified Special Condition #25]
 - f. The date on which the performance tests are conducted must be prearranged with the APCP a minimum of 30 days prior to the proposed test date such that the APCP may arrange a pre-test meeting, if necessary, and assure that the test date is acceptable for an observer to be present. A completed Proposed Test Plan form will serve the purpose of notification and must be approved by the APCP prior to conducting the required emission testing. [Special Condition #27]

- g. Two copies of a written report of the performance test results shall be submitted to the Director of the APCP within 45 days of completion of any required testing. The report must include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required EPA Method for at least one sample run. [Modified Special Condition #28]
- h. The test report is to fully account for all operational and emission parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations. [Special Condition #29]
- i. Performance testing shall be conducted under the condition of maximum process/production, or within 10% of this rated capacity. The process/production rate at which performance testing is conducted shall become the maximum process/production rate at which this source of emissions is permitted to operate, under the authority granted by this permit. If a greater process/production rate is desired, then performance testing and compliance demonstration at the greater rate shall be required. [Special Condition #30]
- j. Actual conditions under which performance testing is conducted shall be recorded every 15 minutes throughout each of the test runs. These conditions are to include all relevant process/production parameters as well as all parameters relating to the status of emission controls. This data is to be included in the emissions test report. [Special Condition #31]
- k. Testing shall be conducted during periods of representative conditions at the maximum process/production rates or within 10% of this rate, not to include periods of startup, shutdown, or malfunction. [Special Condition #32]
- l. The permittee shall provide, or cause to be provided, performance testing facilities as follows: [Special Condition #33]
 - i. Safe sampling platform(s);
 - ii. Safe access to sampling platform(s);
 - iii. Utilities for sampling and testing equipment; and
 - iv. Sampling ports adequate for applicable test methods. This includes:
 - A. Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures;
 - B. Providing a stack or duct free of cyclonic flow during performance test; and
 - C. Removing the port caps 24 hours prior to testing to verify both their removability as well as full-diameter clearance to the stack; caps may be retained hand tight.
- m. Performance test shall be conducted, and data reduced, in accordance with specified EPA Test Methods unless an equivalent or alternative test method is otherwise approved by the APCP Director. [Special Condition #34]
- n. Unless otherwise specified, each performance test shall consist of 3 separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. [Special Condition #35]
- o. For the purpose of determining compliance with applicable standards, the arithmetic mean of the results of the three runs shall apply. Only, under rare circumstances and upon approval by the APCP Director, may compliance by the arithmetic mean of two runs. [Special Condition #36]

Monitoring:

1. Continuous Monitoring Systems:

- a. A temperature continuous monitoring system shall be installed, calibrated, maintained and operated on the ACC. This system shall monitor and record the temperature of the exhaust gas at a point that has been determined to be a minimum of two seconds downstream from the entrance of the ACC. Exhaust gas temperature shall be monitored to an accuracy of plus or minus two percent of the temperature being measured in degrees Fahrenheit. The monitoring and recording system shall be subject to random audits. [Special Condition #IV-A]
- b. A carbon monoxide (CO) continuous emission monitoring and recording system shall be installed, calibrated, maintained and operated for measuring CO emissions discharged to the atmosphere from the ACC. This system shall monitor carbon monoxide and record carbon monoxide in ppm_{dv} corrected to 12% CO₂. This continuous emission monitoring system shall adhere to the monitoring requirements contained in Missouri State Rule 10 CSR 10-6.070, Section 60.13. The monitoring and recording system shall be subject to random audits. [Special Condition #IV-B]
- c. A continuous opacity monitoring and recording system shall be installed, calibrated, maintained and operated for measuring the opacity of emissions discharged to the atmosphere from the ACC stack. This continuous emission monitoring system shall adhere to the monitoring requirements contained in Missouri State Rule 10 CSR 10-6.070, Section 60.13. The monitoring and recording system shall be subject to random audits. [Modified Special Condition #IV-C]
- d. A nitrogen oxides continuous emission monitoring and recording system shall be installed, calibrated, maintained and operated for measuring nitrogen oxides emissions discharged to the atmosphere from the ACC. This system shall monitor nitrogen oxides and record nitrogen oxides in ppm_{dv} corrected to 12% CO₂. This continuous emission monitoring system shall adhere to the monitoring requirements contained in Missouri State Rule 10 CSR 10-6.070, Section 60.13. The monitoring and recording system shall be subject to random audits. [Special Condition #IV-D]
- e. A carbon dioxide (CO₂) continuous emission monitoring and recording system shall be installed, calibrated, maintained and operated for the purpose of correcting carbon monoxide and nitrogen dioxide monitoring results from the ACC to 12% CO₂. This continuous emission monitoring system shall adhere to the monitoring requirements contained in Missouri State Rule 10 CSR 10-6.070, Section 60.13. The monitoring and recording system shall be subject to random audits. [Special Condition #IV-E]

Recordkeeping:

1. Daily records of tons of char produced in the charcoal retort shall be kept. [Special Condition #V-A]
2. Records of the following shall be kept: performance tests; continuous temperature monitoring results; continuous pressure drop (across the high efficiency cyclone) and monitoring results. [Modified Special Condition #V-B]
3. Records of three hour rolling average carbon monoxide concentrations, ppm_{dv} corrected to 12% CO₂, shall be kept. The dates and hours shall be noted in the records. [Special Condition #V-C]
4. Records of three hour rolling average nitrogen oxides concentrations expressed as nitrogen dioxide ppm_{dv} corrected to 12% CO₂, shall be kept. The dates and hours shall be noted in the records. [Special Condition #V-D]
5. Records of six minute average opacities of the ACC exhaust shall be kept. The dates and times shall be noted in the records. [Special Condition #V-E]

Reporting:

1. The permittee shall submit a written report of excess opacity and excess nitrogen dioxide and carbon monoxide emissions; and the nature and cause of the excess emissions, if known, to the Director. This report shall be submitted as part of the semi-annual and annual reports. [Modified Special Condition #VI-B]
2. For opacity, the data summary shall consist of the date, time and magnitude in actual percent opacity of all six minute averages of opacity greater than the opacity emission limitation of 10% - 12%, when briquet dryers are down. Averages of values may be obtained by arithmetically averaging a minimum of thirty-six equally spaced instantaneous opacity measurements per six minute period. [Special Condition #VI-C]
3. For nitrogen dioxide, the data summary shall consist of the date, time, and value in ppm_{dv} corrected to 12% CO₂, of all three hour rolling averages in excess of the nitrogen dioxide concentration limit. [Special Condition #VI-D]
4. For carbon monoxide, the data summary shall consist of the date, time and value in ppm_{dv} corrected to 12% CO₂, of all three hour rolling averages in excess of the carbon monoxide concentration limit. [Special Condition #VI-E]
5. The date and time identifying each period during which the continuous monitoring system was inoperative (except for zero and span checks) and the nature of system repairs or adjustments shall be reported. [Special Condition #VI-F]
6. When no excess emissions have occurred during the reporting period and the continuous monitoring system has not been inoperative, repaired or adjusted, this information shall be included in the report. [Special Condition #VI-G]
7. The permittee shall maintain a file of all data and information collected either by the continuous monitoring system or as necessary to convert monitoring data to the units of the applicable standard, for a minimum of five years from the date of collection of data or submission of reports . [Special Condition #VI-H]

Equipment subject to Permit Condition 2		
Description	Control Device	EIQ #
Single Pass Sawdust Dryer, installed 1993. ¹	Two high efficiency cyclones that vent to the After Combustion Chamber (ACC). ACC has two Low NO _x fuel oil burners (for startup) total rated 56.5 MMBtu/hr each. ACC may also use propane as fuel. ACC installed 1993. (EP-04)	EP-04
Multi-hearth Retort Furnace, 5 Hearths with six Low NO _x fuel oil burners (used for startups only) total rating is 1.48 MMBtu/hr. Installed 1993. ¹	Four high efficiency cyclones that vent to the After Combustion Chamber (ACC). ACC has two Low NO _x fuel oil burners (for startup) total rated 56.5 MMBtu/hr each. ACC may also use propane as fuel. ACC installed 1993. (EP-04)	EP-04
Briquet Dryers #1, #2 and #3, connected in parallel, with a single briquet dryer furnace, rated 30 MMBtu/hr, combusts fuel oil #2. Installed 1993. ¹	Low NO _x fuel oil burner	EP-23

¹Production maximum hourly design rates are not included in this table as they may change with the emissions testing which is required every five years.

Permit Condition 2

December 26, 2000 Consent Agreement; and
September 24, 2002 Termination Agreement
Planned Retort Downtimes (PRD)

Termination Agreement:

1. Upon the execution of the Termination Agreement, the Settlement Agreement is terminated. Sections 19 and 30 of the Settlement Agreement survive termination. If there are inconsistencies between the Settlement Agreement and the Termination Agreement, the Termination Agreement controls. (Termination Agreement #20)
 - a. Pyrolysis, as the term is used in issued permits, is not occurring during PRD activities, and the permittee is therefore not required to meet the 1600°F ACC permit limit, or the CO limit in the issued permits, during PRD. (Settlement Agreement #19)
 - b. MDNR agrees that it will support any request by the permittee to treat the installation of any or all the controls to be installed pursuant to Section II of this Agreement as the installation of “best available control technology” pursuant to §135.313 RSMo. (Settlement Agreement #30)
 - i. The controls that were installed pursuant to Section II of the Settlement Agreement are:
 - A. Design, engineering, and installation an air atomized fuel oil burner system on the ACC. (Settlement Agreement, Section II, Item #2 and Termination Agreement #1)
 - B. Installation of an independent combustion air supply fan to provide an independent source of combustion air for the ACC burners. No permit is needed for this installation. (Settlement Agreement, Section II, Item #4 and Termination Agreement #2)
 - C. These activities satisfy the purpose and intent of the Settlement Agreement, and the permittee is not required to take any additional action to comply with Section II of the Settlement Agreement. (Termination Agreement #7)

Definition of PRD:

1. Planned Retort Downtimes (PRD) are those scheduled/planned periods of time in which the retort process is shut down to do maintenance work and/or duct maintenance. During a PRD, the retort process is shut down, sawdust is not supplied to the retort furnace, and charcoal is not produced. (Termination Agreement #12)
2. A PRD begins 30 minutes after feed is shut off to the furnace. A PRD is considered over upon completion of the retort restart process. The retort restart process begins after the ACC burners are lit and dry sawdust is introduced into the retort furnace. The retort restart process ends when normal ACC and furnace operating temperatures have been reached, the ACC burners are shut off, and the pyrolysis of charcoal becomes the primary objective of retort operation. (Termination Agreement #13)

Operational Limitations:

1. The permittee agrees to keep the existing equipment used to control emissions from the retort in good repair, and further agrees not to remove such equipment unless it will be promptly replaced by equipment that is at least as effective in controlling emissions. (Termination Agreement #10)
2. The CEM system is to remain operational during PRD activity (unless maintenance of the CEM is necessary). During the PRD activities, the CEM may record opacity levels above the 10% allowed by issued permits, and ACC temperatures below 1600°F. Such readings during PRDs will not be

considered a violation of issued permits, as no production of charcoal is occurring. However, the permittee is subject to 10 CSR 10-6.220 (3)(A)-(D) (including any subsequent amendments or modifications) during PRD activities. (Termination Agreement #15):

- a. The permittee shall not cause or permit to be discharged into the atmosphere from any source, any visible emissions greater than 20% opacity. (10 CSR 10-6.220(3)(A))
 - b. Exception: Visible emissions of 60% opacity shall be allowed for a period not aggregating more than one 6 minute period in any 60 minutes. (10 CSR 10-6.220(3)(B))
 - c. Visible emissions over the limitations in 6.220(3)(B) are in violation of this rule unless the director determines that the excess emissions do not warrant enforcement action based on data submitted under 10 CSR 10-6.050 Start Up, Shutdown, and Malfunction Conditions. (10 CSR 10-6.220(3)(C))
 - d. Failure to meet the requirements of 6.220(3)(A) solely because of the presence of uncombined water shall not be a violation of this rule. (10 CSR 10-6.220(3)(D))
3. Pyrolysis, as that term is used in the issued permits, is not occurring during PRD activities, and the permittee is not required to meet the 1600°F ACC permit limit, or the CO limit, during PRD. (Termination Agreement #16)
 4. The permittee agrees to continue to take all reasonable steps to limit the opacity of emissions, and to limit CO emissions, during PRD activities. (Termination Agreement #17)

Start Up, Shutdown, and Malfunction:

In the event the SSM regulation is modified or revised after the date of this Termination Agreement, nothing in this Termination Agreement shall prohibit the permittee from availing itself of any additional protection offered by the new version of the SSM regulation. (Termination Agreement #21) The SSM regulation is found in 10 CSR 10-6.050.

Recordkeeping:

1. The permittee agrees that in the semiannual and annual CEM data submittals to MDNR it will code emissions during PRD so that MDNR can identify any excess emissions associated with exempt PRD activities. (Modified Termination Agreement #17)
2. The permittee will continue to maintain records noting the following information for each PRD. Attachment E, or an equivalent, shall be used for this purpose. (Termination Agreement #14)
 - a. The time of day when the PRD activities began. (Termination Agreement #14a)
 - b. The time of day when feed was shut off to the retort furnace. (Termination Agreement #14b)
 - c. The time of day when sawdust was placed into the retort furnace as part of the retort restart process. (Termination Agreement #14c)
 - d. The time of day when the furnace reaches steady state operation and the PRD ends. (Termination Agreement #14d)

Equipment subject to Permit Condition 3		
Description	Control Device	EQ #
Matchlight pretreat curtain coater (ACC and ACC bypass)	After Combustion Chamber (ACC). ACC has two Low NO _x fuel oil burners (for startup) total rated 56.5 MMBtu/hr each. ACC may also use propane as fuel. ACC installed 1993. (EP-04)	26 (ACC bypass)

Permit Condition 3
 10 CSR 10-6.060 Construction Permits Required
 Construction Permit No. 0699-003

Emission Limitation:

The permittee shall emit into the atmosphere from the solvent treated briquet (STB) system (EP-26) less than 85 tons of volatile organic compounds (VOCs) in any consecutive 12-month period. [Special Condition #1]

Recordkeeping

1. Records of monthly and consecutive 12-month total VOC emissions from the STB system shall be kept on-site for the most recent 60 months. Attachment F, or an equivalent, shall be used for this purpose.[Special Condition #4]
2. The permittee shall maintain an operating and maintenance log for the ACC which shall include the following. Attachment G, or an equivalent, shall be used for this purpose.
 - a. Incidents of malfunction, with impact on emissions, duration of event, probably cause, and corrective actions; and
 - b. Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

Equipment subject to Permit Condition 4		
Description	Control Device	EQ #
2 Lignite storage silos	Individual bin vents and individual fabric filters (CD-4 and 5)	EP-09
Mixer & Muller	Wet suppression system	EP-20
Conveyor to 2 briquet roll presses	Wet suppression system	EP-21
2 briquet roll presses	Wet suppression system	EP-22
Raw material silos #6, #7	Individual bin vents and individual fabric filters (CD-26, CD-27)	EP-38, 39
Starch silo	Fabric filter (CD-07)	EP-15
Raw material surge tank	Fabric filter (CD-28)	EP-41

Permit Condition 4
 10 CSR 10-6.060 Construction Permits Required
 Construction Permit No.062003-012 and 062003-012A

Operational Limitation/Equipment Specifications:

1. The permittee shall operate a wet suppression system to restrict the emission of particulate matter from mixing, roll press conveyor, and roll press (EP20, 21, and 22) operations while the installation

is operating. This wet suppression system must be used whenever these units are in operation and the amount of water applied by this wet suppression system shall be in such quantities that no appreciable visible fugitive emissions occur from these sources. [Construction Permit 062003-012A, Special Condition #1]

2. The permittee shall control the emissions from the following equipment using fabric filters as specified in the permit application [Construction Permit 062003-012A, Special Condition # 2A]

Emission Point	Equipment Description
EP-38	Raw material silo #6
EP-39	Raw material silo #7
EP-15	Starch silo
EP-09	Lignite Silo #1 and #2
EP-41	Raw material surge tank

3. The fabric filters shall be operated and maintained in accordance with the manufacturer's specifications. The fabric filters shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources' employees may easily observe them. Replacement filters for the fabric filters shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance). [Construction Permit 062003-012A, Special Condition #2A]

Monitoring/Recordkeeping

1. The permittee shall monitor and record the operating pressure drop across the fabric filters on the following schedule. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty. Attachment H, or an equivalent, shall be used for this purpose. [Modified Construction Permit 062003-012, Special Condition #2B]
 - a. The permittee shall conduct weekly observations for a minimum of eight consecutive weeks after permit issuance.
 - b. Should the permittee observe no readings outside the design conditions during this period then:
 - i. The permittee may observe once every two weeks for a period of eight weeks.
 - ii. If a reading outside the design conditions is noted, monitoring reverts to weekly.
 - iii. Should no readings outside the design conditions be observed during this period then:
 - A. The permittee may observe once per month.
 - B. If a reading outside the design conditions is noted, monitoring reverts to weekly.
 - c. If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency.
2. Kingsford Manufacturing Company shall maintain an operating and maintenance log for the fabric filters which shall include the following. Attachment G, or an equivalent, shall be used for this purpose. [Construction Permit 062003-012, Special Condition #2C]
 - a. Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - b. Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
3. The permittee shall, on a daily basis, monitor and record the moisture of the material produced by the press rolls (EP22), which is a representative moisture level of the mixing, roll press conveyor, and roll press operations (EP20, 21, and 22). The moisture of this material shall be measured using a moisture analyzer and adjusted as required to ensure control of fugitive emissions from these sources during normal operation.

Equipment subject to Permit Condition 5		
Description	Control Device	EIQ #
Sawdust silo with pneumatic conveyance system	Fabric filter (CD-24)	12A

Permit Condition 5
 10 CSR 10-6.060 Construction Permits Required
 Construction Permit No.1189-010

Emission Limitation:

The permittee shall not handle more than 8,000 tons of sawdust in any consecutive twelve month period in the sawdust silo. [Modified Special Condition #1].

Monitoring/Recordkeeping

The monthly amount of sawdust throughput in the sawdust silo shall be recorded and totaled on a consecutive twelve month basis. Attachment I, or an equivalent, shall be used for this purpose. [Modified Special Condition #2]

Equipment subject to Permit Condition 6		
Description	Control Device	EIQ #
Sawdust silo with pneumatic conveyance system	Fabric filter (CD-24)	12A
Truck dumping station	Fabric filter (CD-03)	EP-07

Permit Condition 6
 10 CSR 10-6.060 Construction Permits Required
 Construction Permit Number: 102005-008

Operational Limitation/Equipment Specifications:

1. The permittee shall control emissions from the truck dumping operation (EP-7) and the sawdust silo/pneumatic conveyor (EP-12A) using fabric filters. [Special Condition #1]
2. The fabric filters shall be operated and maintained in accordance with the manufacturer's specifications. [Special Condition #1A]
3. The fabric filters shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources' employees may easily observe them. Replacement filters for the fabric filter shall be kept on hand at all times. The filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance). [Special Condition #1B]

Monitoring/Recordkeeping:

The permittee shall monitor and record the operating pressure drop across the fabric filter and maintain an operating and maintenance log as detailed in Permit Condition 4.

Equipment subject to Permit Condition 7		
Description	Control Device	EIQ #
Briquetting Surge Bin	Bin vent fabric filter (CD-23)	EP-14
Briquet transfer	Baghouse (CD-12)	EP-24
Briquet packaging	Baghouse (CD-13)	EP-27
Starch conveying system	Fabric Filter (CD-15)	EP-30

Permit Condition 7
 10 CSR 10-6.400 Restriction of Emission of Particulate Matter from Industrial Processes

Conditional Exemption:

The permittee shall install, operate, and maintain a control device system that provides at least 90% control of particulate matter emissions.

Operational Limitation/Equipment Specification

1. The fabric filters shall be operated and maintained in accordance with the manufacturer's specifications.
2. The fabric filters shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources' employees may easily observe them. Replacement filters for the fabric filter shall be kept on hand at all times. The filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).

Monitoring/Recordkeeping:

The permittee shall monitor and record the operating pressure drop across the fabric filter and maintain an operating and maintenance log as detailed in Permit Condition 4.

Equipment subject to Permit Condition 8		
Description	Control Device	EIQ #
16.8 MMBtu/hr Boiler fueled by distillate oil #2 and waste heat, constructed 1993	Low NO _x burner	EP-19

Permit Condition 8
 10 CSR 10-6.070 New Source Performance Regulations
 40 CFR Part 60 Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Emission Limitation:

Standard for sulfur dioxide:

1. The permittee shall not combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. [§60.42c(d)]
2. The SO₂ emission limits and fuel oil sulfur limits apply at all times, including periods of startup, shutdown, and malfunction. [§60.42c(i)]

Monitoring/Recordkeeping:

1. For distillate oil-fired boilers, compliance with the emission limits or fuel oil sulfur limits may be determined based on a certification from the fuel supplier, as described under §60.48c(f)(1). [§60.42c(h)(1), §60.48c(f)(1)(i) through (iii)]
 - a. The fuel supplier certification shall include the name of the oil supplier; a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c, and the sulfur content or maximum sulfur content of the oil.
2. The permittee shall record and maintain records of the total amount of each steam generating unit fuel delivered to the property during each calendar month. [§60.48c(g)(3)]

Reporting:

The permittee shall submit records of fuel supplier certification with a certified statement that the records of fuel supplier certification submitted represent all of the fuel combusted in the boiler during the reporting period. The reporting period for the reports required is each six-month period. All reports including calendar dates covered in the reporting period shall be submitted to the Air Pollution Control Program’s Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, by the 30th day following the end of the reporting period. [§60.48c(d), (e)(1), (e)(11) & (j)]

Equipment subject to Permit Condition 9		
Description	Control Device	EIQ #
16.8 MMBtu/hr Boiler fueled by distillate oil #2 and waste heat, constructed 1993	Low NO _x burner	EP-19

Permit Condition 9
 40 CFR Part 63, Subpart JJJJJJ-National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

Emission Limitation:

1. The permittee must comply with each work practice standard, emission reduction measure, and management practice specified in Table 2 to this subpart that applies. A facility that operates under an energy management program established through energy management systems compatible with ISO 50001, that includes the affected units, also satisfies the energy assessment requirement.
 - a. Conduct a tune-up of the boiler biennially as specified in §63.11214, and conduct a tune-up of the boiler biennially as specified in §63.11223. [Table 2, #4]
 - b. Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table satisfies the energy assessment requirement. Energy assessor approval and qualification requirements are waived in instances where past or amended energy assessments are used to meet the energy assessment requirements. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items (1) to (4) appropriate for the on-site technical hours listed in §63.11237: [Table 2, #16]
 - i. A visual inspection of the boiler system

- ii. An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints,
 - iii. An inventory of major energy use systems consuming energy from affected boiler(s) and which are under control of the boiler owner or operator,
 - iv. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage,
 - v. A list of major energy conservation measures that are within the facility's control,
 - vi. A list of the energy savings potential of the energy conservation measures identified, and
 - vii. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.
2. At all times the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. 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 Administrator that 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. [§63.11205(a)].

Continuous Compliance

1. The permittee must conduct a performance tune-up according to §63.11223(b) and keep records as required in §63.11225(c) to demonstrate continuous compliance. You must conduct the tune-up while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up. [§63.11223(a)]
2. Except as specified in §63.11225(c) through (f), the permittee must conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in §63.11223(b)(1) through (7). Each biennial tune-up must be conducted no more than 25 months after the previous tune-up. [§63.11223(b)]
 - a. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). [§63.11223(b)(1)]
 - b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. [§63.11223(b)(2)]
 - c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). [§63.11223(b)(3)]
 - d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject. [§63.11223(b)(4)]
 - e. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [§63.11223(b)(5)]

- f. Maintain on-site and submit, if requested by the Administrator, a report containing the information in §63.11223(b)(6)(i) through (iii). [§63.11223(b)(6)]
 - i. The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler. [§63.11223(b)(6)(i)]
 - ii. A description of any corrective actions taken as a part of the tune-up of the boiler. [§63.11223(b)(6)(ii)]
 - iii. The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. [§63.11223(b)(6)(iii)]
- g. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup. [§63.11223(b)(7)]

Notification/Reporting/Recordkeeping:

1. The permittee must submit the notifications specified in §63.11225(a)(1) through (5) to the administrator. [§63.11225(a)]
 - a. The permittee must submit all of the notifications in §§63.7(b); 63.8(e) and (f); and 63.9(b) through (e), (g), and (h) that apply by the dates specified in those sections except as specified in §63.11225(a)(2) and (4). [§63.11225(a)(1)]
2. The permittee may prepare only a biennial compliance report as specified in §63.11225(b)(1) and (2). [§63.11225(b)]
 - a. Company name and address. [§63.11225(b)(1)]
 - b. Statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart. Your notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official: [§63.11225(b)(2)]
 - i. "This facility complies with the requirements in §63.11223 to conduct a biennial tune-up, as applicable, of each boiler." [§63.11225(b)(2)(i)]
 - ii. For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit." [§63.11225(b)(2)(ii)]
 - iii. "This facility complies with the requirement in §§63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available." [§63.11225(b)(2)(iii)]
3. The permittee must maintain the records specified in §63.11225(c)(1) through (7). [§63.11225(c)]
 - a. As required in §63.10(b)(2)(xiv), the permittee must keep a copy of each notification and report submitted to comply with this subpart and all documentation. [§63.11225(c)(1)]
 - b. The permittee must keep records to document conformance with the work practices, emission reduction measures, and management practices required by §63.11214 and §63.11223 as specified in §63.11225(c)(2)(i) through (vi). [§63.11225(c)(2)]
 - i. Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned. [§63.11225(c)(2)(i)]
 - ii. For each boiler required to conduct an energy assessment, you must keep a copy of the energy assessment report. [§63.11225(c)(2)(iii)]

- c. Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment. [§63.11225(c)(4)]
 - d. Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in §63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation. [§63.11225(c)(5)]
4. The permittee’s records must be in a form suitable and readily available for expeditious review. You must keep each record for 5 years following the date of each recorded action. You must keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. You may keep the records off site for the remaining 3 years. [§63.11225(d)]

Equipment subject to Permit Condition 10	
Description	EIQ #
Coal Unloading, Storage and Handling	EP-10
Roll crusher (hammer mill crusher in coal receiving)	EP-34

Permit Condition 10
 10 CSR 10-6.070 New Source Performance Regulations
 40 CFR Part 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, gases which exhibit 20 percent opacity or greater. [§60.254(a)]

Monitoring/Recordkeeping:

See Permit Condition PW2.

Equipment subject to Permit Condition 11	
Description	EIQ #
80 HP Emergency Power Generator – No. 2 Fuel Oil	EP-42
240HP Caterpillar 3208T Fire Pump Engine No. 2 – No. 2 Fuel Oil	EP-44

Permit Condition 11
 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

Management Practices:

The permittee shall comply with the requirements in Table 2d to MACT ZZZZ that apply. [§63.6603(a)]

Table 2d to MACT ZZZZ – Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

For each...	The permittee shall meet the following requirements...
Emergency stationary CI RICE and black start stationary CI RICE. ¹	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ²
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Fuel Requirements:

For existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that use diesel fuel and operate for the purpose specified in §63.6640(f)(4)(ii), the permittee shall use diesel fuel that meets the requirements in §80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted. [§63.6604(b)]

General Compliance Requirements:

1. The permittee shall be in compliance with the management practices that apply at all times. [§63.6605(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. 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)]

Monitoring, Operation, and Maintenance Requirements:

1. 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 a maintenance plan which shall 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. The permittee shall install a non-resettable hour meter if one is not already installed. [§63.6625(f)]
3. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Table 2d to MACT ZZZZ. The oil analysis shall be performed at the same

¹ If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of MACT ZZZZ, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources shall report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

² Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of MACT ZZZZ.

frequency specified for changing the oil in Table 2d to MACT ZZZZ. The analysis program shall at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the permittee is not required to change the oil. If any of the limits are exceeded, the permittee shall change the oil within two business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee shall change the oil within two business days or before commencing operation, whichever is later. The permittee shall keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program shall be part of the maintenance plan for the engine. [§63.6625(i)]

Continuous Compliance Requirements:

1. The permittee shall demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Table 2d to MACT ZZZZ that apply according to methods specified in Table 6 to MACT ZZZZ. [§63.6640(a)]
2. The permittee shall report each instance in which the permittee did not meet the requirements in Table 8 to MACT ZZZZ that apply. [§63.6640(e)]
3. The permittee shall operate the emergency stationary RICE according to the requirements in §63.6640(f)(1) through (4). In order for the engine to be considered an emergency stationary RICE under MACT ZZZZ, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in §63.6640(f)(1) through (4), is prohibited. If the permittee does not operate the engine according to the requirements in §63.6640(f)(1) through (4), the engine will not be considered an emergency engine under MACT ZZZZ and shall meet all requirements for non-emergency engines. [§63.6640(f)]
 - a. There is no time limit on the use of emergency stationary RICE in emergency situations. [§63.6640(f)(1)]
 - b. The permittee may operate the emergency stationary RICE for any combination of the purposes specified in §63.6640(f)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by §63.6640(f)(3) and (4) counts as part of the 100 hours per calendar year allowed by this paragraph. [§63.6640(f)(2)]
 - i. Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the director for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. [§63.6640(f)(2)(i)]
 - c. Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing. Except as provided in §63.6640(f)(4)(ii), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a

facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [§63.6640(f)(4)]

Table 6 to MACT ZZZZ – Continuous Compliance With Emission Limitations, and Other Requirements

For each...	Complying with the requirement to...	The permittee shall demonstrate compliance by...
Existing emergency and black start stationary RICE located at an area source of HAP	Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow a maintenance plan which shall 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.

General Provisions:

The permittee shall comply with §§63.1 through 63.15 as specified by Table 8 to MACT ZZZZ.

Recordkeeping and Reporting:

1. The permittee shall keep the records described in §63.6655(a)(2) through (a)(5). [§63.6655(a)]
 - a. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. [§63.6655(a)(2)]
 - b. Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii). [§63.6655(a)(3)]
 - c. Records of all required maintenance performed on the air pollution control and monitoring equipment. [§63.6655(a)(4)]
 - d. Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [§63.6655(a)(5)]
2. The permittee shall keep the records required in Table 6 of MACT ZZZZ to show continuous compliance with each management practice that applies. [§63.6655(d)]
3. The permittee shall keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to a maintenance plan. [§63.6655(e)]
4. The permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(4)(ii), the permittee shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. [§63.6655(f)]
5. Records shall be in a form suitable and readily available for expeditious review according to §63.10(b)(1). [§63.6660(a)]
6. As specified in §63.10(b)(1), the permittee shall keep each record for five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [§63.6660(b)]
7. The permittee shall keep each record readily accessible in hard copy or electronic form for at least five years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). [§63.6660(c)]

Equipment subject to Permit Condition 12	
Description	EIQ #
182 HP Fire Pump Engine #3-Diesel fired	TBD
Retort Emergency Power Generator-No. 2 Fuel Oil (2012)	EP-45

<p style="text-align: center;">Permit Condition 12</p> <p style="text-align: center;">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 10 CSR 10-6.070 New Source Performance Regulations 40 CFR part 60, Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines</p>

Emission Limitation:

1. The permittee must comply with the following emission limits over the life of the engine:
[§60.4205(c), §60.4206, and Table 4]
 - a. NMHC + NO_x: 4.0 g/kW-hr (3.0 g/HP-hr)
 - b. CO: 3.5 g/kW-hr (2.6 g/HP-hr)
 - c. PM: 0.2 g/kW-hr (0.15 g/HP-hr)
2. The permittee must comply with the fuel requirements in §60.4207(b).
3. The permittee shall meet the requirements of 40 CFR part 63 Subpart ZZZZ by meeting the requirements of 40 CFR part 60 Subpart IIII. No further requirements apply under 40 CFR part 63 Subpart ZZZZ. [Subpart ZZZZ, §63.6590(c)(1)]

Monitoring and Compliance Requirements:

1. The permittee must install a non-resettable hour meter prior to startup of the engine. [§60.4209(a)]
2. The permittee must do all of the following, except as permitted under §60.4211(g): [§60.4211(a)]
 - a. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; [§60.4211(a)(1)]
 - b. Change only those emission-related settings that are permitted by the manufacturer; and [§60.4211(a)(2)]
 - c. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you. [§60.4211(a)(3)]
3. The permittee must comply by purchasing an engine certified to the emission standards in §60.4205(c), for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in §60.4211(g). [§60.4211(c)]
4. The permittee must operate the emergency stationary ICE according to the requirements in §60.4211(f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than as described in §60.4211(f)(1) through (3), is prohibited. If you do not operate the engine according to the requirements in §60.4211(f)(1) through (3), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. [§60.4211(f)]
 - a. There is no time limit on the use of emergency stationary ICE in emergency situations. [§60.4211(f)(1)]

- b. You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2). [§60.4211(f)(2)]
 - i. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. [§60.4211(f)(2)(i)]
- c. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in §60.4211(f)(2). Except as provided in §60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [§60.4211(f)(3)]
 - i. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: [§60.4211(f)(3)(i)]
 - A. The engine is dispatched by the local balancing authority or local transmission and distribution system operator; [§60.4211(f)(3)(i)(A)]
 - B. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. [§60.4211(f)(3)(i)(B)]
 - C. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines. [§60.4211(f)(3)(i)(C)]
 - D. The power is provided only to the facility itself or to support the local transmission and distribution system. [§60.4211(f)(3)(i)(D)]
 - E. The permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the permittee. [§60.4211(f)(3)(i)(E)]
- 5. If the permittee does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or changes emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as required in §60.4211(g).

Notification/Reports/Recordkeeping:

- 1. The permittee is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the permittee must keep records of the operation of the engine

in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee must record the time of operation of the engine and the reason the engine was in operation during that time. [§60.4214(b)]

2. If the emergency stationary operates for the purposes specified in §60.4211(f)(3)(i), the permittee must submit an annual report according to the requirements in §60.4214(d)(1) through (3). [§60.4214(d)]
 - a. The report must contain the following information: [§60.4214(d)(1)]
 - i. Company name and address where the engine is located. [§60.4214(d)(1)(i)]
 - ii. Date of the report and beginning and ending dates of the reporting period. [§60.4214(d)(1)(ii)]
 - iii. Engine site rating and model year. [§60.4214(d)(1)(iii)]
 - iv. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place. [§60.4214(d)(1)(iii)]
 - v. Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine. [§60.4214(d)(1)(vii)]
 - b. Annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. [§60.4214(d)(2)]
 - c. The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4. [§60.4214(d)(3)]

Equipment subject to Permit Condition 13	
Description	EIQ #
Gasoline Tank (560 gallon)– Vehicles	
Gasoline Tank (50 gallon)– Equipment	

Permit Condition 13
 40 CFR Part 63, Subpart CCCCCC-National Emission Standards for Hazardous Air Pollutants for
 Source Category: Gasoline Dispensing Facilities

Emission Limitation:

The permittee must, at all times, 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 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. [§63.11115(a)]

Operational Limitation/Recordkeeping:

1. The permittee must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following: [§63.11116(a)]
 - a. Minimize gasoline spills; [§63.11116(a)(1)]

- b. Clean up spills as expeditiously as practicable; [§63.11116(a)(2)]
 - c. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use; [§63.11116(a)(3)]
 - d. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators. [§63.11116(a)(4)]
2. The permittee is not required to submit notifications or reports as specified in §63.11125, §63.11126, or subpart A of this part, but must have records available within 24 hours of a request by the Administrator to document gasoline throughput. [§63.11116(b)]
 3. The permittee must comply with the requirements of this subpart by the applicable dates specified in §63.11113. [§63.11116(c)]
 4. Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are considered acceptable for compliance with §63.11116(a)(3). [§63.11116(d)]

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 are only excerpts from the regulation or code, and are 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) 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.

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) 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 to the director in writing at least ten days prior to any maintenance, start-up or shutdown activity 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, notice shall be given as soon as practicable prior to the activity.
- 3) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under section 643.080 or 643.151, RSMo.

- 4) Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under sections 643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
- 5) Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

10 CSR 10-6.060 Construction Permits Required

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

10 CSR 10-6.065 Operating Permits

The permittee shall file a complete application for renewal of this operating permit at least six months before the date of permit expiration. In no event shall this time be greater than eighteen months. The permittee shall retain the most current operating permit issued to this installation on-site. The permittee shall immediately make such permit available to any Missouri Department of Natural Resources personnel upon request.

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

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.

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 Reporting of Emission Data, Emission Fees and Process Information

- 1) The permittee shall submit a 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 a spreadsheet file, can be submitted for approval by the director.
- 2) 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.
- 3) 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.

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 10-6.165 Restriction of Emission of Odors

This requirement is a State Only permit requirement.

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 10-6.170

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.

Monitoring:

The permittee shall conduct inspections of its facilities sufficient to determine compliance with this regulation. If the permittee discovers a violation, the permittee shall undertake corrective action to eliminate the violation.

The permittee shall maintain the following monitoring schedule:

- 1) The permittee shall conduct weekly observations for a minimum of eight (8) consecutive weeks after permit issuance.
- 2) Should no violation of this regulation be observed during this period then-
 - a) The permittee may observe once every two (2) weeks for a period of eight (8) weeks.
 - b) If a violation is noted, monitoring reverts to weekly.
 - c) Should no violation of this regulation be observed during this period then-
 - i) The permittee may observe once per month.
 - ii) If a violation is noted, monitoring reverts to weekly.
- 3) If the permittee reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner to the initial monitoring frequency.

Recordkeeping:

The permittee shall document all readings on Attachment J, 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 equipment malfunctions contributed to an exceedance.
- 3) 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 10-6.250 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.

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 at an installation:
- 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.

40 CFR Part 82 Protection of Stratospheric Ozone (Title VI)

- 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 40 CFR §82.106.
 - b) The placement of the required warning statement must comply with the requirements of 40 CFR §82.108.
 - c) The form of the label bearing the required warning statement must comply with the requirements of 40 CFR §82.110.
 - d) No person may modify, remove, or interfere with the required warning statement except as described in 40 CFR §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 of 40 CFR Part 82:
- a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices described in 40 CFR §82.156.
 - b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment described in 40 CFR §82.158.
 - c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR §82.161.
 - d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with the record keeping requirements of 40 CFR §82.166. ("MVAC-like" appliance as defined at 40 CFR §82.152).

- e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to 40 CFR §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 40 CFR §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 contained 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.*

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

10 CSR 10-6.065(6)(E)3.C Extension of Expired Permits

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. If a timely and complete application for a permit renewal is submitted, but the Air Pollution Control Program fails to take final action to issue or deny the renewal permit before the end of the term of this permit, this permit shall not expire until the renewal permit is issued or denied.

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

- 1) Record Keeping
 - a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
 - b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any Missouri Department of Natural Resources' personnel upon request.
- 2) Reporting
 - a) All reports shall be submitted to the Air Pollution Control Program, Compliance and 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.
 - c) Each report shall identify any deviations from emission limitations, monitoring, record keeping, reporting, or any other requirements of the permit, this includes deviations or Part 64 exceedances.
 - d) Submit supplemental reports as required or as needed. 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 semiannual 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)

If the installation is required to develop and register a risk management plan pursuant to Section 112(R) of the Act, the permittee will verify that it has complied with the requirement to register the plan.

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 semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
 - a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
 - b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
- 4) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, as well as the Air Pollution Control Program, Compliance and 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, Compliance and Enforcement

Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., 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), record keeping, 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, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., 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 APCP shall place a copy with the permit in the public file. Written notice shall be provided to the EPA and the APCP 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 APCP 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 permit, 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 contemporaneous written notice of the change to the Air Pollution Control Program, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219. This notice shall not be required for changes that are insignificant activities under 10 CSR 10-6.065(6)(B)3 of this rule. 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)34 Responsible Official

The application utilized in the preparation of this permit was signed by Steve Miller, Plant Manager. On November 20, 2017, the Air Pollution Control Program was informed that Brian Bockway, Plant Manager is now the responsible official. 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 shall be reopened for cause if:

- 1) The Missouri Department of Natural Resources (MoDNR) 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) MoDNR 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) MoDNR 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 B
 Total HAPs Emission Tracking Sheet

This sheet covers the month of _____ in the year _____

Column 1	Column 2 (a)	Column 3	Column 4	Column 5
Material Used (name, HAP CAS #)	Amount of material used (include units)	Density of material used (lbs/gal)	HAP content (%)	HAP emissions (tons)

Column 6	Column 7	Column 8	Column 9
Other HAP sources	Throughput (units)	Emission factors (units)	HAP emissions (tons)
HAPs from fuel oil combustion			
HAPs from natural gas combustion			
HAPs from storage tanks			
HAPs from char process			

(b) Total HAP emissions calculated for this month (tons):	
(c) 12-month HAP emissions total from previous month's worksheet (tons):	
(d) Monthly HAP emissions total from previous year's worksheet (tons):	
(e) Current 12 month total of HAP emissions (tons): [(b)+(c)-(d)]	

Instructions:

- (a) Choose appropriate HAP calculation method for units reported:
 1. If usage is in tons: [Column 2] x [Column 4] = [Column 5]
 2. If usage is in pounds: [Column 2] x [Column 4] x [0.0005] = [Column 5]
 3. If usage is in gallons: [Column 2] x [Column 3] x [Column 4] x [0.0005] = [Column 5]
- (b) Summation of Column 5.
- (c) 12-month HAP emissions total from previous month's worksheet (tons).
- (d) Monthly HAP emissions total from previous year's worksheet (tons).
- (e) Calculate the new 12 month HAP emissions total. **A total of less than 25 tons indicates compliance.**

Start-up, shutdown, and malfunction emissions as reported to the Air Pollution Control Program's Compliance/Enforcement Section during the most recent 12 month period must be included in the rolling total.

Attachment D
 Method 9 Opacity Emissions Observations

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 F
VOC Compliance Worksheet

This sheet covers the period from _____ to _____.
 (month, year) (month, year)

Copy this sheet as needed.

Column A	Column B	Column C	Column D
Process Description	Amount of STB Produced (Tons) (Note 1)	VOC Emission Factor (lb VOC/Ton STB Produced) (Note 2)	Process VOC Emissions (Tons) (Note 3)
Fugitive STB emissions routed to ACC (EP-4)		2.02	
Matchlight™ routed to ACC (EP-4)		0.2429	
Matchlight™ routed to ACC bypass (EP-26)		4.858	
BBQ Bag™ routed to ACC (EP-4)		0.0405	
BBQ Bag™ routed to ACC bypass (EP-26)		0.81	
Total VOC Emissions Calculated for this Month (Tons)		(Note 4)	
12-Month VOC Emissions Total From Previous Month's Worksheet (Tons)		(Note 5)	
Monthly VOC Emissions Total From Previous Year's Worksheet (Tons)		(Note 6)	
Current 12-Month Total VOC Emissions (Tons)		(Note 7)	

Note 1: Total amount of STB produced during this month for each scenario.

Note 2: Emission factors calculated based on information submitted by Kingsford in the construction permit review and assuming a 95% efficiency for the ACC.

Note 3: Column D = (Column B)*(Column C)/(2000lb/ton)

Note 4: Sum of Monthly emissions reported in Column D.

Note 5: Running 12-month total of VOC emissions.

Note 6: VOC emissions reported for this month in the last calendar year.

Note 7: Amount reported in Note 4 plus amount reported in Note 5 minus amount reported in Note 6. **Less than 85 tons indicates compliance.**

Start-up, shutdown, and malfunction emissions as reported to the Air Pollution Control Program's Compliance/Enforcement Section during the most recent 12 month period must be included in the rolling total.

STATEMENT OF BASIS

INSTALLATION DESCRIPTION

The Kingsford Manufacturing Company (KMC) manufactures and packages Kingsford® brand charcoal briquets in several bag sizes at the Belle plant. The plant receives wood, which is processed in a wood dryer and retort furnace to produce char. The char is mixed with other additives including a starch binder and pressed into briquets. The briquets are then dried in three briquet dryers, cooled, and then stored in silos prior to bagging and packaging. The plant also operates a solvent treated briquet operation to produce MatchLight® brand products.

Raw materials, including wood scrap (“hog fuel”), char, sawdust, coal, lime, bagged borax and starch are received by truck. The hog fuel is unloaded to an outdoor storage pile and is conveyed to the wood dryer. When dried, the wood is conveyed to the retort furnace, which turns the wood into char. The air exiting the wood dryer and the retort furnace is passed through high efficiency cyclones.

The Belle plant is classified as an existing major source for construction permitting, and is classified as a Named Installation (#25 Charcoal Production Facilities). The installation is classified under SIC 2861 and NAICS 325194. The potential emissions and previous 5 years of reported actual emissions are presented in the table below. Potential emissions were submitted by the installation, with calculations based 2011 and 2007 testing results, and also includes fugitives. The table also includes the plant wide limitation on HAPs found in Permit Condition PW1.

Actual and Potential emissions, tons per year

Pollutants	Reported Actual Emissions					Potential emissions
	2016	2015	2014	2013	2012	
PM ₁₀	105.78	90.81	90.67	94.93	95.74	235.6
PM _{2.5}	102.42	87.75	88.03	92.20	93.00	204.5
SO _x	16.45	16.37	16.5	17.41	17.45	29.9
NO _x	149.74	150.63	151.88	159.64	161.63	216.8
VOC	79.79	79.89	86.83	87.63	83.78	116.4
CO	37.70	39.18	39.56	41.15	42.33	58.6
Pb	0.02	0.02	0.01	0.01	0.01	ND
HAPs	HAPs are reported as VOC or PM ₁₀ under the provisions of 10 CSR 10-6.110.					<10/25

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 25, 2015;
2. Part 70 Operating Permit, OP2010-118, issued November 5, 2010;
3. 2016 Emissions Inventory Questionnaire, received February 17, 2017;

4. U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition;
5. webFIRE; and
6. All projects listed in Construction Permit History section of this Statement of Basis; and
7. December 26, 2000 Consent Agreement; and
8. September 24, 2002 Termination Agreement

Construction permit history and applicability of special conditions

1. Construction Permit #1077-004
This permit was issued October 4, 1977 to authorize the installation of a single chamber incinerator. This permit does not contain any special conditions, and this unit has been removed from the site.
2. Construction Permit #0979-034 through 036
These permits were issued together in one document on September 12, 1979, for authority to construct a rail car unloading and storage facility for lignite (0979-034), a lignite storage and metering facility (0979-035), and a charcoal briquet dryer (0979-036). These permits do not contain any special conditions. The equipment for permits 0979-034 and 035 was never built. The charcoal briquet dryer was replaced in 1997.
3. Construction Permit #0780-001
This permit was issued June 26, 1980 to authorize construction of a charcoal briquet solvent application system. This permit was superseded by Construction Permit #0699-003.
4. Construction Permit #1180-002
This permit was issued November 16, 1980 to authorize construction of a pyrolysis plant. This process was removed around 1993.
5. Construction Permit #1189-010
This permit was issued November 27, 1989 to authorize construction of a hammermill, piping and fans for pneumatic conveyance, a feed tank, and a 4.2 MMBtu/hr boiler. This boiler was removed around 1993, therefore the special conditions pertaining to the boiler fuel oil usage have not been included in this permit. The hammermill, pneumatic conveyance system, and feed tank have a throughput limitation on the amount of sawdust. According to the application submitted for this Operating Permit, the sawdust sizing system (hammermill) has not been operated in years, with no plans for future operation. The pneumatic conveyance system and feed tank is still on site and is currently referenced as EP-12A Sawdust silo. It is still in use for handling wood materials used to produce mesquite, hickory, and apple flavored charcoal products. The sawdust throughput limitation appears in this Operating Permit for EP-12A. The condition has been modified to change the emission limit from a "per year" timeline to a consecutive 12 month total timeline.
6. Construction Permit #1190-007
This permit was issued November 19, 1990 to authorize construction of two charcoal storage silos with bintop filters. These silos are currently identified as EP-09, lignite storage silos. This permit contains two special conditions that are not incorporated into this permit. Special Condition # 1 requires the permittee to keep a copy of the permit and review at the plant site. This requirement has been incorporated into the general recordkeeping requirements of Section II, Plant Wide Emission Limitations, as it applies to all issued construction and operating permits. Special Condition #2 requires the permittee to keep spare filter bags on site at all times. This requirement is also applied to the lignite storage silos in CP062003-012 and CP062003-012A. This Operating Permit cites the 2003 construction permits for this requirement.

7. Construction Permit #1192-023
This permit was issued November 30, 1992 to authorize construction of a process boiler and process heater. This permit does not contain any special conditions. The boiler and process heater were removed around 1993, with construction of the units permitted in Construction Permit #1093-019.
8. Construction Permit #0793-017
This permit was issued July 16, 1993 to authorize installation of new dry tanks for starch, nitrate, and borax, new liquid tanks for nitrate and borax, and four emission control devices. This permit does not contain any special conditions.
9. Construction Permit #1093-019
This permit was issued October 19, 1993 to authorize construction of a charcoal retort system consisting of a wood sizing system, a rotary wood dryer, a multi-hearth continuous furnace, and an after combustion chamber (ACC). Also in this project, two oil fired boilers and two process heaters will be replaced by a 400 HP boiler that will use the ACC waste heat as a primary heat source and a single process heater. This permit contains 53 special conditions. This permit was superseded by CP0697-010, therefore these conditions do not appear in this Operating Permit.
10. Construction Permit #0697-010
This permit was issued June 11, 1997 to increase briquet production and to revise the special conditions of Construction Permit#1093-019. Although not specifically stated in this permit, it is the intent of this permit to supersede Construction Permit #1093-019. This permit contains 59 special conditions, most of which are carried forward from Construction Permit #1093-019. This construction permit revises some special conditions from the 1993 permit, to reflect agreed upon changes between Kingsford and MDNR and to incorporate performance testing results from tests required in the 1993 permit. Special Condition #13 is superseded by CP0699-003, Special Condition #2. All the special conditions of this permit were replaced by the amendment, see Construction Permit #0697-010A.
11. Construction Permit #0898-004
This temporary construction permit was issued July 28, 1998 to authorize a feasibility study for replacing anthracite coal with metallurgical coke. This temporary permit has expired and is therefore not included in this Operating Permit.
12. No Permit Required Letter #1998-08-038
This project is for the re-routing of the char discharge system emissions from a wet scrubber (will be removed) to the retort furnace with cyclones and afterburner. The potential emissions are less than construction permitting thresholds.
13. No Permit Required Letter #1998-08-085
This project is for bag unloading and conveying operations. The potential emissions are less than construction permitting thresholds.
14. No Permit Required Letter #1998-11-033
This project is for a new roller mill. The potential emissions are less than construction permitting thresholds.
15. Construction Permit #0699-003
This permit was issued June 1, 1999 to authorize re-routing of the fumes from the solvent treated briquet system into the retort after combustion chamber (ACC) for incineration. This permit supersedes the VOC emission limitation found in Construction Permit #0780-001, and establishes a new VOC emission limitation. This permit also supersedes Special Condition #13 of CP0697-010; establishing a new TOC limit on the after combustion chamber (ACC) and briquet dryers combined. The special condition regarding TOC limits from this Construction Permit was later incorporated into an amendment to CP0697-010, see Construction Permit #0697-010A. Therefore the citation in

this Operating Permit for the TOC condition will reference Construction Permit #0697-010A. The VOC limitation from EP-26, the ACC bypass, is included in this Operating Permit.

16. No Permit Required Letter #2000-02-027

This project is for the like-kind replacement of the grinder, receiver/baghouse, and screw conveyors. The new units have the same capacity and design rates as the old equipment and the throughput and capacity of the process will not increase due to the replacement.

17. Construction Permit #092000-001

This permit was issued August 29, 2000 to authorize modification of the retort ACC burners. There are two 40 MMBtu/hr burners. The burners are to be converted from steam atomizing #2 fuel oil burners to air atomized #2 fuel oil burners. This project also includes installation of a dedicated combustion air fan for the ACC burners. These changes are being made to improve the reliability of the burners. There are no special conditions in this permit.

18. Construction Permit #0697-010A

This amendment was issued to update the special conditions of Construction Permit #0697-010. Due to the extensive changes incorporated in this amendment, a complete revised copy of the special conditions of the permit was issued with this project. Additionally, the TOC emission limitation modified in Construction Permit #0699-003 has been incorporated into the revised special conditions. These special conditions appear in this Operating Permit for emission points EP-04 and EP-23, with some modifications that are explained in the testing section of this Statement of Basis. The requirement to keep records on the sulfur content of the fuel oil, in Special Condition # V-B, is not included in this permit. This requirement is already contained in Plant Wide Condition PW2, and including it here would be duplicative. Special Condition # II-C has been modified to delete the references to Method 9 opacity observations. This special condition provides the installation with a choice to use Method 9 observation or COMS to determine opacity. The installation has chosen to use COMS. Special Condition # VI-B has been modified to change the reporting frequency from quarterly to semiannually, the information will now be included in both the semiannual and annual reports. Initially, the data was required to be submitted on a quarterly basis due to the unfamiliarity of the Air Program with the innovative process. Over time, the reports have shown the process to be predictable. While the information is still needed, the Air Program has determined that receiving this information in the semiannual and annual reports is sufficient. Special Condition #VI-H was also modified to reflect the change in reporting.

19. No Permit Required Letter #2001-05-064

This project is for a like-kind replacement of a vibratory screener in the solvent treated briquet (STB) manufacturing operations.

20. No Permit Required Letter #2001-07-092

This project is for a like-kind replacement of an Eagle 18-head combination weigh scale.

21. No Permit Required Letter #2002-07-110

This project is for parts replacements on the Briquet Dryer #1 and the retort wood drying system. This project also includes installation of a green fines collection system on dryer #1, including a drag conveyor to convey the green (wet) briquets to the existing fines conveying system. The conveyor has potential emissions less than the construction permitting thresholds, and the other activities will not contribute to an emissions increase.

22. No Permit Required Letter #2002-10-062

This project is for parts replacement for Briquet Dryer #2 in lieu of Dryer #1 (see 2002-07-110). These activities will not contribute to an emissions increase.

23. No Permit Required Letter #2002-12-020

This project is for the replacement of the roll mill crusher for coke breeze with a hammermill crusher for coal. The MHDR of the new unit is 11 tons/hour, with potential emissions less than construction permitting thresholds.

24. Construction Permit #062003-012

This permit was issued June 3, 2003 for modification of the raw material receiving and storage area, briquet blending/mixing/pressing operations, and packaging operations. The permitted modifications included installation of a new packaging dust collector, installation/replacement of storage silos and associated bin vents, replacement of fines/rerun conveyors, char hammermill, muller/plow mixer, miscellaneous conveyors, and installation of new roll presses and a third packaging line. However, the installation did not install the third packaging line, the replacement packaging dust collector, the rerun silo and the char hammermill. The special conditions appear in this Operating Permit, see CP062003-012A for details. Special Condition #2A was modified in Construction Permit #062003-012A.

25. No Permit Required Letter #2003-04-019

This project is for replacement of an existing solvent chiller. The chiller is used as a control device to lower solvent (lighter fluid) temperature and reduce VOC emissions. The existing 10 ton chiller will be replaced with a new 20 ton chiller. There will be no increase in throughput capacity or production with this change.

26. Construction Permit #062003-012A

This amendment contains clarifications to special conditions #2A and the Installation Description on page 5 of the permit. This amendment restates all the Special Conditions from the original permit. Special Condition # 2A has been modified to correctly identify both lignite silos #1 and #2 as EP-08. Special condition #2B has been modified to change the baghouse pressure drop monitoring from daily to a graduated schedule. Since the purpose of the monitoring is to ensure operation within the manufacturer's specified pressure drop range, the graduated schedule, in conjunction with opacity monitoring, is sufficient to demonstrate compliance with the operational limitation.

27. Construction Permit #102003-014

This permit was issued on October 3, 2003 to authorize replacement of two conveyors and a wood dryer in the retort system, as well as modifications to the retort wood dryer process. There are no special conditions in this permit.

28. No Permit Required Letter #2004-07-028

This project is for a like kind replacement of the continuous opacity monitor (COMS) on the ACC stack, as well as a replacement of ductwork between the wood dryer dropout box and the wood dryer cyclones. No emissions increases are expected with these changes.

29. No Permit Required Letter #2005-04-009

This project is for the replacement of the existing Bag Top Catcher with a cyclone. The proposed cyclone will catch the bag tops replacing the existing drop out chamber; and will prevent the bag tops from becoming entangled and plugging the system.

30. Construction Permit #102005-008

This permit was issued September 13, 2005 to authorize construction of a new truck dumping operation (EP-7) and sawdust pneumatic transfer system (EP-12a) controlled by fabric filters, improvement of wood dryer bypass fines handling, briquet dryer routine repair, packaging operation modifications and replacement of a re-run bucket elevator and assorted conveyors. The special conditions of the permit appear in this Operating Permit. Special Conditions #1C and #1D were modified to change the baghouse pressure drop monitoring from daily to a graduated schedule. Since the purpose of the monitoring is to ensure operation within the manufacturer's specified

pressure drop range, the graduated schedule, in conjunction with opacity monitoring, is sufficient to demonstrate compliance with the operational limitation.

31. No Permit Required Letter #2006-06-014

This project is for the replacement of the wood infeed vibrating screen (EP-3), the replacement of ductwork and fan associated with Baghouse #2 fan and ductwork associated with EP-7; and replacement of the briquet dryer #1 bed chain (EP-23) . These projects are considered routine repair, replacement, and maintenance activities. These activities are not expected to cause emissions increases.

32. No Permit Required Letter #2006-09-045

This project is for the relocation of the furnace fines injection. The injection will be relocated from hearth #4 to hearth #5. No emissions increase is expected with this project.

33. No Permit Required Letter #2007-02-065

This project is for the replacement of the existing Dust Collector #1 by a baghouse. This replacement will not cause an increase in emissions.

34. Construction Permit #062007-012

This permit was issued on June 26, 2007 to authorize the replacement of two of the furnace hearths and enlargement of the drop out holes in these hearths. This permit contains performance testing requirements. These requirements have been satisfied and are not included in this Operating Permit. This permit also contains a record keeping requirement to support the finding of the actual to projected actual applicability tests under 40 CFR 52.21 that were used in this permit. The condition requires the permittee to keep these records for five years after the modifications are completed. This five year period has passed, and therefore this Special Condition does not appear in this Operating Permit.

35. No Permit Required Letter #2008-12-010

This project is for the replacement of the refractory lining in the ACC unit. This project is not expected to cause any emissions increases.

36. No Permit Required Letter #2009-05-015

This project is for an expansion of the storage capacity of the hogfuel storage pile from 3 acres to 4 acres. The emissions expected from this change are less than construction permitting thresholds.

37. No Permit Required Letter #2013-05-007

This project is to increase the stack heights of the four briquet dryer cooling exhausts (S-19, S20, S-21, and S-22) from 27 feet to 67 feet above grade. This project will not increase emissions and no significant increase to ambient impact is expected.

38. No Permit Required Letter #2013-03-082

This project is for the like kind replacement of two existing cyclones on the sawdust dryer, which is part of the ACC. The new cyclones will have the same performance, pressure drop, and collections efficiency as the existing units. No emissions increase is expected with this replacement.

39. No Permit Required Letter #2014-05-033

This project is for the replacement of the induced draft fan associated with the waste heat recovery boiler. This change will allow operation of the boiler on waste heat when the briquet dryers are not in operation, and will reduce the amount of fuel oil necessary to operate the boiler. This project is not expected to cause an emissions increase.

40. No Permit Required Letter 2015-12-010

This project is for the like-kind replacement of four furnace cyclones. Since this project does not increase the throughput of any process or increase the potential to emit, no construction permit is required.

41. No Permit Required Letter 2016-06-044

This project is for the shortening of the four furnace cyclone's collection cones. The cones serve as collection vessels for the material removed from the cyclones and have no impact on other processes. Since this project does not increase the throughput of any process or increase the potential to emit, no construction permit is required.

42. No Permit Required Letter 2016-06-045

This project is for the installation of a new combustion air fan. Since this project does not increase the throughput of any process or increase the potential to emit, no construction permit is required.

43. No Permit Required Letter 2016-08-001

This project is for the installation of a new wood feed sizing system. Since the potential emissions of this process are less than the exemption levels in 6.061(3)(A)3.A., no construction permit is required.

44. No Permit Required Letter 2017-06-056

This project is for the installation of a new combustion air fan. Since this project does not increase the throughput of any process or increase the potential to emit, no construction permit is required.

New Source Performance Standards (NSPS) Applicability

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

This standard is applicable to any of the following affected facilities in coal preparation plants which process more than 200 tons per day and commenced construction or modification after October 24, 1974: 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.

The coal processing and conveying equipment are subject to the requirements of this standard. Since the equipment was constructed/modified/reconstructed between October 27, 1974 and April 28, 2008, it is subject to the 20% opacity standard in §60.254(a). This regulation requires a one time performance test, see §60.255(a). Since these units do not use control devices, the regulation does not contain continuous compliance, recordkeeping, or reporting requirements for them. This Operating Permit has gap filled these requirements with the same requirements used for the state opacity regulation, 10 CSR 10-6.220. Using these gap-filled requirements for monitoring, recordkeeping, and reporting will allow the installation to demonstrate continuous compliance with the opacity emissions standard.

40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.*

This subpart applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989, and that has a maximum design heat input capacity of 29 megawatts (MW) (100 MMBtu/hr) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).

The EP-19 Boiler is rated at 16.8 MMBtu/hr and was constructed in 1993, and is subject to this regulation. For this regulation, the boiler is considered an oil fired unit, and is therefore subject to the sulfur dioxide standard in §60.42c(d). To streamline the requirements of this regulation and the requirements of Construction Permit #0697-010A, the permittee has chosen the alternative standard of combusting fuel oil that contains less than 0.5 weight percent sulfur. Since this unit is an oil fired unit, with heat capacity between 10 and 100 MMBtu/hr, compliance with the fuel oil sulfur limit may be determined based on certification from the fuel supplier, see §60.42c(h)(1). This regulation does not apply a particulate matter or opacity emission limitation

to this boiler, due to the fuel type, size, and installation date. The installation has chosen to use the alternative recordkeeping provisions in §60.48c(g)(3) to document compliance with the fuel oil sulfur limit.

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*

This regulation applies to the following petroleum liquid storage vessels, with exceptions as provide in §60.110:

1. Storage capacity between 40,000 and 65,000 gallons, commenced construction or modification between March 8, 1974 and May 19, 1978; and
2. Storage capacity above 65,000 gallons and commenced construction or modification between June 11, 1973 and 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*

This regulation applies to petroleum liquid storage vessels with storage capacity greater than 40,000 gallons, that commenced construction after May 18, 1978, with exceptions as provided in §60.110a.

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 regulation applies to volatile organic liquid storage vessels with capacity greater than 75m³ (approximately 19,813 gallons), that commenced construction, reconstruction, or modification after July 23, 1984; with exceptions as provided in §60.110b.

The following storage tanks are below the applicability threshold and therefore are not subject to Subparts K, Ka, or Kb:

EP #	Description	Capacity (gallons)
	Diesel Tank – Dozer Fuel	500
	Diesel Tank – Fire Pump No. 1	250
	Diesel Tank – Fire Pump No. 2	250
	Diesel Tank – Equipment	2,000
TBD	Gasoline Tank – Vehicles	560
TBD	Gasoline Tank – Equipment	50
	Propane Tank	850
	Propane Tank	1,000
	Used motor oil tank	
	Kerosene tank	200

The following storage tanks are not subject to the requirements of Subparts K or Ka because the contents do not meet the definition of petroleum liquid. Additionally, these tanks are not subject to Subpart Kb. That subpart does not apply to storage vessels with a capacity between 75 m³ and 151 m³ storing a liquid with a maximum true vapor pressure less than 15.0 kPa, see §60.110b(b). The maximum true vapor pressure of the materials being stored is less than 15.0 kPa.

EP #	Description	¹ Capacity (m ³)	Solvent Vapor Pressure (kPa)
EP-18	Diesel Fuel Storage Tank	113.59	0.06
EP-25	Three Matchlight™ Pretreat (Briquet Solvent) Tanks	113.59	0.40

¹These tank capacities are approximately 30,000 gallons.

40 CFR part 60, Subpart III, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*

This subpart applies to various stationary compression ignition internal combustion engines, as detailed in §60.4200.

This regulation applies to the Retort Emergency Power Generator (EP-45) and the Fire Pump Engine #3 (EP TBD). These units are compression ignition engines operated as emergency engines in accordance with the provisions of the regulation. The Retort Emergency Power Generator (EP-45) was constructed 2012, with a MHDR of 11.7 gal/hr. The Fire Pump Engine #3 (EP TBD) was constructed 2014, with a MHDR of 12.8 gal/hr. Both units combust #2 fuel oil and are subject to the same requirements of this regulation due to their size, installation date, and emergency engine status.

Maximum Achievable Control Technology (MACT) Applicability

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

This regulation applies to vapor and cold cleaning machines that uses any solvent containing methylene chloride (CAS #75-09-2), perchloroethylene (CAS #127-18-4), trichloroethylene (CAS #79-01-6), 1,1,1-trichloroethane (CAS #71-55-6), carbon tetrachloride (CAS #56-23-5) or chloroform (CAS #67-66-3), or any combination of these solvents, in a total concentration greater than 5% by weight, as a cleaning and/or drying agent. This regulation applies to area and major sources of HAP emissions.

This regulation does not apply to the EP-37 Parts Cleaning because those operations do not use solvents containing the listed HAPs.

40 CFR Part 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

This subpart applies to various compression ignition and spark ignition reciprocating internal combustion engines at area and major sources of HAP emissions. The applicable units are contained in §63.6590.

This regulation applies to the Emergency Power Generator (EP-42) and Fire Pump Engine #2 (EP-44). Both of these compression ignition engines are subject to the same provisions of the rule due to their fuel type, installation date, and emergency engine status. These emergency generators are not enrolled in emergency demand response programs, and do not operate under the provisions of §63.6640(f)(4)(ii), therefore those provisions of the regulation were no included in the permit condition.

40 CFR Part 63, Subpart JJJJJ, *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*

This regulation applies to industrial, commercial, or institutional boilers, as defined in §63.11237, that are located at area sources of HAPs, with the exceptions contained in §63.11195.

This regulation applies to the Boiler (EP-19). The boiler has an MHDR of 16.8 MMBtu/hr and was installed in 1993. Although the boiler primarily runs off the waste heat from the ACC unit, it meets the definition of an oil fired unit and is subject to the energy assessment and tune up requirements of the rule.

40 CFR Part 63, Subpart CCCCCC, *National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities*

This subpart applies to gasoline dispensing facilities, as defined in §63.11132, that are located at area sources of HAPs.

This regulation applies to the two gasoline tanks. Each tank has a monthly throughput of less than 10,000 gallons and is therefore subject to the work practices provisions of the rule.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability

10 CSR 10-6.080, *Emission Standards for Hazardous Air Pollutants*

40 CFR Part 61 Subpart M – *National Emission Standard for Asbestos*,

This regulation applies to the installation and appears in the Core Permit Requirements section of this Operating Permit.

Compliance Assurance Monitoring (CAM) Applicability

40 CFR Part 64, *Compliance Assurance Monitoring (CAM)*

Introduction:

In general, CAM applies to each pollutant specific emissions unit at a major source if the unit satisfies all of the following criteria:

1. The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or surrogate thereof), other than an emission limitation or standard that is proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act. (64.2(a)(1) and (b)(1)).
2. The unit uses a control device to achieve compliance with any such emission limitation or standard (64.2(a)(2)); and
3. The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the major source thresholds (64.2(a)(3)).

Exemptions are found in 64.2(b). For this installation, the exemption of note is:

Emission limitations or standards for which a Part 70 permit specifies a continuous compliance determination method, as defined in 64.1.

Applicability from previous Operating Permit:

The previous Operating Permit, OP2010-118, required and established CAM plans as detailed in the following table:

EP/EU	Description	Control Device	Air pollutant	Applicable regulation	CAM Monitoring Parameter
EP-4/ EU0010	Charring and Drying operations (Charring system consisting of wood dryer and multi-hearth retort furnace)	ACC afterburner	PM	6.400	ACC temperature
			PM ₁₀	6.060, CP0697-010A	
			TOC	6.060, CP0697-010A	
EP-7/ EU0020	Raw material infeed	Fabric filter dust collector	PM	6.400	Visible Emissions and Pressure Drop
EP-24/ EU0140	Briquet transfer operations	Fabric filter dust collector	PM	6.400	Visible Emissions and Pressure Drop
EP-26/ EU0160	Solvent treated briquet system	ACC afterburner	VOC	6.060, Construction Permit 0699-003	ACC temperature
EP-27/ EU0170	Briquet packaging operations	Fabric filter dust collector	PM	6.400	Visible Emissions and Pressure Drop

Applicability in this Operating Permit:

Particulate Matter and material handling operations controlled by fabric filter dust collectors:

Since issuance of the previous Operating Permit, regulation 10 CSR 10-6.400 has been amended to add exemption #15, which states “any particulate matter emission unit that is subject to a federally enforceable requirement to install, operate, and maintain a particulate matter control device system that controls at least 90% of particulate matter emissions”. If an emissions point meets this exemption, this regulation does not apply.

All of the emission units that vent to fabric filters meet this exemption; as explained elsewhere in this Statement of Basis. Since the requirements of 6.400(1)(B)15 are satisfied, this regulation does not apply to these units. Therefore, these units do not meet CAM applicability criteria #1 above, and CAM plans are not included in this Operating Permit for these emission units.

Particulate Matter from charring and wood drying operations controlled by After Combustion Chamber (ACC):

The previous Operating Permit states that the cyclones are used for material recovery, therefore meeting the definition of inherent process equipment, and should not be considered control devices. However, the BACT determination conducted in Construction Permit 1093-019 concluded that “high efficiency

cyclones on the retort and sawdust dryer coupled with the ACC constitute BACT for particulate control”. Since the cyclones have been required as part of the BACT controls, they must be considered control devices.

According to AP-42, Appendix B-2, Table B.2-3, typical control efficiencies of high-efficiency centrifugal collectors are 95% for larger particulate matter in the 6-10 um size, with collection efficiencies trending downward for smaller particle sizes. It is reasonable to infer that for the larger particles regulated by 10 CSR 10-6.400, with particle sizes between 100 and 10 um, collection efficiency would be at least 95% for each cyclone. According to AP-42, Section 10.7, Charcoal, afterburning is estimated to control PM by at least 80%. The control system for the charring operations has four high-efficiency cyclones followed by the ACC. The control system for the wood drying operations has two high-efficiency cyclones followed by the ACC. Capture efficiencies for these systems are near 100%, making the overall control system at least 90% efficient. Additionally, both the cyclones and the ACC are federally required, initially by Construction Permit 1093-019, and currently by Construction Permit 0697-010A. Therefore, the control systems for the wood drying and charring operations meet the exemption in 10 CSR 10-6.400(1)(B)15, and are exempt from the regulation. Accordingly, these units no longer meet the CAM applicability criteria #1 above for PM, and CAM plans are not included in this Operating Permit for PM on these units.

Particulate Matter less than ten microns (PM₁₀) from charring and wood drying operations controlled by After Combustion Chamber (ACC):

The emission limitation for PM₁₀ from these units was established initially by Construction Permit 1093-019, and currently by Construction Permit 0697-010A. The limits are dependent upon specific operating scenarios as detailed in the following table:

Operating Scenario	PM ₁₀ emission limit	Units
ACC and briquet dryers combined	36.73	Lb/hr; and
	6.12	Lb/ton char produced
ACC only (briquet dryers down)	38.15	Lb/hr; and
	6.36	Lb/ton char produced

PM₁₀ and PM underwent the same BACT analysis in Construction Permit 1093-019, as described in the previous section, which established the cyclones and the ACC as the control devices for these emission units. Construction Permit 0697-010A requires the following continuous monitoring:

1. Pressure drop across the cyclones is required to be continuously recorded and maintained within a specified range established by the most recent performance test.
2. Opacity COMS is required on the ACC stack, with 6 minute averages required to be recorded
3. A temperature continuous monitoring system is required on the ACC stack.
4. CO CEMS is required on the ACC stack, with 3 hour rolling averages required to be recorded
5. NOx CEMS is required on the ACC stack, with 3 hour rolling averages required to be recorded
6. CO₂ CEMS is required on the ACC stack, with 3 hour rolling averages required to be recorded

This Construction Permit also requires PM₁₀ emissions testing every 5 years from both the ACC stack and the briquet dryer stack; with production rate, pressure drop, opacity, and temperature all recorded during testing.

Furthermore, the cyclones cannot function properly without regular maintenance to remove the residue that builds up in the cyclones and associated ductwork. The build up affects the performance of both the cyclones and the retort furnace itself, which could cause production shut down. To maintain the system, Kingsford periodically shuts down the retort system, allowing the residue buildup to burn off. The procedures for this process are well documented, and these activities are referred to as “Planned Retort Downtime”, or “PRDs”. All PRD events must be recorded and reported to MDNR in accordance with the December 2000 Settlement Agreement and the September 2002 Termination Agreement.

Based on the continuous monitoring required in Construction Permit 0697-010A and the required maintenance of the cyclone system, these units are considered to have continuous compliance determination methods, and meet the exemption in 64.2(b). Therefore PM₁₀ CAM plans are not included in this Operating Permit for these units.

Total organic carbon (TOC) from charring and wood drying operations controlled by After Combustion Chamber (ACC):

The initial TOC limitation was imposed by Construction Permit 1093-019, which also contains a BACT analysis for VOC/TOC from these units, determining the ACC unit is considered BACT. This Construction Permit established a CO emission limit as a surrogate to ensure adequate destruction of TOC. This limit has been carried forward in the current Construction Permit 0697-010A. Based on the continuous monitoring required by this Construction Permit, these emission units are considered to have continuous compliance determination methods, and meet the exemption in 64.2(b). Therefore, TOC CAM plans are not included in this Operating Permit for these emission units.

Volatile organic compounds (VOC) from solvent treated briquet system controlled by After Combustion Chamber (ACC):

Originally, a TOC limit for the solvent treated briquet system was established in Construction Permit 0780-001. Construction Permit 0699-003 supersedes this limit and establishes a VOC limit. Based on the continuous monitoring required by Construction Permit 0697-010A, this emission unit is considered to have continuous compliance determination methods, and meets the exemption in 64.2(b). Therefore, a VOC CAM plan is not included in this Operating Permit for this emission unit.

In addition to the items detailed above, an analysis was conducted to determine what type of CAM monitoring parameters are typical for cyclones and afterburners. For cyclones, those parameters include pressure drop and opacity. Monitoring of these parameters is already required via Construction Permit 0697-010A. Due to the configuration of cyclones and ACC, 100% of the cyclone air passes through the ACC stack. Therefore, the COMS monitor on the ACC stack also quantifies opacity from the cyclones. For afterburners, typical parameters are temperature and CO emissions. Both of these parameters are continuously monitored through the requirements of CP0697-010A. The addition of further monitoring via the CAM program would simply provide duplicative data, and would not provide additional assurances of compliance.

Greenhouse Gas Emissions

This source may be 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 CO₂ emissions in their Missouri Emissions Inventory Questionnaire; therefore, the installation’s CO₂

emissions were not included within this permit. If required to report, the applicant reports the data directly to EPA. The public may obtain CO₂ emissions data for this installation by visiting <http://epa.gov/ghgreporting/ghgdata/reportingdatasets.html>.

Missouri Code of State Regulations (CSR) Applicability

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

This regulation has been applied as Plant Wide Permit Condition PW3.

10 CSR 10-6.260, *Restriction of Emission of Sulfur Compounds; and*

10 CSR 10-6.261, *Control of Sulfur Dioxide Emissions*

This regulation was marked as applicable in the application. On November 30, 2015 this regulation was rescinded and replaced with 10 CSR 10-6.261, Control of Sulfur Dioxide Emissions. However, 6.260 is still contained in the State Implementation Plan (SIP) and will continue to be an applicable requirement until removed from the SIP. The applicability of these rules is detailed below:

6.260

EP #	Description	Subject to 6.260?	6.260 Applicable Limit	Compliance demonstration
04	Retort furnace ¹	Yes, as a direct heating unit firing #2 fuel oil	Less than 500 ppmv SO ₂ and less than 35 mg/m ³ H ₂ SO ₄ or SO ₃ or any combination averaged on any consecutive 3 hour time period.	Permit Condition PW2 requires the usage of liquid fuels that have less than 0.5% sulfur content.
04	ACC ¹	Yes, as a direct heating unit firing #2 fuel oil or propane		
23	Briquet dryer furnace	Yes, as a direct heating unit firing #2 fuel oil		
42	80 HP Emergency Generator	Yes, as a unit firing #2 fuel oil		
44	240 HP Fire Pump Engine #2	Yes, as a unit firing #2 fuel oil		
	Kerosene fired Maintenance Heaters	Yes, as a unit firing kerosene (#1 fuel oil)		
19	Boiler	No, subject to sulfur requirement in 40 CFR part 60 Subpart Dc. Meets exemption 6.260(1)(A)1.		
TBD	182 HP Fire Pump Engine #3	No, subject to the sulfur requirement in 40 CFR part 60 Subpart III. Meets exemption 6.260(1)(A)1.		
45	Retort Emergency Power Generator	No, subject to the sulfur requirement in 40 CFR part 60 Subpart III. Meets exemption 6.260(1)(A)1.		

¹ These units are subject to this regulation as direct heating units. While they are also used as indirect heating units, their primary purpose is to operate as direct heating units.

The following calculations demonstrate that compliance with the emission limit is achieved by using fuel oil with a sulfur content up to 0.5%. The AP-42 emission factors for #1 and #2 fuel oil are the same for sulfur compounds:

$$\text{Distillate Oil SO}_2 \text{ emission factor (lbs / MMBtu)} = \frac{142(0.5) \text{ lbs}/10^3 \text{ gal}}{140 \text{ MMBtu}/10^3 \text{ gal}} = 0.507 \text{ lb/MMBtu}$$

(AP - 42 Table 1.3 - 1(9/98))

$$\text{ppmv SO}_2 = \left(\frac{0.507 \text{ lb}}{\text{MMBtu}} \right) \times \left(\frac{\text{MMBtu}}{10,320 \text{ wscf}} \right) \times \left(\frac{\text{ppmw}}{1.660E^{-7} \text{ lb / scf}} \right) \times \left(\frac{0.45 \text{ ppmv}}{\text{ppmw}} \right) = 133.22 \text{ ppmv}$$

(Appendix A – 7 to Part 60)

SO₃

$$\text{Distillate Oil SO}_3 \text{ emission factor (lbs / MMBtu)} = \frac{2(0.5) \text{ lbs}/10^3 \text{ gal}}{140 \text{ MMBtu}/10^3 \text{ gal}} = 0.007 \text{ lb/MMBtu}$$

(AP - 42 Table 1.3 - 1(9/98))

$$\text{ppmv SO}_3 = \left(\frac{0.007 \text{ lb}}{\text{MMBtu}} \right) \times \left(\frac{\text{MMBtu}}{10,320 \text{ wscf}} \right) \times \left(\frac{1.602 \times 10^7 \text{ mg ft}^3}{\text{lb m}^3} \right) = 11.088 \frac{\text{mg}}{\text{m}^3}$$

(Appendix A – 7 to Part 60)

6.261

There are eight emission unit types that emit sulfur dioxide this installation, the equipment, applicable limits, and compliance demonstration method are detailed in the table below:

EP #	Description	Subject to 6.261?	6.261 Applicable Limit	Compliance demonstration
04	Retort furnace ¹	Yes, as a direct heating unit firing #2 fuel oil	Limit the fuel sulfur content to less than 8,812 ppm.	Permit Condition PW2 requires the usage of liquid fuels that have less than 0.5% sulfur content. This limit is more restrictive than the limit imposed by the rule; therefore exemption 6.261(1)(C)2 applies. 0.5% converts to 5,000 ppm, which is more restrictive than the applicable limit.
04	ACC ¹	Yes, as a direct heating unit firing #2 fuel oil or propane		
23	Briquet dryer furnace	Yes, as a direct heating unit firing #2 fuel oil		
42	80 HP Emergency Generator	Yes, as a unit firing #2 fuel oil		
44	240 HP Fire Pump Engine #2	Yes, as a unit firing #2 fuel oil		

EP #	Description	Subject to 6.261?	6.261 Applicable Limit	Compliance demonstration
	Kerosene fired Maintenance Heaters	Yes, as a unit firing kerosene (#1 fuel oil)		
19	Boiler	No, subject to sulfur requirement in 40 CFR part 60 Subpart Dc. Meets exemption 6.261(1)(C)1.		
TBD	182 HP Fire Pump Engine #3	No, subject to the sulfur requirement in 40 CFR part 60 Subpart III. Meets exemption 6.261(1)(C)1.		
45	Retort Emergency Power Generator	No, subject to the sulfur requirement in 40 CFR part 60 Subpart III. Meets exemption 6.261(1)(C)1.		

¹ These units are subject to this regulation as direct heating units. While they are also used as indirect heating units, their primary purpose is to operate as direct heating units.

10 CSR 10-6.330, *Restriction of Emissions from Batch-type Charcoal Kilns*

This regulation applies to all batch type charcoal kilns. This regulation defines charcoal kilns as not including retorts and furnaces used for charcoal production.

This installation only uses retorts and furnaces for charcoal production, and does not meet the definition of charcoal kiln. Therefore, this regulation does not apply to the installation.

10 CSR 10-6.390, *Control of NO_x Emissions From Large Stationary Internal Combustion Engines*

This regulation applies to stationary internal combustion engines greater than 1,300 HP located in specific counties in the state, see 6.390(1).

This regulation does not apply to the internal combustion engines at this installation, as they are all rated at less than 1,300 HP.

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

This regulation applies to any activity that emits particulate matter, with exemptions provided in 6.400(1)(B).

The PM emitting units at this installation meet various exemptions in the rule, as explained below:

Exemptions

6.400(1)(B)15 provides an exemption for particulate matter emission units that are subject to federally enforceable requirements to install, operate, and maintain particulate matter control systems that control at least 90% of particulate matter emissions. This conditional exemption applies to the following units:

EP #	Description	Permit Condition requiring controls
EP-04	Single Pass Sawdust Dryer	1
EP-04	Multi-hearth Retort Furnace	1
EP-09	Lignite Silo #1 and #2	4
EP-20	Mixer & Muller	4
EP-38	Raw material silo #6	4

EP #	Description	Permit Condition requiring controls
EP-39	Raw material silo #7	4
EP-15	Starch silo	4
EP-41	Raw material surge tank	4
EP-12A	Sawdust silo with pneumatic conveyance system	6
EP-07	Truck dumping station	6
EP-14	Briquetting Surge Bin	8
EP-24	Briquet transfer	8
EP-27	Briquet packaging	8
EP-30	Starch conveying system	8

The remaining emission points meet the exemptions in 6.400(1)(B)7 for fugitive emission sources, or 6.400(1)(B)12 for units with less than 0.5 lb/hr of potential emissions.

EP-21, Conveyor to 2 briquet roll presses, and EP-22, 2 briquet roll presses meet exemption (B)7. as fugitive sources. The fugitive emissions are controlled through a wet suppression system as specified in the operating permit.

All conveyors and product transfer points are completely enclosed to minimize emissions. The truck dumping station is a structure that receives the unloading material as it is dumped from the back of the truck. The structure has wings that wrap around the outside of the truck as well as two baghouse pickup points to minimize emissions. Based on the extent of the wings and the position of the baghouse pickup points, this unit is expected to achieve at least a 90% overall control efficiency.

The installation has QC burn ovens, however due to product consistency, they are rarely used. The ovens are approximately 2 foot square brick lined openings in the wall. Small piles, about two handfuls, of charcoal are placed inside and burned to determined burn characteristics. The fumes exhaust through the roof to the ambient air. Quantifying and monitoring emissions from these units is impractical due to the small scale and inconsistent usage.

10 CSR 10-6.405, Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating

This regulation applies to fuel burning equipment used for indirect heating, as described in 6.405(1). Indirect heating is defined as the products of combustion not having direct contact with process materials.

The Boiler (EP-19) is fueled by fuel oil #2 and waste heat from the ACC unit (EP-4). The installation has a plant wide limit restricting the fuel oil sulfur content to 0.5% by weight or less. The boiler is the only indirect heating source on site. Therefore, the installation meets the exemption in 6.405(1)(E). The other combustion units on site are direct heating units and do not meet the applicability of this regulation.

Emissions Testing Historical and Current Requirements and Results

Historical and Current Requirements:

The testing requirements for this installation have evolved greatly over time. There are five construction permitting projects that required testing on equipment that currently exists at the plant. During the technical review of this Operating Permit, testing protocols were submitted and were reviewed for 2015 testing. The applicable testing requirements were unclear, so an in depth review was conducted. The results of the review are detailed here for reference. The six permits reviewed here are:

- A. Construction Permit #1093-019
 - B. Construction Permit #0697-010
 - C. Construction Permit #0699-003
 - D. Construction Permit #0697-010A; and
 - E. Construction Permit #062007-012
 - F. Operating Permit OP2010-118, CAM requirements
- A. Construction Permit #1093-019
Requires testing for PM, PM₁₀, opacity, NO_x, CO, TOC and SO₂, all on an annual basis, on the ACC exhaust and briquet dryer exhaust. Testing was conducted, and the permit was subsequently replaced with Construction Permit 0697-010.
 - B. Construction Permit #0697-010
Continues to requires testing for PM, PM₁₀, opacity, NO_x, CO, TOC and SO₂, all on an annual basis, on the ACC exhaust and briquet dryer exhaust. This permit made some changes to the testing requirements based on an analysis of the testing conducted under 1093-019. They are not detailed here because this permit was subsequently replaced with 0697-010A.
 - C. Construction Permit #0699-003
Requires testing to quantify the TOC emissions from the ACC and briquet dryers. This permit changed the TOC emission limit to 15 ppmvd, from the original limit of 10 ppmvd established in CP0697-010. This permit states that testing shall be done as required in Construction Permit 0697-010. It does not specifically state, but historically it was assumed annually.
 - D. Construction Permit #0697-010A
This amendment was issued in 2001 and contains vast changes to the conditions of Construction Permit 0697-010. The transmittal letter accompanying these special conditions states that due to the extensive changes to the special conditions found in the original Construction Permit 0697-010, this document contains a complete revised copy of the special conditions, and the enclosed copy is intended to replace the special conditions and all other elements contained in the original permit.

The transmittal letter explains that the annual performance tests were required primarily because the retort process was an innovative technology and minimal data existed to estimate emission rates. Kingsford successfully conducted the required testing in 1998, 1999, and 2000. The data obtained from these tests confirmed that Kingsford's emissions were in compliance with the permit limits. Evaluation and compilation of the test results indicated that the retort process produces consistent emissions over time. Therefore, the information obtained from future annual testing would be anticipated to duplicate historical data already obtained as well as the information recorded by the CEM units and reported to the APCP. The Special Conditions of this permit, and modifications incorporated into this Operating Permit are detailed below:

- I. Special Condition # III-A contains the requirements for performance testing. It refers to testing for PM to comply with the limit in Special Condition #II-B. However Special Condition # II-B contains a PM₁₀ limit. This permit does not contain a PM limitation, therefore it has been assumed that the references to PM in Special Condition #III-A are typographical errors and the intent was to require testing for PM₁₀ in order to demonstrate compliance with the PM₁₀ limit.
- II. Special Condition #III-A also requires that performance testing conditions shall be consistent with historical testing and consistent with conditions set forth in Special Condition #17, 18, 23, 24, 25, and 27 through 36 of Construction Permit #0697-010. Those special conditions are discussed below:
 1. Special Condition #17 requires that PM from both the dryer exhaust and cooler vents, and PM₁₀ from the ACC and briquet dryer be determined. However, the PM requirement has not been carried forward into this Operating Permit. The PM requirement was an artifact from an earlier construction permit that established a PM emission limit, and the purpose of determining these emissions during testing was to demonstrate compliance with the limit. Through various construction permitting amendments, the PM limit was discontinued, while the PM₁₀ limitation has been carried forward. The condition has been modified in this permit to only reference the PM₁₀ testing, as it is required to demonstrate compliance with the PM₁₀ limit established by the Construction Permit.

This Special Condition also contains a requirement perform emissions testing using the worst case feed stock. This is typical language for a unit that contains multiple feed stocks. However, at this installation, all types of woods are mixed together in the sawdust storage pile using dozers. The feed stock comes from approximately 125 different local suppliers, and is aged in the storage pile between 1-4 months. It is not possible to quantify the components of the mixed feed stock, other than it is all hardwood species. The mixture is put through the process, individual wood types are not processed alone. Therefore the requirement to use the worst case feed stock does not appear in this Operating Permit. The installation is still required to record the amount of feed stock used during the performance test.

This Special Condition also contains a requirement to keep the briquet feed rate to the dryers close to 20 tons per hour. When this permit was issued in 1997, the approximate maximum hourly design rate of the dryers was 22 tons per hour. However, over time the process has changed and the current equipment MHDR is approximately 32 TPH, however the units typically run at 25 TPH to produce briquets compliant with the manufacturing specifications. This increase in MHDR has been documented via construction permitting actions. As the operating rate increases, the emissions increase as well. Therefore, testing at the 20 TPH in this permit condition does not represent worst case emissions and the feed rate requirement has been removed. Testing shall be conducted under the feed rate established by the installation (no greater than 32 TPH, as permitted),

and that feed rate will become the maximum allowed feed rate under the provisions of Special Condition #30 of Construction Permit #0697-010.

This Special Condition also requires the ACC exhaust gas to be vented through the dryers during the particulate testing of the dryers. However, this requirement does not accurately portray operations during all three operating scenarios. Scenario #1, with the ACC and dryers operating simultaneously does have some of the ACC exhaust gas diverted from the ACC stack to the dryers. This is irrespective of whether the retort is running during this scenario. Including this requirement for this operating scenario would be redundant, as it is inherent to the operating scenario. Under operating scenario #2, with the ACC operating and the dryers not operating, ACC gases are not routed to the dryers and 100% of the ACC gas passes through the ACC stack. Also, under scenario #3, with the dryers operating alone, the ACC is not operating, and there are no ACC exhaust gases to route through the dryers. It would not be appropriate to include this requirement for operating scenarios #2 and #3. Therefore, this requirement has not been included in this Operating Permit.

2. Special Condition #18 requires the determination of the opacity of the ACC exhaust and briquet dryer exhausts, and has not been modified in this Operating Permit.
3. Special Condition #23 requires the ACC retention time to be included in the performance test results and has not been modified in this Operating Permit.
4. Special Condition #24 details the location at which the ACC temperature shall be determined and has not been modified in this Operating Permit.
5. Special Condition #25 states that compliance will be considered shown only for those wood types for which the tested wood represents the worst case emissions. However, as explained above, this is typical language for a multiple individual feed stock situation. Since this installation mixes the different types of woods and feeds the mixture to the process, there is no worst case feed type. Therefore, this special condition has been changed to state that compliance is shown for the feed stock used during the test.
6. Special Condition # 27 through 36 contain standard language for performance testing, such as pre-arranging test with the APCP with at least 30 days notice, submitting two copies of the results, etc. Special Conditions #30 specifies that testing must be conducted under the condition of 10% of the maximum process rate, and that the tested rate will become the maximum production rate at which the source can operate. The maximum rate may be re-established with each test. These requirements have not been modified and appear in this Operating Permit. Special Condition #28 required the testing results to be submitted within 30 days. However, due to the usage of the Selective Electron Microscopy (SEM), more time is needed to compile the results. This permit has changed the 30 day

deadline to a 45 day deadline to provide the time needed to analyze the SEM results.

Clarifications incorporated into this Operating Permit:

The testing requirements are detailed in Permit Condition 1. In summary, the performance testing must be conducted every 5 years and must evaluate compliance with the following limitations and operating scenarios. Since the only testing requirement in this Construction Permit is for PM₁₀ and opacity, continued testing of the other pollutants was determined to be voluntary and has been discontinued effective with the 2015 testing. As described in the transmittal letter to Construction Permit 0697-010A, testing indicates stable emissions over time for these pollutants, many of which are monitored by CEMs, and continued voluntary testing was deemed unnecessary to demonstrate compliance with emission limitations.

Operating Scenario	Emission Limitations		
	PM ₁₀ Emission Limit	Units	Opacity Limitation
#1: ACC and briquet dryers combined ^A	36.73	Lb/hr; and	10% (by COMS)
	6.12	Lb/ton char produced	
#2: ACC (briquet dryers down)	38.15	Lb/hr; and	12% (by COMS)
	6.36	Lb/ton char produced	
#3: Briquet dryer (ACC and retort down)	7.38	Lb/hr	5% (by Method 9)

^ADuring Operating Scenario #1 operation of the retort is optional. However, for emissions testing purposes, the testing must be conducted with the retort operational. This represents the worst case scenario for emissions.

Although not detailed in construction permitting, some modifications from standard testing method are required for this installation due to the high temperatures in the ACC stack (1600°F to 2000°F). As required, Kingsford submitted testing protocols in fall 2015 for December testing. During the review of the testing protocols, the usage of the Anderson Mark III 8-stage Impactor was questioned. The initial determination to use this unit was made 20 years ago, and it is questionable whether additional technologies have emerged during that time which may be better at quantifying PM₁₀ from a high temperature stack. The decision was made to move forward with using the Anderson impactor for the 2015 testing. However, documentation must be submitted prior to the next round of testing to validate the continued usage of the Anderson Mark III 8-stage impactor or an alternative particle sizing device/approach for testing PM₁₀ emissions from the ACC stack.

E. Construction Permit #062007-012

Requires testing for PM₁₀, SO_x and NO_x on the ACC exhaust and briquet dryer exhaust after the proposed modifications are completed. This is a one-time testing requirement. The emissions increase determination of this permit was based on a baseline actual to projected actual analysis. The testing is required to verify the projected actual emissions used in the evaluation. These testing requirements have been satisfied and do not appear in this Operating Permit.

F. Operating Permit OP2010-118, CAM requirements

The CAM plan contained in OP2010-118 required testing no later than June 30, 2011 to establish the ongoing three hour rolling average temperature indicator range/excursion level on the ACC exhaust. The indicator range/excursion level then became that three hour rolling average temperature that is successfully demonstrated to achieve compliance with the applicable PM, PM₁₀, and VOC emission limits. This testing, as well as CAM requirements, is discussed in detail in the CAM section of this Statement of Basis.

Results:

The most recent testing was performed on December 8-10, 2015; with results verified by the program on May 11, 2016. The review letter appears in Appendix 1 of the Statement of Basis.

Continuous Monitoring Systems and Continuous Opacity Monitoring Systems:

Carbon monoxide (CO) CEMS, Nitrogen Oxide (NO_x) CEMS, and Carbon Dioxide (CO₂) CEMS

Construction Permit #0697-010A requires the installation of these CEM units in the ACC stack (see Special Conditions #IV-B, IV-D, and IV-E). Each of these CEMS units must comply with 40 CFR part 60 Subpart 60.13. Since these CEM units are required to demonstrate compliance with an emission limit on a continuous basis, they must comply with 40 CFR part 60, Appendix F (see §60.13(a)). Appendix F requires a RATA at least once every four calendar quarters (see Procedure 1, Section 5, Part 5.1.1). For the current RATA period, testing was performed during December 8-10, 2015; with results verified by the program on March 23, 2016. The review letter appears in Appendix 2 of the Statement of Basis.

Continuous Opacity Monitor (COMS)

A COMS is required to monitor the opacity from the ACC stack by Construction Permit 0697-010A, Special Condition # IV-C. This special condition also states that the COMS is subject to the monitoring requirements in 40 CFR part 60 Subpart 60.8. However, §60.8 does not contain monitoring requirements, it contains performance test requirements. These requirements are general and do not specifically apply to COM units. Therefore, this Operating Permit has corrected the reference to state that the COMS must comply with the monitoring requirements of §60.13.

Other Regulatory Determinations

Reporting Schedule

This permit changes the reporting frequency of the quarterly reports required by Construction Permit 0697-010A to a semiannual frequency, to be included with the semiannual and annual compliance certifications. These changes from the construction permit are found in Permit

Condition 1 and are detailed in the Construction Permit History section of this Statement of Basis. The Settlement/Termination Agreement cited for Permit Condition 2 requires that PRD time must be coded on these reports. The agreement concerns itself with the coding of these events, and does not require these reports to be submitted quarterly. Permit Condition 2 also reflects the change in reporting frequency, and continues to require the PRD coding on these reports.

After Combustion Chamber Burner Size

On February 8, 2016, the installation submitted a letter detailing a discrepancy with the size of the fuel oil burners for the After Combustion Chamber, ACC (EP-04). During a recent visit by the manufacturer, it was discovered that 56.5 MMBtu/hr burners were installed instead of 40 MMBtu/hr burners. These are the original burners, and have not changed since initial

construction of the installation. Although the permitted rate is 40 MMBtu/hr, operating these larger burners does not cause any compliance issues. The limitations imposed by the issued permits are not changed due to burner size. All performance testing has been conducted with the larger burners, and testing has always indicated compliance with the permitted limits.

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 APCP'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 APCP a schedule for achieving compliance for that regulation(s).

Appendix 1: Performance testing conducted December 8-10, 2015



May 11, 2016

Mr. Steve Miller, Plant Manager
 Kingsford Manufacturing Company
 21200 Maries Road 314
 Belle, Missouri 65013

RE: Charcoal Briquet Manufacturing Particulate Matter ≤ 10 Micrometers in Diameter (PM₁₀)
 Performance Test (PT) - December 8–10, 2015

Dear Mr. Miller:

On December 8–10, 2015, Kingsford Manufacturing Company (Kingsford), located at 21200 Maries Road 314, in Belle, Maries County, Missouri, retained Environmental Quality Management, Inc. (EQM), located at 1800 Carillon Boulevard, in Cincinnati, Ohio, to conduct performance testing in accordance with Part 70 Operating Permit No. OP2010-118 on the equipment listed in Table 1 and Table 2.

Staff from the Missouri Department of Natural Resources' Air Pollution Control Program recalculated EQM's data reduction. The program substantially agrees with their conclusions tabulated below.

Table 1			
Emission Unit	PM ₁₀ Measured Emission Rate	PM ₁₀ Permit Limit	
Condition #1 (tested 12/9/2015): ACC and Briquet Dryer Operating Collectively			
EU0010 - ACC	21.93 lb/hr ^{1,3}		
	2.62 lb/ton char ^{2,3}		
EU0130 – Briquet Dryer	4.37 lb/hr ¹		
	0.16 lb/ton char ²		
Normal Operation (Combined Emissions)	26.30 lb/hr ^{1,3}		36.73 lb/hr ¹
	2.78 lb/ton char ^{2,3}		6.12 lb/ton char ²
Condition #2 (tested 12/8/2015): ACC Only (100% Flow with Dryer Not Operating)			
EU0010 - ACC	26.58 lb/hr ^{1,3}	38.15 lb/hr ¹	
	3.29 lb/ton char ^{2,3}	6.36 lb/ton char ²	
Condition #3 (tested 12/10/2015): Briquet Dryer Only (Auxiliary Burner with ACC Not Operating)			
EU0130 – Briquet Dryer	2.92 lb/hr ¹	7.38 lb/hr ¹	

1. Pounds per hour. 2. Pounds per ton of char produced. 3. Results calculated using Scanning Electron Microscopy (SEM) analysis.

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Table 2		
Emission Unit	Average Opacity %	Opacity % Permit Limit
Condition #1 (tested 12/9/2015): ACC and Briquet Dryer Operating Collectively		
EU0010 – ACC & EU0130 – Briquet Dryer Normal Operation (Combined Emissions)	1.71 ⁴	10
Condition #2 (tested 12/8/2015): ACC Only (100% Flow with Dryer Not Operating)		
EU0010 - ACC	3.33 ⁴	12
Condition #3 (tested 12/10/2015): Briquet Dryer Only (Auxiliary Burner with ACC Not Operating)		
EU0130 – Briquet Dryer	0 ⁵	5

4. Average determined by Continuous Opacity Monitoring System (COMS). 5. Average determined by Method 9 observations.

Facility Overview

Kingsford operates a 300,000 sq. ft. charcoal briquet manufacturing facility. They manufacture and package Kingsford® brand charcoal and Matchlight® brand solvent treated products. Kingsford produces charcoal briquets by first conveying wet wood (sawdust) to a mixing chamber and then into a wood dryer drum. After drying, the sawdust is fed to the wood dryer’s drop out box and then conveyed to a retort-charring furnace, which turns the sawdust into char, to make the briquets. Kingsford uses high efficiency cyclones to capture airborne sawdust (particulate) exiting the wood dryer and high efficiency cyclones on the furnace discharge. They duct the air streams exiting the cyclones to the after combustion chamber (ACC) and transfer thermal energy (waste heat) generated by the ACC, to the wood dryer drum and briquet drying process. The facility is a minor source of hazardous air pollutants (HAPs). Kingsford submitted a Part 70 operating permit renewal application, currently under technical review, on March 25, 2015, and currently operates under Part 70 Operating Permit No. OP2010-118, issued November 5, 2010.

Performance Testing Objectives

Kingsford tested to demonstrate compliance with the following:

- Part 70 Operating Permit No. OP2010-118 and Permit to Construct No. 0697-010A, Special Condition III.

Special Condition III.A. states:

“Kingsford shall conduct performance testing for PM, from both the ACC and briquet dryers in order to demonstrate compliance with Special Condition II.B. Performance testing conditions shall be consistent with historical testing conducted by Kingsford and consistent with conditions set forth in Special Conditions 17, 18, 23, 24, 25, 27 through 36...”

Special Condition II.B. states:

“The maximum particulate matter less ten microns (PM₁₀) emission rates allowed from the ACC and briquet dryers combined are 36.73 pounds per hour and 6.12 pounds per ton of char produced.

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When the briquet dryers are down, the maximum ACC PM₁₀ emissions rates allowed are 38.15 pounds per hour and 6.36 pounds per ton of char produced. When the retort and ACC are down, the maximum briquet dryer PM₁₀ emission rate allowed is 7.38 pounds per hour."

Additionally, Kingsford is required to comply with the following requirements pulled forward from Permit to Construct No. 0697-010:

- o *The opacity of the ACC exhaust and briquette dryer exhausts shall be determined. [Special Condition #18]*
- o *The actual ACC retention time shall be calculated or determined and included in the written report of the performance test results. [Special Condition #23]*
- o *The temperature in the ACC shall be determined a minimum of 2 seconds downstream from the entrance of the ACC and included in the written report of the performance test results. [Special Condition #24]*
- o *Compliance will be considered shown for only those wood-types (or less polluting wood-types) represented during the performance testing that demonstrates compliance with the emission limitations. The amount and types of sawdust processed during the performance test must be representative of the worst polluting amount and wood-types that the permittee will process at any time. These types shall be documented as part of the test results. [Special Condition #25]*
- o *Performance testing shall be conducted under the condition of maximum process/production, or within 10% of this rated capacity. The process/production rate at which performance testing is conducted shall become the maximum process/production rate at which this source of emissions is permitted to operate, under the authority granted by this permit. If a greater process/production rate is desired, then performance testing and compliance demonstration at the greater rate shall be required. [Special Condition #30]*
- o *Actual conditions under which performance testing is conducted shall be recorded every 15 minutes throughout each of the test runs. These conditions are to include all relevant process/production parameters as well as all parameters relating to the status of emission controls. This data is to be included in the emissions test report. [Special Condition #31]*
- o *Testing shall be conducted during periods of representative conditions at the maximum process/production rates or within 10% of this rate, not to include periods of startup, shutdown, or malfunction. [Special Condition #32]*

Note: Special Condition 17 requires that PM from both the dryer exhaust and cooler vents, and PM₁₀ from the ACC and briquet dryer be determined. The new Operating Permit will not include the PM requirement. The PM requirement was an artifact from an earlier construction permit that established a PM emission limit. Through various construction permitting amendments, the PM limit was discontinued, while the PM₁₀ limitation will be carried forward.

Special Conditions 27–29, 33–36 are not stated, as they are conditions of formality.

Methodology

EQM tested emissions according to the methodology in 40 CFR Part 60, Appendix A, using United States Environmental Protection Agency (EPA) Promulgated Test Method:

- 1 for sample and velocity traverse.
- 2 for determination of stack gas velocity and volumetric flow rate.
- 3 to determine oxygen (O₂) and carbon dioxide (CO₂) concentrations.

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- 4 for determination of stack gas moisture at combustion sources.
- 5 for determination of filterable particulate matter.
- 9 for determination of visible emissions.
- 201A for determination of PM₁₀ emissions.
- 202 for determination of condensable particulate matter.

EQM determined filterable particulate matter concentrations following EPA Method 5 procedures, using a sampling train consisting of an air cooled quartz probe, heated quartz filter with temperatures maintained at $248^{\circ} \pm 25^{\circ}\text{F}$, and a series of impingers followed by a vacuum pump, dry gas meter, and calibrated orifice. They followed EPA Method 202 procedures for measuring condensable particulate matter combined with the Method 5 sampling trains used at the ACC exhaust.

EQM determined PM₁₀ emissions at the main dryer exhaust by following EPA Method 201A and 202 procedures. For Method 201A, EQM employed a sampling train, collected samples isokinetically at a fixed sampling rate with the number of minutes sampled at each traverse point determined by the ratio of the point velocity to the average velocity. They measured velocity and temperature at each traverse point.

Field data sheets provided with the test report show EQM performed pre and post-leak checks before and after each test run for the particle size sample trains. To avoid disturbing the particulate catch, they removed the Andersen cutoff-cyclone prior conducting the post-leak check. EQM purged the particle sizing sample trains with ambient air from the probe nozzle back through the impinger train. They disassembled the sample train and rinsed and brushed the quartz probe with acetone collecting the rinsate in a sample bottle. EQM also conducted this procedure on the impactor pre-separator, collecting the rinsate in a separate sample bottle. They recovered the impactor in the sample recovery trailer. After recovery, the particulate fractions of the nozzle, probe, particle-sizing device, impingers and rinsate were evaporated to dryness at 100°F and desiccated to a constant weight. For Method 202, EQM recovered the back half of the train with distilled water and acetone/hexane rinses for condensable PM. EQM submitted these samples to ALS Global in Cincinnati, Ohio for condensable analysis.

Kingsford conducted visible emissions observations according the EPA Method 9 at EU0130 on December 9 and 10, 2015. Observations occurred at the same time particulate testing occurred with measurements, recorded every fifteen (15) seconds for thirty (30) minutes, documenting zero visible emissions.

EQM documented quality assurance included the use of calibrated source sampling equipment, reference test methods, and traceability protocols for recording and calculating data.

Unique Apparatus /History

Andersen Mark III Eight Stage Cascade Impactor – The apparatus is a multi-stage, multi-jet impactor made of stainless steel with Inconel O-rings, capable of withstanding temperatures of 850°F, for use in stack analysis of particulate emission applications. Withdrawn under isokinetic conditions, the cascade impactor segregates particulate matter by size. The impactor:

- uses the principle of inertial separation to size segregate particulate samples from the gas stream.
- has eight stages for particle-size determination.
- gives a cut-point based on aerodynamic diameter of the particle.

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During sampling, particles are driven (jetted) toward a collecting surface where they may adhere. By changing the velocity (orifice size of the jet), the size of the particles collected is controlled. The size of the jets within each stage is constant, but for each succeeding stage, the jets get smaller. Impaction occurs when the particle's inertia overcomes the aerodynamic drag. Meaning, the particle remains in the air stream and proceeds to the next stage. The impactor must be operated at a constant flow rate to keep the cut-point for each stage constant. At each stage, particles impact on a desiccated, tared, glass fiber mat. Following sampling, samples are cooled in a desiccator and weighed.

In the mid 1990's, EQM worked with program staff and Lane County (Oregon) Regional Air Pollution Control Agency (LRAPA) personnel to develop a method to measure PM₁₀ in the ACC outlet stack. Stack temperatures for the ACC typically exceed 1500°F. Initial testing, using stainless steel and Inconel alloy PM₁₀ heads, proved the particle-sizing devices would not tolerate the elevated temperatures. The metal fused together rendering samples unrecoverable. EQM slightly modified the method, repositioning the particle-sizing device outside the stack, mounted in-line directly behind the probe inside the heated filter box, and prior to the impinger section of the sample train.

With this configuration, EQM tested running a Method 5/202 train to get the total particulate concentration (filterable and condensable). By selecting this method, EQM was able to:

1. obtain a good sample volume (at least 30 cubic feet), which they can get with the Method 5/202 train;
2. use the particle-sizing device to get the PM₁₀ percentage in the ACC stack;
3. apply the PM₁₀ percentage to the Method 5 data to get the final PM₁₀ filterable particulate, and then add in the inorganic and organic condensables to get total PM₁₀.

EQM determined particulate size distribution at the ACC outlet by using the multistage particle-sizing device with the addition of a pre-separator with a particle cut-point of 13 microns. They made the following historical modifications, as recommended by program staff and LRAPA personnel. They:

- used a heated out-of-stack Andersen impactor and pre-separator.
- operated the sampler at an optimum flow rate of 0.3 to 0.5 actual cubic foot per minute to ensure an optimum cut-point in the impactor.
- completed and recovered the first sample run and adjusted the sampling times and volumes based on the first run, to optimize the following samples, prior to starting the second sample run.
- executed a clean air purge through a Method 5 filter for 10 minutes at the end of each sampling run.
- purged approximately 7 cubic feet of clean air through the entire system at the actual sampling rate used during the test. After this purge was performed, the material remaining in the probe was considered similar in size to the pre-separator cut-point (13-15 microns) and impactor stages (less than 10 microns).
- monitored the impactor temperature at the inlet to the pre-separator and at the exit of the filter body prior to the impinger section of the sample train to determine particulate cut size in the impactor and ensure that the sampling stream did not condense moisture within the filter stages.

EQM employed Scanning Electron Microscopy (SEM) to image the particulate matter. SEM uses a focused beam of high-energy electrons to generate a variety of signals at the surface of solid specimens. Accelerated electrons in a SEM instrument carry significant amounts of kinetic energy. When incident electrons decelerate in a solid sample, kinetic energy dissipates as a variety of signals produced by electron-sample interactions. SEM measurements of particle size distributions can determine particle sizes smaller than 0.5 micron (µm) and are able to determine the number fraction of particles of a given size. The report

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stated, the cut sizes determined on the desiccated probe rinses were 0.5 μm - <1.0 μm ; 1.0 μm - <2.5 μm ; 2.5 μm - <5.0 μm ; 5.0 μm - <7.5 μm ; 7.5 μm - <10.0 μm ; and >10.0 μm . Prior to SEM analysis, the desiccated probe rinse, suspended in solvent, is placed on a polycarbonate filter and re-desiccated. An equivalent sized section of filter is subjected to the SEM in the ranges requested. Within each size range, particles are counted and the mass of each particle estimated. Data is presented in percentages of particles in the various ranges by the number of particles, and in percentages of particles in the various diameter ranges by their mass.

SEM is a 2-dimensional image that displays high-resolution images of shapes of objects spatial variations. During discussions with EPA Region VII and EPA's Emission Measurement Center (EMC), the EMC emphasized, testing for PM₁₀ emissions is based on the aerodynamic equivalent diameter of a particle collected with 50% efficiency (d₅₀ cut-point) at 10 μm and currently a correlation factor between SEM results and a measurement of equivalent aerodynamic diameter is not available. To better assess the SEM results, EPA Region VII requested EQM develop a correlation factor between the SEM analysis and cascade impactor cuts.

At the request of EPA Region VII, EQM conferred with MVA Scientific Consultants (MVA), located at 3300 Breckinridge Blvd., Suite 400, in Duluth, Georgia. MVA provides SEM imaging and analytical services. According to MVA, for the probe fraction, there is no way to measure aerodynamic diameter, as the SEM measures actual dimensions of particles, not aerodynamic diameter and, all particles are assumed similar based on a defined density. EQM stated, they recognize there are biases with the SEM, but emphasized that they only use the data to estimate the particle size distribution of the probe rinse. In theory, they believe the probe rinse distribution consists of particles larger than PM₁₀ and if the program agreed, Kingsford and EQM would be in favor of simplifying the procedure by designating the probe fraction as such, the pre-separator at 12 microns or higher and the 8-stages of impactor all <PM₁₀. This approach would not require SEM analysis.

During further discussion, EQM conveyed, approximately 8 years ago, program staff requested the SEM analyses to differentiate PM₁₀ in the probe rinse. After thorough review and consideration, the program believes there are uncontrolled variables in the probe PM recovery process that can adversely affect PM₁₀ determination. The SEM analysis only determines particulate matter <PM₁₀ in the probe rinse. To acquire the total <PM₁₀ percentage, EQM combines the <PM₁₀ determined by the particle-sizing device with the SEM <PM₁₀, and applies the percentage to the total PM measured at the ACC outlet stack using Method 5/202 to determine a <PM₁₀ concentration. The program presumes SEM analyses to be relatively accurate. However, the uncontrolled variables in the probe PM recovery process raise concern and, introduce unacceptable inaccuracies that can bias <PM₁₀ determination, therefore indirectly influencing SEM analyses. The program hereby rescinds (as required by the attached May 7, 2008 letter) the requirement for Kingsford to utilize SEM to determine particle size distribution in the probe rinse for all future PM₁₀ emissions testing.

For testing high- temperature sources at temperatures up to 1,371°C (2,500°F), Method 201A recommends using particle-sizing devices constructed of high-temperature specialty metals such as Inconel, Hastelloy, or Haynes 230. EQM uses air-cooled probes made from Inconel alloy, an alloy of nickel containing chromium and iron, resistant to corrosion at high temperatures. They insert quartz glass liners into the probes for the Method 5/202 and PM₁₀ testing. The Inconel alloy probe-sheathes support the quartz liners and have no threaded connections, as threaded connections tend to be difficult to get apart after subjecting them to such high temperatures. When asked about PM₁₀ particle-sizing devices and nozzles to fit them, EQM reported most are made of stainless steel, which is easier to machine. Apex, Cherokee, and Clean Air Engineering, all

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companies that buy and sell PM₁₀ particle-sizing devices, will not guarantee the devices can be disassembled after subjecting them to temperatures over 1200°F. EQM, during a previous test event, after using an Inconel Method 202 PM₁₀ particle-sizing device (No threads - using high temperature tape to leak check connections, with break-away bolts to hold the sections of the particle sizer together) reported it worked up to 850°F, but appeared galled after use. EQM further stated they have never seen a PM₁₀ particle-sizing device made of Hastalloy or Haynes 230 alloy and, with Inconel, Hastalloy and Haynes 203 alloys having significant amounts of nickel and chromium, these metals tend to flake off when utilized in the ACC native environment, contributing significant amounts of particulate contaminants that can be entrained in the stack samples.

In summary, due to the elevated temperatures in the ACC outlet stack and for lack of a better approach, the program considers the method developed by Kingsford and EQM to measure PM₁₀, an acceptable method. The Andersen Mark III Eight Stage Cascade Impactor, following the historical modifications, determines particulate matter <PM₁₀ using filter stages in the impactor, similar to that of a PM₁₀ cyclone following Method 201A procedures. Jettisoning the requirement to analyze for particle size distribution of the probe rinse, use of the Anderson impactor outside the ACC outlet stack will be acceptable if Kingsford meets Conditions One (1) through Six (6) described below, some of which are previously stated in the program's letter (see attached) dated September 20, 1995. As of the date of this document, Kingsford is no longer required to meet Condition Three (3) of the letter, which states "ratio of probe/nozzle catch and total particulate will be calculated to determine the extent of wall losses. Probe/nozzle fraction should not exceed 15%."

Condition (1) – *If possible a nozzle with a simple large radius elbow should be used rather than a standard "buttonhook" nozzle to minimize wall losses in the nozzle.*

Condition (2) – *A clean air purge will be conducted through a standard Method 5 filter placed before the nozzle to move particulate from the probe and nozzle to the impactor. The purge should be performed at the actual sampling rate during the test. At least seven (7) cubic feet of clean air should be run through the system. After this purge is performed, the material remaining in the probe will be considered particles larger than PM₁₀.*

Condition (3) – *Heated out of stack Anderson impactor and pre-separator will be used. Pre-Separator will determine particles at a 13-15 micron cut-point. The impactor at stage one (1) thru eight (8) will be particles equal to or less than PM₁₀.*

Condition (4) – *The inlet and outlet temperature of the impactor will be monitored during each of the sampling runs. The impactor temperature will then be used to determine particle size ranges of the impactor stages.*

Condition (5) – *The sampler will be operated at an optimum flow rate of 0.3 -0.5 actual cubic feet per minute. This will insure an optimum cut-point in the impactor.*

Condition (6) – *After the first sampling run is performed, that sample will be recovered prior to the next sampling run. The sampling times and volumes will be adjusted based on the first run to optimize the following samples to ensure an appropriate sample volume is attained.*

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Deviations

Other than the prior approved alternate testing method using the multistage particle-sizing device, no other deviations from EPA methods occurred during the PT. The program prefers testing be conducted in a manner compliant with only promulgated test methods, but understands that deviations may be required on a site-specific basis. Due to the deviations required for this testing, the program will require Kingsford to evaluate other test method options and include this evaluation in all future testing proposals. These other test method options must include technology that is available during the time each proposal is submitted.

Operations

Appendix F of the performance test report, documented the following production data.

Table 3					
Emission Unit	Production Rate (tons/hr.) ⁶		ACC Retention Time (seconds)	ACC Stack Temperature °F	Feedstock Rate (tons/hr.)
Condition #1 (tested 12/9/2015): ACC and Briquet Dryer Operating Collectively					
EU0010 – ACC & EU0130 – Briquet Dryer Normal Operation (Combined)	Char	8.38	3.99	1750.22	26.69
	Briquet ⁷	26.96			
Condition #2 (tested 12/8/2015): ACC Only (100% Flow with Dryer Not Operating)					
EU0010 - ACC	Char	8.09	2.85	1769.45	25.95
	Briquet ⁷	0			
Condition #3 (tested 12/10/2015): Briquet Dryer Only (Auxiliary Burner with ACC Not Operating)					
EU0130 – Briquet Dryer	Char	0	NA	NA	NA
	Briquet ⁷	26.22			

6. Maximum process/production rate tested at which this source of emissions is permitted to operate, or within 10% of this rated capacity. 7. Permitted maximum briquette feed rate (not to exceed) = 32 tons/hr.

Production data provided in Appendix F show relevant process/production parameters recorded every fifteen (15) minutes throughout each test run as required by Special Condition 31.

Kingsford mixes all types of hardwoods in their sawdust storage pile. Feedstock, introduced to the process, comes from approximately 125 different local suppliers. It is aged in the sawdust storage pile between one (1) and four (4) months.

Average temperatures measured by EQM at the ACC stack during the test event, measured slightly below that provided by Kingsford in Appendix F. For testing conducted on December 8, 2015, the 3-run average stack temperature measured 1724 °F and on December 9, 2015, measured 1723 °F.

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Thank you for your cooperation. If you have any questions, please contact me at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102-0176, by e-mail at steve.sidebottom@dnr.mo.gov or by telephone at (573) 751-4817.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



James S. Sidebottom
Environmental Scientist

JSS:dd

- c: (all parties below via E-mail)
Mr. Gary Bertram, EPA Region VII
Ms. Amy Baker, Southeast Regional Office, Air Pollution Control Program
Mr. Stephen Hall, Air Quality Analysis, Air Pollution Control Program
Ms. Nicole Weidenbenner, Permits, Air Pollution Control Program
Environmental Quality Management, Inc.
Source File: #125-0001

Appendix 2: Retort After Combustion Chamber CEMS Relative Accuracy Test Audit (RATA)



MAR 23 2016

Mr. Steve Miller, Plant Manager
 Kingsford Manufacturing Company
 21200 Maries Road 314
 Belle, Missouri 65013

RE: Retort After-Combustion Chamber (EU0010) Continuous Emissions Monitoring System (CEMS) Relative Accuracy Test Audit (RATA), December 8, 2015

Dear Mr. Miller:

On December 8, 2015 Kingsford Manufacturing Company (Kingsford), located at 21200 Maries Road 314, in Belle, Maries County, Missouri, retained Environmental Quality Management, Inc. (EQM), located at 1800 Carillon Boulevard, in Cincinnati, Ohio, to conduct performance testing in accordance with Part 70 Operating Permit No. OP2010-118 on the equipment listed in Table 1.

Staff from the Missouri Department of Natural Resources' Air Pollution Control Program (APCP) recalculated EQM's data reduction. The APCP substantially agrees with their conclusions tabulated below.

Unit	Parameter	Rel Acc %	PS	Limit	Pass/Fail
Retort After-Combustion Chamber (EU0010)	NO _x ppmvd ¹	5.17	2	<20.0 of RM	Pass
	CO ₂ % ²	0.02	3	<1% CO ₂	Pass
	CO ppmvd ³	1.70	4	<5.0 of RM	Pass

1 - Nitrogen Oxide (NO_x) Parts Per Million by Volume Dry, Corrected to 12% CO₂. 2 - Carbon Dioxide (CO₂) Percent by Volume Dry.
 3 - Carbon Monoxide (CO) Parts Per Million by Volume Dry, Corrected to 12% CO₂.

Facility Overview

Kingsford operates a 300,000 sq. ft. charcoal briquet manufacturing facility. They manufacture and package Kingsford® brand charcoal and Matchlight® brand solvent treated products. Kingsford produces charcoal briquets by first conveying wet wood (sawdust) to a mixing chamber and then into a wood dryer drum. After drying, they duct the sawdust to the wood dryer's drop out box and convey it to a retort-charring furnace, which turns the sawdust into char, to make the briquets. Kingsford uses high efficiency cyclones to capture airborne sawdust (particulate) exiting the wood dryer and further conveyed to the retort-charring furnace; and, return the airborne portion of char exiting the retort-charring furnace to the briquetting process. They duct the air streams exiting the cyclones to the after combustion chamber (ACC) and transfer thermal energy (waste heat) generated by the ACC, to the

Mr. Steve Miller
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wood dryer drum and briquet drying process. The facility is a minor source of hazardous air pollutants (HAPs). Kingsford submitted a Part 70 operating permit renewal application, currently under technical review, on March 25, 2015, and currently operates under Part 70 Operating Permit No. OP2010-118, issued November 5, 2010.

Performance Testing Objectives

Kingsford tested to demonstrate compliance with the following:

- ~ Part 70 Operating Permit No. OP2010-118, Permit Condition EU0010-001 and EU0130-001

Monitoring:

1) Continuous Monitoring Systems:

- b) A carbon monoxide (CO) continuous emission monitoring and recording system shall be installed, calibrated, maintained and operated for measuring CO emissions discharged to the atmosphere from the ACC. This system shall monitor carbon monoxide and record carbon monoxide in ppmv corrected to 12% CO₂. This continuous emission monitoring system shall adhere to the monitoring requirements contained in §60.13 of 40 CFR Part 60....
- d) A nitrogen oxides continuous emission monitoring and recording system shall be installed, calibrated, maintained and operated for measuring nitrogen oxides emissions discharged to the atmosphere from the ACC. This continuous emission monitoring system shall adhere to the monitoring requirements contained in §60.13 of 40 CFR Part 60....
- e) A carbon dioxide (CO₂) continuous emission monitoring and recording system shall be installed, calibrated, maintained and operated for the purpose of correcting carbon monoxide and nitrogen dioxide monitoring results from the ACC to 12% CO₂. The CO₂ continuous emission monitoring shall adhere to the monitoring requirements contained in Section 60.13 of 40 CFR Part 60....

- ~ §60.13 Monitoring requirements.

- (c) ...the owner or operator of an affected facility shall conduct a performance evaluation of the...continuous emission monitoring system....

- ~ Appendix B to Part 60—Performance Specifications

Performance Specification 2—Specifications and Test Procedures for...NO_x Continuous Emission Monitoring Systems in Stationary Sources

- ~ 13.2 Relative Accuracy Performance Specification. The RA of the CEMS must be no greater than 20 percent when \overline{RM} is used in the denominator...

Performance Specification 3—Specifications and Test Procedures for...CO₂ Continuous Emission Monitoring Systems in Stationary Sources

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- ~ 13.2 CEMS Relative Accuracy Performance Specification. The RA of the CEMS must be no greater than 20 percent of the mean value of the reference method (RM) data. The results are also acceptable if the absolute value of the difference between the mean RM value and the mean CEMS value is less than or equal to 1.0 percent...CO₂.

Performance Specification 4—Specifications and Test Procedures for Carbon Monoxide Continuous Emission Monitoring Systems in Stationary Sources

- ~ 13.2 Relative Accuracy. The RA of the CEMS must be no greater than 10 percent when the average RM value is used to calculate RA or 5 percent when the applicable emission standard is used to calculate RA.

Methodology

EQM tested emissions according to the methodology in 40 CFR Part 60, Appendix A, using United States Environmental Protection Agency (USEPA) Promulgated Test Method:

- 1 for sample and velocity traverse,
- 3A to analyze the sample gas for CO₂ concentration and dry molecular weight,
- 7E for determination of NO_x concentration,
- 10 for determination of CO concentration

and, Appendix B, Performance Specifications (PS):

- 2 and procedure 1 for NO_x,
- 3 and procedure 1 for CO₂, and
- 4 and procedure 1 for CO.

EQM conducted RATA's, consisting of ten 21-minute test runs, on Kingsford's in-situ instruments using:

- ~ a chemiluminescent NO_x analyzer manufactured by Thermo Environmental, Inc., to measure NO_x concentrations with data being recorded on a Strata data logging system;
- ~ a Servomex Model 1400, non-dispersive infrared (NDIR), CO₂ and oxygen (O₂) analyzer that continually measures the CO₂ and O₂ levels in the stack gas; and,
- ~ a NDIR CO analyzer manufactured by Thermo Environmental, Inc., to measure CO on a dry basis.

Prior to and at the end of each test run, zero gas and mid gas were used to calibrate the system to determine instrument drift. EQM used a zero gas and two EPA Protocol One nitrogen oxide gases to complete a direct and system calibration. Prior to sampling, EQM reported, they conducted a NO₂ to NO converter efficiency check at 90.9%. For the CO₂/O₂ gas stream, EQM employed a Baldwin gas conditioner, consisting of an airtight Teflon diaphragm pump and refrigeration unit. The pump provides constant flow to the CO₂/O₂ analyzers using a controller and rotameter. Manifolder from the CEMS sampling system, CO₂ concentrations measured on an operating scale of zero to 21.95%. EQM calibrated CO instruments using two EPA Protocol One CO calibration gases.

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Operations

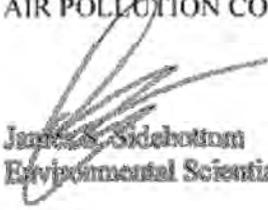
Kingsford's CEMS is an In-Situ System located at the ACC exhaust (on the stack), that measures NO_x, CO₂ and CO concentrations. The analyzers listed in the Table 2 collect data and report it to a Campbell Scientific, Model No. CR10X, computerized data acquisition and handling system.

Constituents	Manufacturer	Model Number	Instrument ID
NO _x	Teledyne-API	252	172
CO ₂	California Analytical Instruments	3300A	N3K4249T
CO	Teledyne-API	300	148

Thank you for your cooperation. If you have any questions, please contact me at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102-0176, by e-mail at steve.sidebottom@dnr.mo.gov or by telephone at (573) 751-4817.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



James S. Sidebottom
Environmental Scientist

JSS:dd

- c: (all parties below via E-mail)
Mr. Gary Bertram, EPA Region VII
Mr. Amy Baker, Southeast Regional Office
Mr. Steve Hall, APCA, Air Quality Analysis Section
Environmental Quality Management, Inc.
Source file: 125-0001

Response to Public Comments

The draft Part 70 Operating Permit for Kingsford Manufacturing Company-Belle was placed on public notice August 4, 2017 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> . Public comments were received from Mr. Mark Smith, EPA Region 7. The comments are addressed in the order in which they appear within the letter(s).

Comment #1: First, the Missouri Code of State Regulations (CSR) Applicability section of the Statement of Basis (pages SB-14) provides a detailed demonstration of Kingsford-Belle compliance with the requirements of 10 CSR 10-6.261-*Control of Sulfur Dioxide Emissions*. However, there is no explanation in the Statement of Basis, to explain the absence of the applicable requirements in 10 CSR 10-6.260- *Restriction of Emission of Sulfur Compounds*. Missouri rules regarding operating permit requirements, as specified in 10 CSR 10-6.065(6)(C)l, says every operating permit issued shall contain all requirements applicable to the installation at the time of issuance. 10 CSR 10-6.020(A) 54. A. defines applicable requirements to include any standard or requirement provided for in the implementation plan approved and promulgated by the United States Environmental Protection Agency. 10 CSR 10-6.260 is included in the EPA approved Missouri State Implementation Plan (SIP) and therefore is an applicable requirement to be included in this operating permit. EPA recognizes that Kingsford-Belle may be in compliance with the requirements of 10 CSR 10-6.260, however, EPA encourages MDNR to recognize the applicability of 10 CSR 10-6.260 in the permit and Statement of Basis until such time as the rule is rescinded from the SIP.

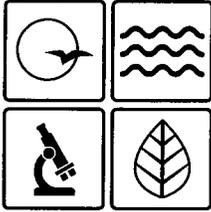
Response to Comment #1: The applicable requirements of 10 CSR 10-6.20, Restriction of Emissions of Sulfur Compounds have been added to the permit with explanations provided in the Statement of Basis.

Comment #2: Second, Permit Condition 2 says "Upon the execution of the Termination Agreement, the Settlement Agreement is terminated. Sections 19 and 30 of the Settlement Agreement survive termination. If there are inconsistencies between the Settlement Agreement and the Termination Agreement, the Termination Agreement Controls." Permit Condition 2 is not easily reviewable, by the public, because neither the Termination Agreement nor the Settlement Agreement are made available as part of the public record for review as either attachments or addendums to this draft operating permit. Additionally, neither the Termination Agreement nor the Settlement Agreement are identified as "Permit Reference Documents" in the Statement of Basis. EPA believes it would publicly beneficial for both the Termination Agreement and the Settlement Agreement to be included within the Statement of Basis.

Response to Comment #2: The Termination Agreement and Settlement Agreement have been added to the Permit Reference Documents in the Statement of Basis. These documents are available to the public via sunshine request. Additional information on the sunshine request process is available at the following web address: <http://dnr.mo.gov/sunshinerequests.htm>

Comment #3: Finally, Permit Condition 4 requires the permittee to operate a wet suppression system to restrict the emission of particulate matter from mixing, roll press conveyor and roll press (EP20, EP21 and EP22) operations while the installation is operating. However, Permit Condition 4 provides no compliance verification showing that the wet suppression system is in operation during the operating of EP20, EP21 and EP22. To increase enforceability of Permit Condition 2, EPA suggests MDNR consider including compliance monitoring / recordkeeping for the wet suppression system.

Response to Comment #3: Monitoring and recordkeeping requirements for the moisture content have been added to the permit condition. During production, moisture is added to the product at the mixing stage (EP20). To meet product specifications, the moisture content must be greater than 20%, which is more than sufficient to eliminate fugitive emissions from these sources. It takes less than five minutes for the product to pass through EP20, 21 and 22; during which the moisture content does not significantly change. The permit condition requires daily monitoring to assure compliance on a continuous basis.



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Eric R. Greitens, Governor

Carol S. Comer, Director

DEC 08 2017

Mr. Brian Brockway
Kingsford Manufacturing Company-Belle
21200 Maries Road 314
Belle, MO 65013

Re: Part 70 Operating Permit
Installation ID: 125-0001, Permit Number: OP2017-088

Dear Mr. Brockway:

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.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

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 contact the Air Pollution Control Program (APCP) at (573) 751-4817, or you may write to the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.

Sincerely,

AIR POLLUTION CONTROL PROGRAM


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

MJS:nwj

Enclosures

c: PAMS File: 2015-03-094

