



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: OP2014-031
Expiration Date: OCT 01 2019
Installation ID: 189-1591
Project Number: 2013-06-043

Installation Name and Address

Maryland Heights Energy Center
2320 Creve Coeur Mill Road
Maryland Heights, MO 63166
St. Louis County

Parent Company's Name and Address

Ameren Missouri
1901 Chouteau Ave.
St. Louis, MO 63166-6149

Installation Description:

This installation is a biogas fueled power plant with three landfill gas fired turbine generators, a landfill gas pretreatment system, and an enclosed flare. The turbines have a combined rating of 166.8 MMBtu/hr and the flare is rated at 6.8 MMBtu/hr.

For permitting purposes, this facility is considered to be one installation with the Progressive Waste Solutions landfill, site ID 189-0308. The landfill is required to obtain a Part 70 Operating permit. Therefore, the Energy Center is also required to obtain this Part 70 operating permit.

OCT 02 2014

Effective Date


Director or Designee

Department of Natural Resources

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I. Installation Description and Equipment Listing

INSTALLATION DESCRIPTION

This installation is a biogas fueled power plant with three landfill gas fired turbine generators and a landfill gas pretreatment system controlled by an enclosed flare. The turbines have a combined rating of 166.8 MMBtu/hr and the flare is rated at 6.8 MMBtu/hr.

For permitting purposes, this facility is considered to be one installation with the Progressive Waste Solutions landfill, site ID 189-0308. The landfill is required to obtain a Part 70 Operating permit. Therefore, the Maryland Heights Energy Center is also required to obtain this Part 70 operating permit.

Landfill gas from the Progressive Waste Solutions landfill (site ID 189-0308) is dewatered, filtered to five microns and compressed by the landfill to delivery to the Maryland Heights Energy Center via pipeline. Upon arrival at the Maryland Heights Energy Center, the landfill gas goes through a separator and the first stage of compression. After the first stage of compression, the gas goes through an after cooler and another separator prior to being passed through an iron oxide coated media which removes sulfur compounds from the gas via chemical reaction resulting in an iron pyrite byproduct. After sulfur removal, the gas passes through a chiller and another separator, and a second stage of compression. During each compression stage, oil is added to the gas to facilitate compression. After this second stage of compression, the gas passes through an after cooler and a coalescing filter where the oil is removed. Next, the gas passes through pre-filters and then through media filled tanks where siloxane compounds are removed from the gas. After siloxane treatment, the gas undergoes additional filtration and a third stage of compression. Again, oil is added to facilitate compression and removed by another coalescing filter after cooling. After this final stage of oil removal, the gas is ready for combustion in the turbines.

Siloxane is a landfill gas contaminant which consists of various organic silicon molecules. Siloxanes are typically gases at ambient temperature which become liquids upon cooling or compressions. The silicas in siloxanes form a hardened glass with heat and subsequent cooling and this hardened glass material is detrimental to the gas turbines. Therefore, siloxane removal is necessary. The siloxane removal occurs in four regenerative media tanks. One tank is taken offline at a time while the other tanks remain in operation. The offline tank undergoes regeneration where hot air is blown through the media causing the siloxanes to unbind from the media. This siloxane laden air is burned in the enclosed flare. The flare is fueled by landfill gas taken from the treatment system after sulfur treatment but prior to the second stage of compression.

Oil separated from the landfill gas drained via coalescing filters is directed to a holding tank and is ultimately recycled. The holding tank is vented to the atmosphere. Condensate which is removed from the landfill gas is maintained in holding tanks which are also vented to the atmosphere. This condensate is ultimately returned to the Progressive Waste Solutions landfill via pipe for treatment in accordance with the requirements for the landfill.

The Maryland Heights Energy Center began operations in 2012. They submitted a full emissions inventory questionnaire (EIQ) and reported the following emissions:

Pollutants	2012
Particulate Matter ≤ Ten Microns (PM ₁₀)	2.23
Particulate Matter ≤ 2.5 Microns (PM _{2.5})	2.23
Sulfur Oxides (SO _x)	0.30
Nitrogen Oxides (NO _x)	3.77

*The Air Pollution Control Program EIQ unit is working with the installation to correct the 2012 EIQ submittal to include all combustion emissions.

EMISSION UNITS WITH LIMITATIONS

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

Emission Point #	Description of Emission Unit
EP01A	Turbine 1
EP01B	Turbine 2
EP01C	Turbine 3
EP02	Enclosed flare
PW-01	Parts Washers
MT-01	Maintenance sand blaster, enclosed with filtered exhaust
HR-01	2 Forced hot water heating systems for building heat, natural gas fired, 0.99 MMBtu/hr.

EMISSION UNITS WITHOUT LIMITATIONS

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

Description of Emission Source	
None	Landfill gas treatment system
TK-01	Wastewater tank-1,000 gallon capacity, contains oily water from coalescing filters
ST-01	Sulpha treat media removal, drying, loading, and transfer

DOCUMENTS INCORPORATED BY REFERENCE

These documents have been incorporated by reference into this permit.

- Construction Permit #7358, Issued by St. Louis County Department of Health
- Construction Permit #7359, Issued by St. Louis County Department of Health
- Construction Permit #7360, Issued by St. Louis County Department of Health
- Construction Permit #7361, Issued by St. Louis County Department of Health

II. Plant Wide Emission Limitations

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

None

III. Emission Unit Specific Emission Limitations

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

Turbines and Flare		
Emission Point #	Description	Manufacturer/Model #
EP01A	Combustion turbine, landfill gas fired, constructed 7/26/2010, MHDR 55.6 MMBtu/hr, design rated power output 5 MW	Solar/Mercury
EP01B	Combustion turbine, landfill gas fired, constructed 7/26/2010, MHDR 55.6 MMBtu/hr, design rated power output 5 MW	Solar/Mercury
EP01C	Combustion turbine, landfill gas fired, constructed 7/26/2010, MHDR 55.6 MMBtu/hr, design rated power output 5 MW	Solar/Mercury
EP02	Enclosed flare, landfill gas fired, constructed 7/26/2010, MHDR 6.8 MMBtu/hr, 1,900 SCFM	

PERMIT CONDITION 001

10 CSR 10-6.060 Construction Permits Required
 Construction Permit #7358, #7359, #7360 and #7361
 Issued July 26, 2010 by St. Louis County Department of Health

Emission Limitations:

1. The emissions from each turbine are limited as follows: (Special condition #1)

Pollutant	Emission limitation (pounds/hour)
PM ₁₀	1.22
SO _x	3.42
NO _x	5.22

2. The emissions from the siloxane flare are limited as follows: (Special condition #2)

Pollutant	Emission limitation (pounds/hour)
PM ₁₀	0.29
SO _x	0.69
NO _x	0.38

Operational Limitation:

Whenever a turbine is not in operation, that portion of the landfill gas shall be diverted to the existing landfill gas flaring system operated by Progressive Waste Solutions. (Special condition #4)

Monitoring:

The permittee shall operate all equipment according to manufacturer’s specifications.
 The permittee shall maintain operations as represented in the most recent performance test.

Recordkeeping:

1. The permittee shall keep a copy of the most recent performance test on site.
2. The permittee shall maintain all records for not less than 5 years and shall make them available immediately to any Department of Natural Resources’ personnel upon request.

Reporting:

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

Turbines and Flare		
Emission Point #	Description	Manufacturer/Model #
EP01A	Combustion turbine, landfill gas fired, constructed 7/26/2010, MHDR 55.6 MMBtu/hr, design rated power output 5 MW	Solar/Mercury
EP01B	Combustion turbine, landfill gas fired, constructed 7/26/2010, MHDR 55.6 MMBtu/hr, design rated power output 5 MW	Solar/Mercury
EP01C	Combustion turbine, landfill gas fired, constructed 7/26/2010, MHDR 55.6 MMBtu/hr, design rated power output 5 MW	Solar/Mercury
EP02	Enclosed flare, landfill gas fired, constructed 7/26/2010, MHDR 6.8 MMBtu/hr, 1,900 SCFM	

PERMIT CONDITION 002
 10 CSR 10-6.220, Restriction of Emissions of Visible Air Contaminants

Emission Limitation:

1. No owner or other person shall cause or permit to be discharged into the atmosphere from any source any visible emissions with an opacity greater than 20%.
2. Exception: A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any sixty (60) minutes air contaminants with an opacity up to 40%.

Monitoring/Recordkeeping/Reporting:

See Core Permit Requirements.

Turbines		
Emission Point #	Description	Manufacturer/Model #
EP01A	Combustion turbine, landfill gas fired, constructed 7/26/2010, MHDR 55.6 MMBtu/hr, design rated power output 5 MW	Solar/Mercury
EP01B	Combustion turbine, landfill gas fired, constructed 7/26/2010, MHDR 55.6 MMBtu/hr, design rated power output 5 MW	Solar/Mercury
EP01C	Combustion turbine, landfill gas fired, constructed 7/26/2010, MHDR 55.6 MMBtu/hr, design rated power output 5 MW	Solar/Mercury

PERMIT CONDITION 003

10 CSR 10-6.070 New Source Performance Standards
 40 CFR Part 60 Subpart KKKK- Standards of Performance for Stationary Combustion Turbines and
 40 CFR Part 60 Subpart A-General Provisions

Emission/Operational Limitations:

1. The permittee shall not emit nitrogen oxides in excess of 74 ppm at 15% O₂ or 460 ng/J of useful output (3.6 lb/MWh). [§60.4320(a) and Table 1 to Subpart KKKK]
2. The permittee shall not cause to be discharged into the atmosphere from the affected source any gases that contain SO₂ in excess of 65 ng SO₂/J heat input (0.15 lb/MMBtu). [§60.4330(a)(3)]
3. The permittee must operate and maintain the stationary combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including startup, shutdown, and malfunction. [§60.4333(a)]

Continuous Compliance:

1. The permittee shall perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NO_x emission result from the performance test is less than or equal to 75% of the NO_x emission limit for the turbine, the permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75% of the NO_x emission limit for the turbine, the permittee must resume annual performance tests. [§60.4340(a)]
2. The permittee shall determine the total sulfur content of the combustion fuel according to the provisions of §60.4360 and §60.4370. The permittee may be exempted from monitoring the total sulfur content of the fuel by complying with the provisions of §60.4365.

Performance Tests:

1. The permittee shall conduct subsequent performance tests for NO_x according to the provisions of §60.4400 and the allowance for single turbine testing contained in the letter from Richard P. Swartz (Testing and Emissions Unit Chief, Missouri Department of Natural Resources Air Pollution Control Program) to Ken Anderson, Ameren dated February 24, 2014; Re: Performance Test Waiver.
2. The permittee shall conduct subsequent SO₂ performance tests on an annual basis (no more than 14 calendar months following the previous performance test), according to the provisions of §60.4415.

Reporting:

1. For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, the permittee must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction. [§60.4375(a)]
2. For each affected unit that performs annual performance tests in accordance with §60.4340(a), the permittee must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test. [§60.4375(b)]
3. If the permittee chooses to monitor the sulfur content of the fuel, for excess emissions and monitoring downtime for SO₂, the permittee shall follow the provisions of §60.4385.
4. All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period. [§60.4395]
5. The permittee shall report any deviations from the limitations, standards, test methods and procedures, monitoring, recordkeeping, and reporting requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.

Flare		
Emission Point #	Description	Manufacturer/Model #
EP02	Enclosed flare, landfill gas fired, constructed 7/26/2010, MHDR 6.8 MMBtu/hr, 1,900 SCFM	N/A

PERMIT CONDITION 004
 10 CSR 10-6.260, Restriction of Emission of Sulfur Compounds

Emission Limitation:

The permittee shall not cause or permit the emission into the atmosphere gases containing more than five hundred parts per million by volume (500 ppmv) of sulfur dioxide or more than thirty five milligrams per cubic meter (35 mg/m³) of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour period.

Monitoring/Recordkeeping:

None-See Statement of Basis-Other Regulatory Determinations.

Reporting:

Reports of any deviations from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

Parts Washers	
Emission point #	Description
PW-01	Parts Washers using cold solvent cleaners

PERMIT CONDITION 005
 10 CSR 10-5.300, Control of Emissions From Solvent Metal Cleaning

Equipment Specifications:

1. The permittee shall not use a cold cleaning solvent with a vapor pressure greater than 1.0 mmHg at 20°C (68°F). [5.300(3)(A)1.A.]
2. The permittee may use an alternate method for reducing cold cleaning emissions if the permittee shows the level of emission control is equivalent to or greater than the requirement listed above. This alternative method must be approved by the director and EPA. [5.300(3)(A)1.D.]
3. Each cold cleaner shall have a cover which will prevent the escape of solvent vapors from the solvent bath while in the closed position, or an enclosed reservoir which limits the escape of solvent vapors from the solvent bath whenever parts are not being processed in the cleaner. [5.300(3)(A)1.C.]
4. When one or more of the following conditions exist, the cover shall be designed to operate easily such that minimal disturbing of the solvent vapors in the tank occurs. (For covers larger than ten square feet, this shall be accomplished by either mechanical assistance such as spring loading or counter weighing or by power systems): [5.300(3)(A)1.E.]
 - a) The solvent vapor pressure is greater than 0.3 psi measure at 37.8°C (100°F); [5.300(3)(A)1.E.(I)]
 - b) The solvent is agitated; or [5.300(3)(A)1.E.(II)]
 - c) The solvent is heated. [5.300(3)(A)1.E.(III)]
5. Each cold cleaner shall have an internal drainage facility so that parts are enclosed under the cover while draining. [5.300(3)(A)1.F.]
6. If an internal drainage facility cannot fit into the cleaning system and the solvent vapor pressure is less than 0.6 psi measured at 37.8°C (100°F), then the cold cleaner shall have an external drainage facility which provides for the solvent to drain back into the solvent bath. [5.300(3)(A)1.G.]
7. Solvent sprays, if used, shall be a solid fluid stream (not a fine, atomized or shower-type spray) and at a pressure which does not cause splashing above or beyond the freeboard. [5.300(3)(A)1.H.]
8. A permanent conspicuous label summarizing the operating procedures shall be affixed to the equipment or in a location readily visible during operation of the equipment. [5.300(3)(A)1.I.]
9. Any cold cleaner which uses a solvent that has a solvent vapor pressure greater than 0.6 psi measured at 37.8°C (100°F) or is heated above 48.9°C (120°F), must use one of the following control devices: [5.300(3)(A)1.J.]
 - a) A freeboard ratio of at least 0.75; [5.300(3)(A)1.J.(I)]
 - b) Water cover (solvent must be insoluble in and heavier than water); or [5.300(3)(A)1.J.(II)]
 - c) Other control systems with a mass balance demonstrated overall VOC emissions reduction efficiency greater than or equal to 65%. These control systems must receive approval from the director and EPA prior to their use. [5.300(3)(A)1.J.(III)]

Operational Limitation

1. Cold cleaners:
 - a) Cold cleaner covers shall be closed whenever parts are not being handled in the cleaners or the solvent must drain into an enclosed reservoir except when performing maintenance or collecting solvent samples. [5.300(3)(B)1.A.]
 - b) Clean parts shall be drained in the freeboard area for at least 15 seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining. During the draining, tipping, or rotating, the parts shall be positioned so that the solvent drains directly back into the cold cleaner. [5.300(3)(B)1.B.]
 - c) Whenever a cold cleaner fails to perform within the operating parameters established for it by this regulation, the unit shall be shut down immediately and shall remain shut down until operation is restored to meet the operating requirements. [5.300(3)(B)1.C.]
 - d) Solvent leaks shall be repaired immediately or the cleaner shall be shut down until the leaks are repaired. [5.300(3)(B)1.D.]
 - e) Any waste material removed from a cold cleaner shall be disposed of by one of the following methods or an equivalent method approved by the director and EPA: [5.300(3)(B)1.E.]
 - i) Reduction of the waste material to less than 20% VOC solvent by distillation and proper disposal of the still bottom waste, or [5.300(3)(B)1.E.(I)]
 - ii) Stored in closed containers for transfer to a:
 - (1) contract reclamation service; or [5.300(3)(B)1.E.(II)(a)]
 - (2) a disposal facility approved by the director and EPA. [5.300(3)(B)1.E.(II)(b)]
 - f) Waste solvent shall be stored in covered containers only. [5.300(3)(B)1.F.]

Operator and Supervisor Training:

1. Only persons trained in at least the operational and equipment requirements specified in this rule for their particular solvent metal cleaning process shall be permitted to operate this equipment; [5.300(3)(C)1.]
2. The person who supervises of any person who operates solvent cleaning equipment regulated by this rule shall receive equal or greater operational training than the operators. [5.300(3)(C)2.]
3. A procedural review shall be given to all solvent metal cleaning equipment operators at least once every 12 month period. [5.300(3)(C)3.]

Monitoring/Recordkeeping:

1. The permittee shall keep records of all types and amounts of solvent containing waste material from cleaning or degreasing operations transferred either to a contract reclamation service or to a disposal facility and all amounts distilled on the premises. The records shall also include maintenance and repair logs for both the degreaser and any associated control equipment. These records shall be kept current and made available for review on a monthly basis. [5.300(4)(A)]
2. The permittee shall maintain the records which include for each purchase of cold cleaning solvent:
 - a) The name and address of the solvent supplier; [5.300(4)(B)]
 - b) The date of purchase;
 - c) The type of solvent; and
 - d) Vapor pressure of solvent in mmHg at 20°C (68°F).
3. The permittee shall keep a record of solvent metal cleaning training. [5.300(4)(D)]
4. Attachments D, E, F, and G, or equivalents, shall be used to demonstrate compliance. All records shall be maintained for five years and shall be made available immediately for inspection to the Department of Natural Resources' personnel upon request.

Reporting:

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

Natural gas combustion and sand blasting	
Emission point #	Description
HR-01	2 forced hot water heating systems for building heat, natural gas fired, 1.00 MMBtu/hr each
MT-01	Maintenance sand blaster, enclosed with filtered exhaust

PERMIT CONDITION 006 10 CSR 10-6.220, Restriction of Emissions of Visible Air Contaminants
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Emission Limitation:

1. No owner or other person shall cause or permit to be discharged into the atmosphere from any source any visible emissions with an opacity greater than 20%.
2. Exception: A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any sixty (60) minutes air contaminants with an opacity up to 40%.

Monitoring/Recordkeeping:

None-See Statement of Basis-Other Regulatory Determinations.

Reporting:

Reports of any deviations from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

IV. Core Permit Requirements

The installation shall comply with each of the following regulations or codes. Consult the appropriate sections in the Code of Federal Regulations (CFR), the Code of State Regulations (CSR), and local ordinances for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued. The following is only an excerpt from the regulation or code, and is provided for summary purposes only.

10 CSR 10-6.045 Open Burning Requirements

- 1) General Provisions. The open burning of tires, petroleum-based products, asbestos containing materials, and trade waste is prohibited, except as allowed below. Nothing in this rule may be construed as to allow open burning which causes or constitutes a public health hazard, nuisance, a hazard to vehicular or air traffic, nor which violates any other rule or statute.
- 2) Refer to the regulation for a complete list of allowances. The following is a listing of exceptions to the allowances:
 - a) Burning of household or domestic refuse. Burning of household or domestic refuse is limited to open burning on a residential premises having not more than four dwelling units, provided that the refuse originates on the same premises, with the following exceptions:
 - i) Kansas City metropolitan area. The open burning of household refuse must take place in an area zoned for agricultural purposes and outside that portion of the metropolitan area surrounded by the corporate limits of Kansas City and every contiguous municipality;
 - ii) Springfield-Greene County area. The open burning of household refuse must take place outside the corporate limits of Springfield and only within areas zoned A-1, Agricultural District;
 - iii) St. Joseph area. The open burning of household refuse must take place within an area zoned for agricultural purposes and outside that portion of the metropolitan area surrounded by the corporate limits of St. Joseph; and
 - iv) St. Louis metropolitan area. The open burning of household refuse is prohibited;
 - b) Yard waste, with the following exceptions:
 - i) Kansas City metropolitan area. The open burning of trees, tree leaves, brush or any other type of vegetation shall require an open burning permit;
 - ii) Springfield-Greene County area. The City of Springfield requires an open burning permit for the open burning of trees, brush or any other type of vegetation. The City of Springfield prohibits the open burning of tree leaves;
 - iii) St. Joseph area. Within the corporate limits of St. Joseph, the open burning of trees, tree leaves, brush or any other type of vegetation grown on a residential property is allowed during the following calendar periods and time-of-day restrictions:
 - (1) A three (3)-week period within the period commencing the first day of March through April 30 and continuing for twenty-one (21) consecutive calendar days;
 - (2) A three (3)-week period within the period commencing the first day of October through November 30 and continuing for twenty-one (21) consecutive calendar days;
 - (3) The burning shall take place only between the daytime hours of 10:00 a.m. and 3:30 p.m.; and
 - (4) In each instance, the twenty-one (21)-day burning period shall be determined by the director of Public Health and Welfare of the City of St. Joseph for the region in which the City of St. Joseph is located provided, however, the burning period first shall receive the approval of the department director; and

- iv) St. Louis metropolitan area. The open burning of trees, tree leaves, brush or any other type of vegetation is limited to the period beginning September 16 and ending April 14 of each calendar year and limited to a total base area not to exceed sixteen (16) square feet. Any open burning shall be conducted only between the hours of 10:00 a.m. and 4:00 p.m. and is limited to areas outside of incorporated municipalities;
- 3) Certain types of materials may be open burned provided an open burning permit is obtained from the director. The permit will specify the conditions and provisions of all open burning. The permit may be revoked if the owner or operator fails to comply with the conditions or any provisions of the permit.
- 4) Maryland Heights Energy Center may be issued an annually renewable open burning permit for open burning provided that an air curtain destructor or incinerator is utilized and only tree trunks, tree limbs, vegetation or untreated wood waste are burned. Open burning shall occur at least two hundred (200) yards from the nearest occupied structure unless the owner or operator of the occupied structure provides a written waiver of this requirement. Any waiver shall accompany the open burning permit application. The permit may be revoked if Maryland Heights Energy Center fails to comply with the provisions or any condition of the open burning permit.
- a) In a nonattainment area, as defined in 10 CSR 10-6.020, paragraph (2)(N)5., the director shall not issue a permit under this section unless the owner or operator can demonstrate to the satisfaction of the director that the emissions from the open burning of the specified material would be less than the emissions from any other waste management or disposal method.
- 5) Reporting and Recordkeeping. New Source Performance Standard (NSPS) 40 CFR Part 60 Subpart CCCC establishes certain requirements for air curtain destructors or incinerators that burn wood trade waste. These requirements are established in 40 CFR 60.2245-60.2260. The provisions of 40 CFR Part 60 Subpart CCCC promulgated as of September 22, 2005 shall apply and are hereby incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401. To comply with NSPS 40 CFR 60.2245-60.2260, sources must conduct an annual Method 9 test. A copy of the annual Method 9 test results shall be submitted to the director.
- 6) Test Methods. The visible emissions from air pollution sources shall be evaluated as specified by 40 CFR Part 60, Appendix A–Test Methods, Method 9–Visual Determination of the Opacity of Emissions from Stationary Sources. The provisions of 40 CFR Part 60, Appendix A, Method 9 promulgated as of December 23, 1971 is incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401.

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

- 1) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the director within two business days, in writing, the following information:
- a) Name and location of installation;
- b) Name and telephone number of person responsible for the installation;
- c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
- d) Identity of the equipment causing the excess emissions;
- e) Time and duration of the period of excess emissions;
- f) Cause of the excess emissions;
- g) Air pollutants involved;
- h) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;

- i) Measures taken to mitigate the extent and duration of the excess emissions; and
 - j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
- 2) The permittee shall submit the paragraph 1 information list to the director in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.
 - 3) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under Section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 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. [10 CSR 10-6.065(6)(B)1.A(V)] The permittee shall retain the most current operating permit issued to this installation on-site. [10 CSR 10-6.065(6)(C)1.C(II)] The permittee shall immediately make such permit available to any Missouri Department of Natural Resources personnel upon request. [10 CSR 10-6.065(6)(C)3.B]

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

- 1) The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos.

- 2) The permittee shall conduct monitoring to demonstrate compliance with registration, certification, notification, and Abatement Procedures and Practices standards as specified in 40 CFR Part 61, Subpart M.

10 CSR 10-6.100 Alternate Emission Limits

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

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

- 1) The permittee shall submit full emissions report either electronically via MoEIS, which requires Form 1.0 signed by an authorized company representative, or on Emission Inventory Questionnaire (EIQ) paper forms on the frequency specified in this rule and in accordance with the requirements outlined in this rule. Alternate methods of reporting the emissions, such as spreadsheet file, can be submitted for approval by the director.
- 2) The permittee may be required by the director to file additional reports.
- 3) Public Availability of Emission Data and Process Information. Any information obtained pursuant to the rule(s) of the Missouri Air Conservation Commission that would not be entitled to confidential treatment under 10 CSR 10-6.210 shall be made available to any member of the public upon request.
- 4) The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079.
- 5) The fees shall be payable to the Department of Natural Resources and shall be accompanied by the emissions report.
- 6) The permittee shall complete required reports on state supplied EIQ forms or electronically via MoEIS. Alternate methods of reporting the emissions can be submitted for approval by the director. The reports shall be submitted to the director by April 1 after the end of each reporting year. If the full emissions report is filed electronically via MoEIS, this due date is extended to May 1.
- 7) The reporting period shall end on December 31 of each calendar year. Each report shall contain the required information for each emission unit for the twelve (12)-month period immediately preceding the end of the reporting period.
- 8) The permittee shall collect, record and maintain the information necessary to complete the required forms during each year of operation of the installation.

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

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

10 CSR 10-6.150 Circumvention

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

10 CSR 10-6.170

Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin

Emission Limitation:

- 1) The permittee shall not cause or allow to occur any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line of origin. The nature or origin of the particulate matter shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director.
- 2) The permittee shall not cause nor allow to occur any fugitive particulate matter emissions to remain visible in the ambient air beyond the property line of origin.
- 3) Should it be determined that noncompliance has occurred, the director may require reasonable control measures as may be necessary. These measures may include, but are not limited to, the following:
 - a) Revision of procedures involving construction, repair, cleaning and demolition of buildings and their appurtenances that produce particulate matter emissions;
 - b) Paving or frequent cleaning of roads, driveways and parking lots;
 - c) Application of dust-free surfaces;
 - d) Application of water; and
 - e) Planting and maintenance of vegetative ground cover.

Monitoring:

The permittee shall conduct monthly 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.

Recordkeeping:

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

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

10 CSR 10-6.180 Measurement of Emissions of Air Contaminants

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

- 3) The director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

10 CSR 10-5.040 Use of Fuel in Hand-Fired Equipment Prohibited

It shall be unlawful to operate any hand-fired fuel-burning equipment in the St. Louis, Missouri metropolitan area. This regulation shall apply to all fuel-burning equipment including, but not limited to, furnaces, heating and cooking stoves and hot water furnaces. It shall not apply to wood-burning fireplaces and wood-burning stoves in dwellings, nor to fires used for recreational purpose, nor to fires used solely for the preparation of food by barbecuing. Hand-fired fuel-burning equipment is any stove, furnace, or other fuel-burning device in which fuel is manually introduced directly into the combustion chamber.

**10 CSR 10-5.060 Refuse Not to be Burned in Fuel Burning Installations
(Contained in State Implementation Plan)**

No person shall burn or cause or permit the burning of refuse in any installation which is designed for the primary purpose of burning fuel.

10 CSR 10-5.120 Information on Sales of Fuels to be Provided and Maintained

Every delivery of coal or residual fuel oil when first delivered to a consumer or wholesaler in the St. Louis metropolitan area must be accompanied by a ticket prepared in triplicate and containing at least the name and address of the seller and the buyer; the grade of fuel; ash content of coal, the source of the fuel, which must be an approved source, and such other information as the Air Conservation Commission may require. One copy of each ticket shall be kept by the person delivering the fuel and be retained for one year; one copy is to be given to the recipient of the fuel to be retained for one year; and, upon request, within 30 days after delivery of the fuel, the delivering party shall mail one copy to the Air Conservation Commission.

10 CSR 10-5.130 Certain Coals to be Washed

The permittee shall not import, sell, offer for sale, expose for sale, exchange, deliver or transport for use and consumption in the St. Louis metropolitan area or use or consume in the said area any coal which as mined containing in excess of 2.0% sulfur or 12.0% ash calculated as described in 10 CSR 10-5.110, unless it has been cleaned by a process known as "washing" so that it shall contain no more than 12.0% ash on a dry basis. The term "washing" is meant to include purifying, cleaning, or removing impurities from coal by mechanical process, regardless of cleaning medium used.

10 CSR 10-6.165 Restriction of Emission of Odors

This requirement is not federally enforceable.

No person may cause, permit or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one volume of odorous air is diluted with seven volumes of odor-free air for two separate trials not less than 15 minutes apart within the period of one hour. This odor evaluation shall be taken at a location outside of the installation's property boundary.

10 CSR 10-5.240 Additional Air Quality Control Measures May be Required When Sources Are Clustered in a Small Land Area

The Air Conservation Commission may prescribe more restrictive air quality control requirements that are more restrictive and more extensive than provided in regulations of general application for:

- 1) Areas in which there are one or more existing sources and/or proposed new sources of particulate matter in any circular area with a diameter of two miles (including sources outside metropolitan area) from which the sum of particulate emissions allowed from these sources by regulations of general application are or would be greater than 2000 tons per year or 500 pounds per hour.
- 2) Areas in which there are one or more existing sources and/or proposed new sources of sulfur dioxide in any circular area with a diameter of two miles from which the sum of sulfur dioxide emissions from these sources allowed by regulations of general application are or would be greater than 1000 tons for any consecutive three months or 1000 pounds per hour.

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

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

Monitoring:

- 1) The permittee shall conduct opacity readings on each emission unit using the procedures contained in U.S. EPA Test Method 22. The permittee is only required to take readings when the emission unit is operating and when the weather conditions allow. If the permittee observes no visible or other significant emissions using these procedures, then no further observations are required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
- 2) The permittee must maintain the following monitoring schedule:
 - a) The permittee shall conduct weekly observations for a minimum of eight (8) consecutive weeks after permit issuance.
 - b) Should the permittee observe no violations of this regulation during this period then-
 - i) The permittee may observe once every two (2) weeks for a period of eight (8) weeks.
 - ii) If a violation is noted, monitoring reverts to weekly.
 - iii) Should no violation of this regulation be observed during this period then-
 - (1) The permittee may observe once per month.
 - (2) If a violation is noted, monitoring reverts to weekly.
- 3) If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency.

Recordkeeping:

The permittee shall maintain records of all observation results using Attachments B, 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 U.S. EPA Method 9 opacity tests performed.

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

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

Title VI – 40 CFR Part 82 Protection of Stratospheric Ozone

- 1) The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
 - a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
 - b) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
 - c) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
 - d) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
- 2) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:
 - a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
 - b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
 - c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
 - d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with recordkeeping requirements pursuant to §82.166. ("MVAC-like" appliance as defined at §82.152).
 - e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
 - f) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- 3) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.

- 4) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.
- 5) The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR Part 82*

10 CSR 10-6.280 Compliance Monitoring Usage

- 1) The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
 - a) Monitoring methods outlined in 40 CFR Part 64;
 - b) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
 - c) Any other monitoring methods approved by the director.
- 2) Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred by a permittee:
 - a) Monitoring methods outlined in 40 CFR Part 64;
 - b) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
 - c) Compliance test methods specified in the rule cited as the authority for the emission limitations.
- 3) The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
 - a) Applicable monitoring or testing methods, cited in:
 - i) 10 CSR 10-6.030, "Sampling Methods for Air Pollution Sources";
 - ii) 10 CSR 10-6.040, "Reference Methods";
 - iii) 10 CSR 10-6.070, "New Source Performance Standards";
 - iv) 10 CSR 10-6.080, "Emission Standards for Hazardous Air Pollutants"; or
 - b) Other testing, monitoring, or information gathering methods, if approved by the director, that produce information comparable to that produced by any method listed above.

V. General Permit Requirements

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

10 CSR 10-6.065(6)(C)1.B Permit Duration

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

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

- 1) Recordkeeping
 - a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
 - b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made 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 Enforcement Section, P. O. Box 176, Jefferson City, MO 65102.
 - b) The permittee shall submit a report of all required monitoring by:
 - i) October 1st for monitoring which covers the January through June time period, and
 - ii) April 1st for monitoring which covers the July through December time period.
 - iii) Exception. Monitoring requirements which require reporting more frequently than semi-annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
 - c) Each report shall identify any deviations from emission limitations, monitoring, recordkeeping, reporting, or any other requirements of the permit, this includes deviations or Part 64 exceedances.
 - d) Submit supplemental reports as required or as identified in i-iii below. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
 - i) Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph (6)(C)7. of 10 CSR 10-6.065 (Emergency Provisions) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.
 - ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.

- iii) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's semi-annual report shall be reported on the schedule specified in this permit.
- e) Every report submitted shall be certified by the responsible official, except that, if a report of a deviation must be submitted within ten days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within ten days after that, together with any corrected or supplemental information required concerning the deviation.
- f) The permittee may request confidential treatment of information submitted in any report of deviation.

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

The permittee shall comply with the requirements of 40 CFR Part 68, Accidental Release Prevention Requirements. If the permittee has more than a threshold quantity of a regulated substance in process, as determined by 40 CFR Section 68.115, the permittee shall submit a Risk Management Plan in accordance with 40 CFR Part 68 no later than the latest of the following dates:

- 1) June 21, 1999;
- 2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or
- 3) The date on which a regulated substance is first present above a threshold quantity in a process.

10 CSR 10-6.065(6)(C)1.E Title IV Allowances

This installation is not subject to Title IV requirements, see Statement of Basis.

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

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

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

- 1) The permittee must comply with all of the terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application.
- 2) The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit
- 3) The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- 4) This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
- 5) The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the

permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the Air Pollution Control Program copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 10 CSR 10-6.065(6)(C)1.

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

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

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

None.

10 CSR 10-6.065(6)(C)3 Compliance Requirements

- 1) Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
- 2) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
 - a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
 - b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
- 3) All progress reports required under an applicable schedule of compliance shall be submitted semi-annually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
 - a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
 - b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
- 4) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, as well as the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and Part 64 exceedances and excursions must be included in the compliance certifications. The compliance certification shall include the following:
 - a) The identification of each term or condition of the permit that is the basis of the certification;

- b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
- c) Whether compliance was continuous or intermittent;
- d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and
- e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

10 CSR 10-6.065(6)(C)6 Permit Shield

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

10 CSR 10-6.065(6)(C)7 Emergency Provisions

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

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

An installation that has been issued a Part 70 operating permit is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described below if the changes are not Title I modifications, the changes do not cause emissions to exceed emissions allowable under the permit, and the changes do not result in the emission of any air contaminant not previously emitted. The permittee shall notify the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner 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), recordkeeping, reporting or compliance requirements of the permit.
 - a) Before making a change under this provision, The permittee shall provide advance written notice to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner 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 Air Pollution Control Program shall place a copy with the permit in the public file. Written notice shall be provided to the EPA and the Air Pollution Control Program as above at least seven days before the change is to be made. If less than seven days notice is provided because of a need to respond more quickly to these unanticipated conditions, the permittee shall provide notice to the EPA and the Air Pollution Control Program as soon as possible after learning of the need to make the change.
 - b) The permit shield shall not apply to these changes.

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

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

- c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes; and
- d) The permit shield shall not apply to these changes.

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

The application utilized in the preparation of this permit was signed by Ozzie Lomax, Director Renewables and CTG Ops. . In addition, at the request of the permittee, the following persons have authority to act as responsible officials: Mr. Mike Menne, Vice President Environmental Services, Ameren Services, and Mr. Dan Cole, President and CEO, Ameren Services. If any of these people terminate employment, or are reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

10 CSR 10-6.065(6)(E)6 Reopening-Permit for Cause

This permit may be reopened for cause if:

- 1) The Missouri Department of Natural Resources (MDNR) receives notice from the Environmental Protection Agency (EPA) that a petition for disapproval of a permit pursuant to 40 CFR § 70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,
- 2) The Missouri Department of Natural Resources or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
- 3) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
 - a) The permit has a remaining term of less than three years;
 - b) The effective date of the requirement is later than the date on which the permit is due to expire;
or
 - c) The additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
- 4) The installation is an affected source under the acid rain program and additional requirements (including excess emissions requirements), become applicable to that source, provided that, upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit;
or
- 5) The Missouri Department of Natural Resources or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

10 CSR 10-6.065(6)(E)1.C Statement of Basis

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

VI. Attachments

Attachments follow.

Attachment C
 10 CSR 10-6.220

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

Readings ranged from _____ to _____ % opacity.

Was the emission unit in compliance at the time of evaluation?

 YES NO

 Signature of Observer

STATEMENT OF BASIS

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 June 17, 2013;
- 2) 2012 Emissions Inventory Questionnaire, received 4/30/2013; and
- 3) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.

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

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

See Other Regulatory Determinations

Other Air Regulations Determined Not to Apply to the Operating Permit

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

10 CSR 10-5.490, Municipal Solid Waste Landfills

This regulation applies to landfills located in the St. Louis ozone nonattainment area that have accepted waste since November 8, 1987, or have additional capacity available for future waste deposition. This regulation does not apply to the Ameren-Maryland Heights Energy Center. This regulation does apply to the Progressive Waste Solutions landfill. While both of these facilities are considered one installation for permitting purposes, there are no provisions of this regulation that apply to the Ameren operations. This regulation does apply to the landfill, and appears in the Part 70 Operating Permit issued to them.

10 CSR 10-5.510 Control of Emissions of Nitrogen Oxides

This regulation applies to all installations within the St. Louis Metropolitan area that have the potential to emit 100 tons or greater of nitrogen oxides. This regulation does not apply to the Ameren Maryland Heights Energy Center because the potential emissions of nitrogen oxides are less than 100 tons per year.

10 CSR 10-6.130, Restriction of Emissions From Municipal Solid Waste Landfills

This regulation applies to landfills that have accepted waste since November 8, 1987, and have undergone construction, reconstruction, or modification before May 30, 1991. This regulation does not apply to the Ameren-Maryland Heights Energy Center. The Progressive Waste Solutions landfill is exempt from this regulation because it is subject to 10 CSR 5.490 (see 6.310(1)(C)).

10 CSR 10-6.360, Control of NO_x Emissions From Electric Generating Units and Non-Electric Generating Boilers

10 CSR 10-6.362, Clean Air Interstate Rule Annual NO_x Trading Program

10 CSR 10-6.364, Clean Air Interstate Rule Seasonal NO_x Trading Program

10 CSR 10-6.366 Clean Air Interstate Rule SO₂ Trading Program

These regulations apply to certain electric generating units that serve a generator with a nameplate capacity greater than 25 MW. The units at this installation produce 5 MW each, and therefore do not meet the applicability threshold of these rules.

40 CFR Part 72 through 78-Acid Rain Program (Title IV)

The units listed in this operating permit are not subject to the provisions of the acid rain program. The program applies to fossil fuel fired units. In §72.2, *Fossil fuel* means natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel derived from such material. The units at this installation combust solely landfill gas which does not meet the definition of a fossil fuel. Therefore, these regulations do not apply.

Construction Permit History

The following construction permits were issued to this installation:

Construction Permit #7358, #7359, #7360, and #7361

These construction permits were issued by the St. Louis County Health Department on July 26, 2010 to authorize installation of the three turbines (permits #7358, 7359, and 7360) and a flare (permit #7361).

The flare controls emissions from the landfill gas pretreatment system, which removes silica type material from the landfill gas that would otherwise cause damage to the turbines. The turbines will produce electricity that will be fed directly into the Ameren's current power distribution system.

While Ameren will own and operate the turbines and combustion pretreatment system, Progressive Waste Solutions owns and operates the landfill (site ID 189-0308) and the landfill's gas collections, distribution and flaring system. Since the entire Ameren project will be located within the bounds of the landfill, and only fires landfill gas purchased from the landfill, it is considered one installation with the landfill for permitting purposes. The landfill is required to obtain a Part 70 Operating Permit due to the requirements found in 40 CFR Part 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills. Both the landfill and Ameren are obtaining separate Part 70 Operating Permits, in compliance with 10 CSR 6.065, Operating Permits.

While each of the turbines and the flare were issued separate construction permits, all permits were issued simultaneously and all emissions from the proposed equipment were considered together. All permits contain the same special conditions, apply the same regulations, and contain the same Statement of Basis. Instead of providing a separate operating permit condition for each of these construction permits, all construction permits have been combined into one operating permit condition. Special Conditions 1 and 2 contain emission limitations for each turbine and the flare, respectively, for PM₁₀, SO_x, and NO_x. These limitations reflect the emissions expected from the equipment operating at the maximum hourly design rate. The limits were established to ensure the emissions from the equipment will not exceed the levels used to perform the modeling analysis that was conducted as part of the construction permit review. These emission limitations have been included in this operating permit.

Special Condition 3 contains a performance testing requirement for one of the turbines. The condition requires the turbine undergo testing at the full range of loads. The condition also requires that if testing indicates the actual emissions of PM₁₀, SO_x, or NO_x exceed the limits established in special condition 1, that Ameren shall reduce the amount of landfill gas burned to insure the potential emissions will not

exceed the limits and submit a modified permit application with a new modeling study based upon the test result emissions. Ameren conducted performance testing on May 8-10, 2012 on turbine #3 to satisfy this testing requirement. The results are summarized below:

Pollutants tested	Load condition	Emission rate (lb/hr)	Emission Limit (lb/hr)
NO _x	100%	0.09	5.22
	75%	0.07	
	50%	0.14	
SO _x	100%	1.10	3.42
	75%	0.94	
	50%	0.81	
PM ₁₀	100%	0.649	1.22
	75%	0.443	
	50%	0.289	

The performance testing required by this special condition was a one time requirement. Since Ameren has conducted the testing and the results indicate the emission rates are less than the emission limits in the construction permit, the requirements of special condition 3 have been satisfied and do not appear in this operating permit. Note: Additional performance testing is required under 40 CFR Part 60 Subpart KKKK- Standards of Performance for Stationary Combustion Turbines, those testing requirements do appear in this operating permit and are explained under the NSPS section of this Statement of Basis.

Special Condition 4 requires that if any turbine is not in operation, that the portion of landfill gas that could be used by that turbine is diverted to the existing landfill gas flaring system. This condition has been clarified in this permit to refer to the landfill gas flaring system operated by Progressive Waste Solutions, and not the treated landfill gas flaring system operated by Ameren. The purpose of this condition is to ensure that Ameren is only taking landfill gas that it can use in the turbines and the landfill satisfies the requirements that it is subject to under 40 CFR Part 60 Subpart WWWW-Standards of Performance for Municipal Solid Waste Landfills.

New Source Performance Standards (NSPS) Applicability

40 CFR Part Cc-Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills

This regulation applies to each existing municipal solid waste (MSW) landfill for which construction, reconstruction, or modification was commenced before May 30, 1991.

This regulation does not apply to the operations contained in this operating permit, the operations owned and operated by Ameren. According to the Part 70 operating permit issued to Progressive Waste Solutions landfill, site ID 189-0308, permit #OP2010-036, this regulation does not apply to the landfill because the landfill underwent a horizontal expansion in 1993.

40 CFR Part 60 Subpart GG- Standards of Performance for Stationary Gas Turbines

The installation is exempt from this regulation per 40 CFR Part 60 Subpart KKKK, §60.4305(b).

40 CFR Part 60 Subpart WWWW-Standards of Performance for Municipal Solid Waste Landfills

This regulation applies to MSW landfills that commenced construction, reconstruction, or modification on or after May 30, 1991. This regulation does apply to the Progressive Waste

Solutions landfill because the landfill underwent a horizontal expansion in 1993, and is included in its operating permit, #OP2010-036.

According to the permit application, the landfill gas used by this installation is dewatered, filtered to 5 microns and compressed by Progressive Waste Solutions for delivery via pipeline to Ameren. Upon arrival at the Ameren facility, the landfill gas undergoes additional treatment so that it may be combusted in the turbines. While it is possible to combust the landfill gas without this additional treatment, it would decrease the lifespan of the turbines and increase their maintenance costs.

Progressive Waste Solutions and Ameren are considered one installation for permitting purposes. This subpart does apply to the installation, but the responsibility for compliance with this subpart lies with Progressive Waste Solutions, and not Ameren. Therefore this regulation does not appear in this operating permit.

EPA proposed a rule amendment in the September 8, 2006 Federal Register that would clarify what constitutes treated landfill gas; who is responsible for compliance where multiple parties are involved in the ownership or operation of a landfill and the associated landfill gas collection, control, and/or treatment systems; and revisions to the provisions for routine maintenance and startup, shutdown and malfunction. At the time of issuance of this operating permit, these amendments have not yet been finalized and therefore do not appear in this operating permit. These amendments contain provisions that could affect the permittee when they are finalized.

40 CFR Part 60 Subpart CCCC-Standard of Performance for Commercial and Industrial Solid Waste Incineration Units

This regulation applies to new commercial and industrial solid waste incineration (CISWI) units that are constructed after June 4, 2010. A CISWI unit is any unit that currently combusts, or has combusted in the last 6 months, any solid waste as that term is defined in 40 CFR Part 241. 40 CFR Part 241 refers to the definition of solid waste found in part 258.2.

The applicability of this regulation was evaluated for the enclosed flare. The flare is fueled by treated landfill gas, and is used to destroy siloxane compounds from the landfill gas treatment system owned by Ameren. This treatment system involves passing the landfill gas through regenerative media tanks that are used to remove the siloxane compounds. When the tanks have reached their threshold quantity of siloxane compounds, the siloxane compounds in the regenerative media are purged by passing hot and cold gases through the tanks. These purge gases are sent to the enclosed flare for destruction. The applicability of the CISWI rule to this unit is dependent upon the definition of solid waste. The definition specifies that "contained gaseous materials" are considered solid waste. According to the definitions in §60.2265, this term means gases that are in a container when the container is combusted. Since the installation is not burning any containers, the definition of "contained gaseous material" is not met, and the requirements to meet the definition of solid waste are not satisfied. Therefore, this unit is not a CISWI unit and this regulation does not apply. EPA has agreed with this determination via email dated August 15, 2013.

40 CFR Part 60 Subpart KKKK- Standards of Performance for Stationary Combustion Turbines

This regulation applies to stationary combustion turbines that commenced construction, modification, or reconstruction after February 18, 2005 with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel.

This regulation contains emission limitations for NO_x and SO₂. The NO_x limits are specified in Table 1 to Subpart KKKK, which contains different limitations for different fuels and sizes. The turbines for this installation are classified as “new turbine firing fuels other than natural gas”, and are sized between 50 and 850 MMBtu/hr. The SO₂ limitations have a category for turbines that burn at least 50% biogas on a calendar month basis. These limits are applied in this operating permit.

This subpart requires both initial and continuous performance testing. By letter dated January 28, 2013, the St. Louis County Department of Health granted a waiver for the initial performance testing for 40 CFR Part 60 Subpart KKKK, on the basis that the installation had already conducted performance testing to demonstrate compliance with NO_x and SO_x emission limits in Construction Permits ##7358, #7359, #7360. This waiver applies only to the initial performance testing requirements, and not to any ongoing, continuous, or subsequent performance testing required under this subpart.

There are three options to demonstrate continuous compliance with the NO_x emission limitation: 1) use water or steam injection, 2) performance testing, or 3) install NO_x CEMS. The installation has chosen to use the performance testing option. According to §60.4340, the performance testing is required annually. However, if the result from the performance test is less than or equal to 75% of the limit then the frequency of subsequent performance tests may be reduced to once every 2 years (no more than 26 calendar months following the previous performance test).

The performance testing conducted in May 2012 demonstrated that the emissions are less than 75% of the limit, therefore the next performance test is due by July 2014.

On February 24, 2014, the MDNR ACP issued a performance test waiver to the Maryland Heights Energy Center. This waiver authorizes periodic testing on one turbine in place of testing all three turbines to demonstrate compliance with this regulation. In order for the waiver to remain effective, the emission test results must continue to be significantly below the emission standards and the each turbine must be tested on a rotating basis. Since the testing in May 2012 was conducted on #3 turbine (EP1C), subsequent testing must start with the first turbine (EP1A), with the next required test on the second turbine (EP1B), and the third required test on the third turbine (EP1C). Then the cycle must repeat.

Maximum Achievable Control Technology (MACT) Applicability

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

This regulation applies to individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride (CAS No. 75-09-2), perchloroethylene (CAS No. 127-18-4), trichloroethylene (CAS No. 79-01-6), 1,1,1-

trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5) or chloroform (CAS No. 67-66-3), or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent.

The solvent cold cleaner at this installation does not use any solvent containing the target HAP in a total concentration greater than 5% by weight. Therefore, this regulation does not apply.

40 CFR Part 63 Subpart AAAA-National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

This regulation applies to landfills that are either major sources of HAP emissions or meet specific design and emission criteria. The affected sources under this subpart is a MSW landfill, as defined in §63.1990. This subpart contains requirements for landfill collection/control systems, bioreactors, and requires an affected source to develop an SSM plan, according to the procedures in §63.6(e)(3).

This subpart does not contain any requirements for landfill gas once it has complied with the requirements of Subpart WWW, §60.752(b)(iii)(C). The owners of the landfill, Progressive Waste Solutions, are subject to Subpart AAAA, but Ameren is not. Therefore this regulation does not appear in this operating permit.

EPA proposed a rule amendment in the September 8, 2006 Federal Register that would clarify what constitutes treated landfill gas; who is responsible for compliance where multiple parties are involved in the ownership or operation of a landfill and the associated landfill gas collection, control, and/or treatment systems; and revisions to the provisions for routine maintenance and startup, shutdown and malfunction. At the time of issuance of this operating permit, these amendments have not yet been finalized and therefore do not appear in this operating permit. These amendments contain provisions that could affect the permittee when they are finalized.

40 CFR Part 63 Subpart YYYY-National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

This regulation applies to stationary combustion turbines located at major sources of HAP emissions. This installation is an area source of HAP emissions, therefore this regulation does not apply.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability

None

Compliance Assurance Monitoring (CAM) Applicability

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

The CAM rule applies to each pollutant specific emission unit that:

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

40 CFR Part 64 is not applicable because none of the pollutant-specific emission units uses a control device to achieve compliance with a relevant standard.

Greenhouse Gas Emissions

Note that this source may be subject to the Greenhouse Gas Reporting Rule. The applicant is required to report the data directly to EPA. The public may obtain CO₂ emissions data for this installation by visiting EPA’s Clean Air Markets website at: <http://camddataandmaps.epa.gov/gdm/index.cfm>.

Updated Potential to Emit for the Installation

Pollutant	Potential to Emit (tons/yr)
PM ₁₀	17.33
PM ₂₅	17.33
NO _x	70.64
SO _x	47.66
CO	22.33
VOC	0.78
HAP	0.34

The table reflects the potential emissions of the three turbines, the flare, and the natural gas combustion. The potential emissions for this permit were based solely on the potential of the Ameren equipment, and does not include the potential emissions from the landfill itself. Those emissions are represented in the Part 70 Operating Permit for the landfill. The landfill contracts the landfill gas to multiple customers, and Ameren only accepts what it can use. Ameren does not store any landfill gas onsite, the production process is linear. Therefore, the potential emissions reflect the potential of Ameren’s equipment only.

Potential emissions of the flare and turbines were based on the federally enforceable limitations found in the issued construction permit. For the flare, the potential emissions were scaled to the PM₁₀ limitation, as complying with this limitation resulted in NO_x and SO₂ emissions that were less than their established limits. For the turbines, PM₁₀, NO_x, and SO₂ emissions were based on the construction permit limitations, not the performance testing data. 40 CFR Part 60 Subpart KKKK requires annual performance testing. Since the testing results can change every year, it is not appropriate to use them as a basis for potential to emit calculations. The emissions for the natural gas combustion units were calculated using factors from webFIRE for SCC code 10300603.

Other Regulatory Determinations

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

This regulation does not apply to the turbines because they are subject to a sulfur compound emission limitation under 10 CSR 10-6.070, and are therefore exempt (see 6.260(1)(A)1.).

The flare burns landfill gas, which has a default sulfur concentration of 46.9 ppmv, which is much less than the limit for new sources, 500 ppmv. Since this unit is assumed to always be in compliance, no monitoring or recordkeeping is required.

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

This regulation applies to the turbines, flare, natural gas combustion units, and the maintenance sand blaster. Monitoring and recordkeeping requirements apply only to the turbines and flares. They are not applied to the natural gas combustion units for the following reasons: these units are used as building heating systems for personal comfort, and the potential PM emissions are less than 0.5 lb/hr. When these units are properly maintained and operated, opacity emissions are not expected. Monitoring and reporting requirements are also not required for the maintenance sand blaster. This unit has a confined

volume less than 100 cubic feet and is controlled by a particulate filter. When this unit is properly maintained and operated, opacity emissions are not expected.

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

This regulation does not apply to the turbines, flare, or natural gas combustion units because these units have uncontrolled potential emissions of less than 0.5 lb PM/hr and therefore meet the exemption in 6.400(1)(B)12. This regulation does not apply to the maintenance sand blaster because this unit meets the exemption in 6.400(1)(B)8., which states that emission sources that are exempt from construction permitting under 10 CSR 10-6.061 are exempt from this rule. The maintenance sand blaster meets the criteria of 10 CSR 10-6.061(3)(B)6.C, abrasive blasting sources that have a confined volume less than 100 cubic feet and are controlled by a particulate filter.

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

The natural gas combustion units at this installation are used for indirect heating of the building. Since all indirect heating units at this installation combust natural gas, these units are exempt from this regulation per 6.405(1)(E).

10 CSR 10-5.300, Control of Emissions of Solvent Metal Cleaning

This regulation applies to the parts washers. This regulation requires that records be kept current on a monthly basis. These units are used for facility maintenance purposes. These units are serviced by an outside entity, such as (but not limited to) Safety Kleen. Since these units are not used often, service is not required on a monthly basis. The permittee can satisfy the monthly recordkeeping requirement by indicating that there was no service on the unit for those months, as appropriate.

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

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

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

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

Prepared by:

Nicole Weidenbenner, P.E.
Environmental Engineer

MEMORANDUM

DATE: August 28, 2014

TO: Ameren Missouri-Maryland Heights Energy Center, Part 70 Operating Permit file, PAMS 2013-06-043

FROM: Nicole Weidenbenner, P.E., Environmental Engineer

SUBJECT: Response to Public Comments

The draft permit was placed on public notice April 7, 2014, with the public notice period closing May 7, 2014. Four comments were received during the public notice period. One comment is from Robert Cheever, Environmental Engineer, Air Permitting and Compliance Branch, Air and Waste Management Division, U.S. EPA Region 7. Three comments are from Michael Hutcheson, Consulting Engineer, Environmental Services, Ameren Services.

The following comment is from Robert Cheever:

Comment #1:

MDNR placed a draft Part 70 operating permit for the Ameren Missouri—Maryland Heights Energy Center on public notice April 7, 2014. I have reviewed the draft and provide you with the following minor comments:

The Statement of Basis indicates that the Ameren Maryland Heights Energy Center “greenhouse gas (GHG) potential to emit is 22,765.67 tons per year. This value seems to be lower than what might be expected for the system described in the facility description and I suggest that you might ask Ameren to review their calculation methodology and see if there is an error.

The Maryland Heights Energy Center is in place to convert landfill gas from the Fred Weber Maryland Heights Landfill into energy through the combustion of the gas in four turbine generator sets. According to the construction permits issued to Ameren in 2010, the maximum landfill gas production for the Weber Landfill is 7,337 scfm; of which 40.9% is methane (3,000 scfm) which is equivalent to 189.4 MMBtu/hr. By volume, landfill gas is comprised of essentially methane (CH₄) and carbon dioxide (CO₂). Therefore, if the Weber Landfill gas generation rate is 7,337 scfm of which 3,000 is CH₄, then the remainder or 4,337 scfm is CO₂.

The Weber Landfill is equipped with a landfill gas collection system which is comprised of wells and piping to capture the gas and deliver it to the Maryland Heights Energy Center. Therefore, the system captures the CO₂ in addition to the CH₄; being used for combustion. CO₂ is not combustible, so it simply passes through the combustion turbines and exhausts to the atmosphere. Also, the products of combustion of methane include CO₂ and water. According to the greenhouse gas (GHG) reporting program applicability tool, the combustion of 3,000 scfm of methane produces approximately 85,890 tons of CO₂e per year. This does not include the 4,337 scfm of CO₂ from the landfill which is passing through the turbines.

A scfm of CO₂ weighs 0.1234 pounds and this would equate to 535.2 pound per minute passing through the turbines from the landfill. 535.2 pound per minute equates 16.06 tons per hour and 140,647 tons per year. When added together, there would appear to be some 226,537 tons per year of CO₂e potential from the Maryland Heights Energy Center which is much larger than the reported 22,756.67 tons per year. It appears that Ameren may have missed a decimal and again, I'd suggest you ask for a recalculation.

APCP Response to Comment #1:

The potential emissions contained in this Operating Permit should accurately reflect the potential of the equipment owned and operated by Ameren Missouri-Maryland Heights Energy Center. While Ameren Missouri-Maryland Heights Energy Center and the Progressive Waste Solution landfill are considered one installation for regulatory purposes, each entity has elected to obtain their own Part 70 Operating Permit. The landfill provides landfill gas to multiple customers, including the Ameren Missouri-Maryland Heights Energy Center. Ameren only accepts what it can use at the time, and does not store landfill gas. Therefore, the potential emissions are based on the maximum hourly design rate of Ameren's equipment.

Since the submittal of these comments, there has been a recent court case decision that affects GHG permitting. In response to this, the APCP has decided to no longer include GHG potential emissions in the Operating Permit Statement of Basis. While the permit has not been changed in response to this comment, it has been changed in response to the court decision. The GHG entries in the potential emissions table have been removed, and the Greenhouse Gas Reporting paragraphs have been shortened to indicate that installations which are subject to GHG reporting requirements need to report directly to EPA.

The following comments are from Michael Hutcheson:

Comment #2:

Under Permit Condition 003: Please add the following language to the end of the 1st condition under Performance Tests: 60.4400... "and the allowance for single turbine testing contained in the letter from Richard P. Swartz (Testing and Emissions Unit Chief, MDNR APCP) to Ken Anderson, Ameren dated Feb 24, 2014; Re: Performance Test Waiver." A reference is made to this letter in the Statement of Basis, however, Ameren believes to have real effect and be clearly subject to the Permit Shield the allowance in the letter should be included in the applicable performance testing conditions.

APCP Response to Comment #2:

The proposed change has been incorporated into the Operating Permit as requested.

Comment #3:

In order to properly align the General Permit requirements to the actual language of MO Code of State Regulation requirements for supplemental reports (Page 22 of draft permit), please change discussion under 10 CSR 10-6.065(6)(C)1.C General Recordkeeping and Reporting Requirements Paragraph 2d to the following:

- d) Submit supplemental reports as required or as identified in i-iii below. All supplemental reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
- i) Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph (6)(C)7.A of 10 CSR 10-6.065 (Emergency Provisions) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.
 - ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.
 - iii) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's semi-annual report shall be reported on the schedule specified in this permit.

APCP Response to Comment #3:

The permit has been modified to contain the language found in 10 CSR 10-6.065(6)(C)1.C(III).

Comment #4:

Please modify the monitoring frequency on Page 16 of the draft permit under requirements for 10 CSR 10-6.170 to monthly monitoring only. This facility is a biogas energy center, which is $\frac{3}{4}$ paved and has only some limited use gravel parking and has only one material handling operation that occurs once annually during change out of the sulfur removal media. The Facility has no uncontrolled particulate generating processes and little chance to cause or allow fugitive particulate matter beyond the premises of origin. Because of limited staffing, a graduated monitoring schedule is likely to result in missed observations. Ameren would therefore prefer that observations be set at a minimum of monthly and not vary based on results. The condition already requires that corrective action be taken to eliminate any violations (which are unlikely). Monthly observations should be sufficient given that the majority of the Facility is paved and unpaved areas are generally unused and given that the only material handling occurs infrequently and consists of the removal of a wet iron pyrite material from sulfur removal tanks.

APCP Response to Comment #4:

The proposed change has been incorporated into the Operating Permit as requested.

Mr. Ozzie Lomax
Maryland Heights Energy Center
2320 Creve Coeur Mill Road
Maryland Heights, MO 63166

Re: Maryland Heights Energy Center, 189-1591
Permit Number: **OP2014-031**

Dear Mr. Lomax:

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

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

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

Sincerely,

AIR POLLUTION CONTROL PROGRAM

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

MJS/nwk

Enclosures

c: St. Louis Regional Office
PAMS File: 2013-06-043