

# INTERMEDIATE STATE PERMIT TO OPERATE

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

**Intermediate Operating Permit Number:** OP2020-004  
**Expiration Date:** 5/5/2025  
**Installation ID:** 510-2711  
**Project Number:** 2017-03-122

**Installation Name and Address**

St. Louis University  
3545 Lindell Boulevard  
St. Louis, MO 63103  
St. Louis County

**Parent Company's Name and Address**

Saint Louis University  
3545 Lindell Boulevard  
St. Louis, MO 63103  
St. Louis County

**Installation Description:**

St. Louis University (SLU) is a higher education institution located within the city of St. Louis, Missouri, a non-attainment area for eight (8)-hour ozone; and a maintenance area for one (1) hour ozone, Carbon Monoxide (CO), and Particulate Matter having an aerodynamic diameter of two and one-half (2.5) microns or less (PM<sub>2.5</sub>). Air pollution sources at this installation include natural gas- and diesel-fired combustion units. St. Louis University is a synthetic minor source of Nitrogen Oxides (NO<sub>x</sub>).

St. Louis University (SLU) has historically maintained an Intermediate Operating Permit for its North Campus (formerly known as Frost Campus) using facility ID 510-2711, and a Basic Operating Permit for its South Campus (formerly known as Medical School Campus) using facility ID 510-1349. With this permit renewal SLU has decided to combine the two locations into one Intermediate Operating Permit, and has decided to keep facility ID 510-2711 for the combined installation.

May 5, 2020

Effective Date



Director or Designee  
Department of Natural Resources

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# I. Installation Equipment Listing

## EMISSION UNITS WITH LIMITATIONS

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

Emission Unit EP-01: Emergency Use RICE<sup>1</sup>-Generator Sets (see Table 1)

Emission Unit EP-02: Natural Gas-Fired Indirect Heating Units < ten (10) MMBtu/hr<sup>2</sup> (see Appendix A)

No Emission Unit No.: Diesel Generator Fuel Tanks (each less than 40,000 gallons)

**Table 1: Emergency Use RICE-Generator Sets<sup>3</sup>**

Building	Make/Model	Fuel/ Ignition Type	Generator Output (kW)	Fuel Heat Input (Btu)	Manufac- ture Date	Installa- tion Date
Pius XII Memorial Library	Kohler/ 125ROZJ71	Diesel/ CI	125	7,108	1996	2002
Fusz Hall	Marathon/ 572RSL2040BF	Diesel/ CI	540	30,700	1990	1990
Des Peres Hall	Generac/ 94A02242-S	Diesel/ CI	75	5,289	1994	1994
Des Peres Hall	Olympian/ D200PI-22KW	Diesel/ CI	200	11,374	1999	1999
Des Peres Hall	Olympian/ D200P3	Diesel/ CI	200	11,374	2006	2008
Ritter Hall	Generac/ 98A05915-S	Diesel/ CI	20	1,137	1998	1999
Cook Hall	Onan/ DGFC-3381522	Diesel/ CI	200	11,374	1999	1999
Chaifetz Arena	Caterpillar/ SR4B-GD	Diesel/ CI	1000	56,880	2007	2008
Wool Center	Caterpillar/ D150-8	Diesel/ CI	150	8,530	2011	2011
Spring Hall	Caterpillar/ C7.1 (D200-2)	Diesel/ CI	200	11,374	2015	2016
Macelwane Hall	Caterpillar/ C15 (Tier 2)	Diesel/ CI	500	28,435	2018	2018
Grand Hall	Caterpillar/ C15 (Tier 3)	Diesel/ CI	450	25,591	2017	2017
Macelwane Hall	Kohler/ 80RZG	Natural Gas/SI	80	4,550	2006	2006 (March)

<sup>1</sup> RICE relates to Reciprocating Internal Combustion Engine

<sup>2</sup> MMBtu/hr relates to Million British Thermal Units per hour

<sup>3</sup> CI relates to Compression Ignition, SI relates to Spark Ignition, kW relates to kilowatts, and Btu relates to British Thermal Unit

**EMISSION UNITS WITHOUT SPECIFIC LIMITATIONS**

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

<u>Emission Unit ID</u>	<u>Description of Emission Source</u>
None	Five (5) Chillers (located in the Chaifetz Arena and Monsanto Hall)

## II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect on the date of permit issuance. The plant wide conditions apply to all emission units at this installation. All emission units are listed in Section I under Emission Units with Limitations and Emission Units without Limitations.

### PERMIT CONDITION PW001

#### SR 10-6.065(2)(O) and 10 CSR 10-6.065(4)(C)2. Voluntary Limitation(s)

##### **Emission Limitation:**

The permittee shall discharge into the atmosphere from the entire installation less than 100.0 tons of nitrogen oxides (NO<sub>x</sub>) in any rolling consecutive 12-month period.

##### **Monitoring/Recordkeeping:**

The permittee shall maintain an accurate record of emissions of NO<sub>x</sub> emitted into the atmosphere from this installation. The permittee shall record the monthly and rolling consecutive 12-month totals of NO<sub>x</sub> emissions from this installation. The permittee shall use Attachment E, or equivalent, to demonstrate compliance.

##### **Reporting:**

- 1) The permittee shall report to the Air Pollution Control program's Compliance/Enforcement Section, P.O. Box 176, Jefferson Ciuty, MO 65102, or [AirComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov), no later than ten (10) days after any exceedance or deviation from this permit condition.
- 2) The permittee shall report any deviations from the requirements of this permit condition in the annual compliance certification (ACC). The permittee shall submit the ACC report to both the EPA Region VII and Air Pollution Control Program's Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 or [AirComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov).

### III. Emission Unit Specific Emission Limitations

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

<b>PERMIT CONDITION 001</b>			
<b>SR 10-5.500, Control of Emissions from Volatile Organic Liquid Storage</b>			
<b>Emission Unit ID</b>	<b>Building</b>	<b>Description</b>	<b>Capacity (gallons/cubic meters)</b>
None	Pius XII Memorial Library	Diesel Fuel Tank (Kohler/125ROZJ71)	180/0.681
None	Fusz Hall	Diesel Fuel Tank (Marathon/572RSL2040BF)	400/1.51
None	Des Peres Hall	Diesel Fuel Tank (Generac/94A02242-S)	225/0.852
None	Des Peres Hall	Diesel Fuel Tank (Olympian/D200PI-22KW)	392/1.48
None	Des Peres Hall	Diesel Fuel Tank (Olympian/D200P3)	392/1.48
None	Ritter Hall	Diesel Fuel Tank (Generac/98A05915-S)	75/0.284
None	Cook Hall	Diesel Fuel Tank (Onan/DGFC-3381522)	173/0.655
None	Chaifetz Arena	Diesel Fuel Tank (Caterpillar/SR4B-GD)	788/2.98
None	Wool Center	Diesel Fuel Tank (Caterpillar/D150-8)	275/1.04
None	Spring Hall	Diesel Fuel Tank [Caterpillar/C7.1 (D200-2)]	395/1.50
None	Macelwane Hall	Diesel Fuel Tank [Caterpillar/C15 (Tier 2)]	1000/3.79
None	Grand Hall	Diesel Fuel Tank [Caterpillar/C15 (Tier 3)]	1000/3.79

**Reporting/Recordkeeping:**

- 1) The permittee shall maintain readily accessible records of the dimensions of each storage vessel and an analysis of the capacity of each storage vessel. [§5.500(4)(E)]
- 2) The permittee shall keep all records required by §5.500(4)(E) on-site for the life of the source. The records required by §5.500(4)(E) shall be made available to the Missouri Department of Natural Resources immediately upon request.

<b>PERMIT CONDITION 002</b>				
<b>10 CSR 10-6.065, Operating Permits</b>				
<b>Emission Unit ID</b>	<b>Building</b>	<b>Emergency Use CI RICE-Generator Set Make/Model</b>	<b>Kilowatt Output</b>	<b>Installation Date</b>
EP-01	Pius XII Memorial Library	Kohler/ 125ROZJ71	125	2002
EP-01	Fusz Hall	Marathon/ 572RSL2040BF	540	1990
EP-01	Des Peres Hall	Generac/ 94A02242-S	75	1994
EP-01	Des Peres Hall	Olympian/ D200PI-22KW	200	1999
EP-01	Des Peres Hall	Olympian/ D200P3	200	2008
EP-01	Ritter Hall	Generac/ 98A05915-S	20	1999
EP-01	Cook Hall	Onan/ DGFC-3381522	200	1999
EP-01	Chaifetz Arena	Caterpillar/ SR4B-GD	1000	2008
EP-01	Wool Center	Caterpillar/ D150-8	150	2011
EP-01	Spring Hall	Caterpillar/ C7.1 (D200-2)	200	2016
EP-01	Macelwane Hall	Caterpillar/ C15 (Tier 2)	500	2018
EP-01	Grand Hall	Caterpillar/ C15 (Tier 3)	450	2017
<b>Emission Unit ID</b>	<b>Building</b>	<b>Description</b>		
EP-02	Various	Natural Gas-Fired Indirect Heating Units [each less than ten (10) Million British Thermal Units Per Hour (MMBtu/hr)] (listed in Appendix A)		

- 1) The permittee shall submit to the Air Pollution Control Program’s Compliance/Enforcement and Permits Sections at P.O. Box 176, Jefferson City, MO 65102, no later than 60 days after issuance of this permit, the following:
  - a) The horsepower rating of each diesel-fired emergency engine;
  - b) The type of certification for each emergency engine subject to 40 CFR Part 60, Subpart III;
  - c) Heat input capacities for all natural gas-fired indirect heating units;
  - d) Re-calculation of installation-wide Potential-To-Emit (PTE) for Carbon Monoxide (CO) using the updated heat input capacities and methodology specified in the Statement of Basis;
  - e) An application to amend this permit if CO PTE exceeds 100.0 tons per year, any boiler heat input capacity exceeds ten (10) MMBtu/hr, and/or any emergency engine subject to 40 CFR Part 60, Subpart III is not certified as a “constant speed” engine;
- 2) The permittee shall retain a copy of the submitted information for not less than five (5) years.

<b>PERMIT CONDITION 003</b>		
<b>10-6.220, Restriction of Emission of Visible Air Contaminants (SIP-only)<sup>4</sup></b>		
<b>Emission Unit ID</b>	<b>Building</b>	<b>Description</b>
EP-02	Various	Natural Gas-Fired Indirect Heating Units [each less than ten (10) Million British Thermal Units Per Hour (MMBtu/hr)] (listed in Appendix A)

**Emission Limitation:**

- 1) The permittee shall not cause or permit to be discharged into the atmosphere from these emission units any visible emissions with an opacity greater than 20 percent for any continuous six-minute period. [10 CSR 10-6.220(3)(A)]
- 2) Exception: The permittee may discharge into the atmosphere from any emission unit visible emissions with an opacity up to 40 percent for one continuous six-minute period in any 60 minutes. [10 CSR 10-6.220(3)(B)]
- 3) Failure to demonstrate compliance with §6.220(3)(A) and §6.220(3)(B) solely because of the presence of uncombined water shall not be a violation of §6.220. [10 CSR 10-6.220(3)(D)]

**Monitoring:**

- 1) Monitoring schedule:
  - a) The permittee shall conduct weekly observations for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then:
    - i) The permittee shall conduct observations once every two weeks for a period of eight weeks. If a violation is noted, the permittee shall revert to weekly monitoring. Should no violation of this regulation be observed during this period then:
      - ii) The permittee shall conduct observations once per month. If a violation is noted, the permittee shall revert to weekly monitoring.
- 2) If the permittee reverts to weekly monitoring at any time, the monitoring schedule shall progress in an identical manner from the initial monitoring schedule.
- 3) Observations are only required when the emission units are operating and when the weather conditions allow.
- 4) Issuance of a new, amended, or modified operating permit does not restart the monitoring schedule.
- 5) The permittee shall conduct visible emissions observation on these emission units using the procedures contained in U.S. EPA Test Method 22. Each Method 22 observation shall be conducted for a minimum of six-minutes. If no visible emissions are observed from the emission unit using Method 22, then no Method 9 is required for the emission unit.
- 6) For emission units with visible emissions, the permittee shall have a certified Method 9 observer conduct a U.S. EPA Test Method 9 opacity observation. The permittee may choose to forego Method 22 observations and instead begin with a Method 9 opacity observation. The certified Method 9 observer shall conduct each Method 9 opacity observation for a minimum of 30-minutes.

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<sup>4</sup> This regulation was amended in the Missouri Code of State Regulations (CSR) effective March 30, 2019. The unamended version of the rule remains in Missouri’s EPA-approved State Implementation Plan (SIP). Units burning only natural gas are exempt from regulation by the amended (CSR-only) rule, however, they are not exempt from regulation by the unamended (SIP-only) rule. Therefore, this permit condition is a federally enforceable requirement until it is removed from the SIP. No action on the part of the permittee is needed to revise the operating permit.



**Record Keeping:**

- 1) The permittee shall maintain records of all observation results for each emission unit using Attachments B and C or equivalent forms.
- 2) The permittee shall make these records available within a reasonable period of time for inspection to the Department of Natural Resources’ personnel upon request.
- 3) The permittee shall retain all records for five years.

**Reporting:**

- 1) The permittee shall report to the Air Pollution Control Program’s Compliance/Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or [AirComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov), no later than ten days after an exceedance of the emission limitation.
- 2) The permittee shall report any deviations from the requirements of this permit condition in the annual compliance certification (ACC). The permittee shall submit the ACC report to both the EPA Region VII and Air Pollution Control Program’s Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 or [AirComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov).

<b>PERMIT CONDITION 004</b>				
<b>SR 10-6.260, Restriction of Emission of Sulfur Compounds (SIP-only)<sup>5</sup></b>				
<b>Emission Unit ID</b>	<b>Building</b>	<b>Emergency Use CI RICE-Generator Set Make/Model</b>	<b>Kilowatt Output</b>	<b>Installation Date</b>
EP-01	Pius XII Memorial Library	Kohler/125ROZJ71	125	2002
EP-01	Fusz Hall	Marathon/572RSL2040BF	540	1990
EP-01	Des Peres Hall	Generac/94A02242-S	75	1994
EP-01	Des Peres Hall	Olympian/D200PI-22KW	200	1999
EP-01	Ritter Hall	Generac/98A05915-S	20	1999
EP-01	Cook Hall	Onan/DGFC-3381522	200	1999

**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/m<sup>3</sup>) of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour time period. [§6.260(3)(A)2.]

**Monitoring/Recordkeeping:**

None, See Statement of Basis

<sup>5</sup> This regulation was rescinded from the Missouri CSR on November 30, 2015. However, this regulation remains in Missouri’s SIP. Therefore, this is a federally enforceable requirement until it is removed from the SIP. No action on the part of the permittee is needed to revise the operating permit.

**Reporting:**

- 1) The permittee shall report any exceedance of any of the terms imposed by this permit condition, or any malfunction which could cause an exceedance of any of the terms imposed by this permit condition, no later than ten days after the exceedance or event causing the exceedance. The permittee shall submit these reports to Missouri Compliance Coordinator, Air Branch; Enforcement and Compliance Assurance Division; EPA Region VII; 11201 Renner Blvd., Lenexa, KS 66219.
- 2) The permittee shall report any deviations from the requirements of this permit condition in the annual compliance certification (ACC). The permittee shall submit the ACC report to both the EPA Region VII and Air Pollution Control Program’s Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 or [AirComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov).

<b>PERMIT CONDITION 005</b>				
<b>10 CSR 10-6.065(4)(C)2., Federally Enforceable Conditions</b>				
<b>10 CSR 10-6.261, Control of Sulfur Dioxide Emissions<sup>6</sup></b>				
<b>Emission Unit ID</b>	<b>Building</b>	<b>Emergency Use CI RICE-Generator Set Make/Model</b>	<b>Kilowatt Output</b>	<b>Installation Date</b>
EP-01	Pius XII Memorial Library	Kohler/125ROZJ71	125	2002
EP-01	Fusz Hall	Marathon/572RSL2040BF	540	1990
EP-01	Des Peres Hall	Generac/94A02242-S	75	1994
EP-01	Des Peres Hall	Olympian/D200PI-22KW	200	1999
EP-01	Ritter Hall	Generac/98A05915-S	20	1999
EP-01	Cook Hall	Onan/DGFC-3381522	200	1999
<b>Emission Unit ID</b>	<b>Building</b>	<b>Description</b>		
EP-02	Various	Natural Gas-Fired Indirect Heating Units [each less than ten (10) Million British Thermal Units Per Hour (MMBtu/hr)] (listed in Appendix A)		

**Fuel Limitation<sup>7</sup>:**

The permittee shall only burn diesel fuel having a maximum sulfur content of 15 parts per million or natural gas in the units subject to this permit condition. [§6.065(4)(C)2.]

**Reporting/Recordkeeping:**

- 1) The permittee must maintain a record of fuel deliveries and/or fuel sampling tests. [§6.261(4)(A)3.]

<sup>6</sup> This regulation has not yet been adopted into Missouri’s SIP. Therefore, this regulation is a state-only requirement. Upon adoption into Missouri’s SIP this regulation shall be both a state and federal requirement. No action on the part of the permittee is needed to revise the operating permit.

<sup>7</sup> This fuel sulfur limitation is more stringent than that under §6.261(3)(C), which applies to sources not covered under §6.261(3)(A) or (B). The sources listed are normally covered under §6.261(3)(B) and therefore cannot accept a fuel sulfur limitation under §6.261(3)(C). The installation must meet an exemption to avoid a requirement to demonstrate compliance with the limits under §6.261(3)(B), therefore, fuel sulfur content is limited to 15 parts per million.

- 2) If fuel delivery records are being used for compliance, the permittee must maintain the fuel supplier certification information to certify all fuel deliveries. Bills of lading and/or other fuel delivery documentation containing the following information for all fuel purchases or deliveries are deemed acceptable to comply with the requirements of this permit condition: [§6.261(4)(C)]
  - a) The name, address, and contact information of the fuel supplier;
  - b) The type of fuel (diesel, #2 fuel oil, etc.);
  - c) The sulfur content or maximum sulfur content expressed in percent sulfur by weight or in ppm sulfur; and
  - d) The heating value of the fuel.
- 3) If fuel sampling and analysis is being used for compliance, the permittee must determine sulfur weight percent of fuel(s) in accordance with 10 CSR 10-6.040. [§6.261(4)(D) and (5)(D)]
- 4) All required reports and records must be retained on-site for a minimum of five (5) years and made available within five (5) business days upon written or electronic request by the Director. [§6.261(4)(F)]
- 5) The permittee must furnish the Director all data necessary to determine compliance status. [§6.261(4)(G)]

<b>PERMIT CONDITION 006</b>				
<b>I. Standards of Performance for Stationary Compression Ignition Internal Combustion Engines</b>				
<b>Emission Unit ID</b>	<b>Building</b>	<b>Emergency Use CI RICE-Generator Set Make/Model</b>	<b>Kilowatt Output</b>	<b>Installation Date</b>
EP-01	Des Peres Hall	Olympian/D200P3	200	2008
EP-01	Chaifetz Arena	Caterpillar SR4B-GD	1000	2008
EP-01	Wool Center	Caterpillar/D150-8	150	2011
EP-01	Spring Hall	Caterpillar/C7.1 (D200-2)	200	2016
EP-01	Macelwane Hall	Caterpillar/C15 (Tier 2)	500	2018
EP-01	Grand Hall	Caterpillar/C15 (Tier 3)	450	2017

**Emission Limitations:<sup>8</sup>**

- 1) The permittee must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE. [§60.4205(b)]
  - a) 2007 model year and later emergency stationary CI ICEs with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines shall meet the emission standards specified in paragraphs (a)(1) through (2) of §60.4202. [§60.4202(a)]
    - i) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 for all pollutants beginning in model year 2007. [§60.4202(a)(2)]

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<sup>8</sup> The emission limitations imposed by this permit condition assume all emergency engines at the installation subject to Subpart IIII are certified as “constant speed” engines.

(A) Exhaust emission from nonroad engines to which Subpart B of Part 89 is applicable shall not exceed the applicable exhaust emission standards contained in Table 1 of §89.112, as follows: [§89.112(a)]

**Table 1 of §89.112: Emission Standards, grams per kilowatt-hour (g/kW-hr)**

Engine Kilowatt Output (kW) (must exceed generator set output)	Tier	Nitrogen Oxides (NO <sub>x</sub> )	Hydrocarbons (HC)	Non Methane Hydrocarbons (NMHC) + NO <sub>x</sub>	Carbon Monoxide (CO)	Particulate Matter (PM)
130≤kW<225	1	9.2	1.3	NA	11.4	0.54
	2	NA	NA	6.6	3.5	0.20
	3	NA	NA	4.0	3.5	0.20
225≤kW<450	1	9.2	1.3	NA	11.4	0.54
	2	NA	NA	6.4	3.5	0.20
	3	NA	NA	4.0	3.5	0.20
450≤kW≤560	1	9.2	1.3	NA	11.4	0.54
	2	NA	NA	6.4	3.5	0.20
	3	NA	NA	4.0	3.5	0.20
kW>560	1	9.2	1.3	NA	11.4	0.54
	2	NA	NA	6.4	3.5	0.20

(B) Exhaust emissions of oxides of nitrogen, carbon monoxide, hydrocarbon, and nonmethane hydrocarbon are measured using the procedures set forth in Subpart E of Part 89. [§89.112(b)]

(C) Exhaust emission of particulate matter is measured using the California Regulations for New 1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines. This procedure is incorporated by reference. See §89.6. [§89.112(c)]

(D) Naturally aspirated nonroad engines to which Subpart B of Part 89 is applicable shall not discharge crankcase emissions into the ambient atmosphere, unless such crankcase emissions are permanently routed into the exhaust and included in all exhaust emission measurements. This provision applies to all Tier 2 engines and later models. This provision does not apply to engines using turbochargers, pumps, blowers, or superchargers for air induction. [§89.112(e)]

2) The permittee must operate and maintain stationary CI ICE that achieve the emission standards as required in §60.4205 over the entire life of the engine. [§60.4206]

**Fuel Sulfur Content Limitation:**

The permittee must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, for stationary CI ICE subject to Subpart IIII with a displacement of less than 30 liters per cylinder that use diesel fuel. [§60.4207(b)]

- 1) All nonroad diesel fuel is subject to the following per-gallon standards: [40 CFR 80.510(b)]
  - a) Sulfur content. [40 CFR 80.510(b)(1)]
    - i) 15 parts per million maximum [40 CFR 80.510(b)(1)(i)]

- b) Cetane index or aromatic content, as follows: [40 CFR 80.510(b)(2)]
  - i) A minimum cetane index of 40, or [40 CFR 80.510(b)(2)(i)]
  - ii) A maximum aromatic content of 35 volume percent [40 CFR 80.510(b)(2)(ii)]

**Operational Limitations<sup>9</sup>:**

- 1) The permittee must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; [§60.4211(a)(1)]
- 2) The permittee must change only those emission-related settings that are permitted by the manufacturer; and [§60.4211(a)(2)]
- 3) The permittee must meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply. [§60.4211(a)(3)]
- 4) The permittee must comply with the emission standards specified in §60.4205(b) by purchasing an engine certified to the emission standards in §60.4205(b) for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications. [§60.4211(c)]
- 5) The permittee must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3) of §60.4211. In order for the engine to be considered an emergency stationary ICE under Subpart IIII, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs (f)(1) through (3) of §60.4211, the engine will not be considered an emergency engine under Subpart IIII and must meet all requirements for non-emergency engines. [§60.4211(f)]
  - a) There is no time limit on the use of emergency stationary ICE in emergency situations. [§60.4211(f)(1)]
  - b) The permittee may operate their emergency stationary ICE for any combination of the purposes specified in paragraph (f)(2)(i) of §60.4211 for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of §60.4211 counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2). [§60.4211(f)(2)]
    - i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Director for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. [§60.4211(f)(2)(i)]

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<sup>9</sup> On May 1, 2015, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision vacating paragraphs 40 CFR 60.4211(f)(2)(ii)-(iii). Guidance regarding the impact of the vacatur is available at <https://www3.epa.gov/ttn/atw/icengines/docs/RICEVacaturGuidance041516.pdf>.

- c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2) of §60.4211. Except as provided in paragraph (f)(3)(i) of §60.4211, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [§60.4211(f)(3)]
- i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: [§60.4211(f)(3)(i)]
- (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator; [§60.4211(f)(3)(i)(A)]
  - (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. [§60.4211(f)(3)(i)(B)]
  - (C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines. [§60.4211(f)(3)(i)(C)]
  - (D) The power is provided only to the facility itself or to support the local transmission and distribution system. [§60.4211(f)(3)(i)(D)]
  - (E) The permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the permittee. [§60.4211(f)(3)(i)(E)]

**Monitoring:**

The permittee must install a non-resettable hour meter prior to startup of the engine. [§60.4209(a)]

**Reporting/Recordkeeping:**

- 1) The permittee is not required to submit an initial notification. Starting with the model years in Table 5 to Subpart IIII, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the permittee must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee must record the time of operation of the engine and the reason the engine was in operation during that time. [§60.4214(b)]
- 2) If the permittee owns or operates an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4211(f)(3)(i), the permittee must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of §60.4214. [§60.4214(d)]

- a) The report must contain the following information: [§60.4214(d)(1)]
    - i) Company name and address where the engine is located. [§60.4214(d)(1)(i)]
    - ii) Date of the report and beginning and ending dates of the reporting period. [§60.4214(d)(1)(ii)]
    - iii) Engine site rating and model year. [§60.4214(d)(1)(iii)]
    - iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place. [§60.4214(d)(1)(iv)]
    - v) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine. [§60.4214(d)(1)(vii)]
  - b) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. [§60.4214(d)(2)]
  - c) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). However, if the reporting form specific to Subpart III is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4. [§60.4214(d)(3)]
- 3) The permittee shall report any deviations from the requirements of this permit condition in the annual compliance certification (ACC). The permittee shall submit the ACC report to both the EPA Region VII and Air Pollution Control Program's Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 or [AirComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov).

**General:**

Table 8 to Subpart III shows which parts of the General Provisions in §§60.1 through 60.19 apply to the permittee. [§60.4218]

<b>PERMIT CONDITION 007</b>				
<b>ZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines</b>				
<b>Emission Unit ID</b>	<b>Building</b>	<b>Emergency Use CI RICE-Generator Set Make/Model</b>	<b>Kilowatt Output</b>	<b>Installation Date</b>
EP-01	Pius XII Memorial Library	Kohler/125ROZJ71	125	2002
EP-01	Fusz Hall	Marathon/572RSL2040BF	540	1990
EP-01	Des Peres Hall	Generac/94A02242-S	75	1994
EP-01	Des Peres Hall	Olympian/D200PI-22KW	200	1999
EP-01	Ritter Hall	Generac/98A05915-S	20	1999
EP-01	Cook Hall	Onan/DGFC-3381522	200	1999
EP-01	Macelwane Hall	Kohler/80RZG	80	2006 (March)

**Operational Limitations<sup>10</sup>:**

- 1) The permittee must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of §63.6640. In order for the engine to be considered an emergency stationary RICE under Subpart ZZZZ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of §63.6640, is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs (f)(1) through (4) of §63.6640, the engine will not be considered an emergency engine under Subpart ZZZZ and must meet all requirements for non-emergency engines. [§63.6640(f)]
  - a) There is no time limit on the use of emergency stationary RICE in emergency situations. [§63.6640(f)(1)]
  - b) The permittee may operate their emergency stationary RICE for any combination of the purposes specified in paragraph (f)(2)(i) of §63.6640 for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of §63.6640 counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2). [§63.6640(f)(2)]
    - i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. [§63.6640(f)(2)(i)]

<sup>10</sup> On May 1, 2015, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision vacating paragraphs 40 CFR 63.6640(f)(2)(ii)-(iii). Guidance regarding the impact of of the vacatur is available at <https://www3.epa.gov/ttn/atw/icengines/docs/RICEVacaturGuidance041516.pdf>.



- c) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2) of §63.6640. Except as provided in paragraphs (f)(4)(i) and (ii) of §63.6640, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [§63.6640(f)(4)]
- 2) The permittee shall report any deviations from the requirements of this permit condition in the annual compliance certification (ACC). The permittee shall submit the ACC report to both the EPA Region VII and Air Pollution Control Program's Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 or [AirComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov).

## IV. Core Permit Requirements

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

### **10 CSR 10-6.045 Open Burning Requirements and St. Louis City Ordinance 68657 §16 Open Burning Restrictions**

- 1) No person shall cause, suffer, allow or permit the open burning of refuse.
- 2) No person shall conduct, cause or permit the conduct of a salvage operation by open burning.
- 3) No person shall conduct, cause or permit the disposal of trade waste by open burning.
- 4) No person shall cause or permit the open burning of leaves, trees or the byproducts therefrom, grass, or other vegetation.
- 5) It shall be prima-facie evidence that the person who owns or controls property on which open burning occurs, has caused or permitted said open burning.

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

- 1) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the Director within two business days, in writing, the following information:
  - a) Name and location of installation;
  - b) Name and telephone number of person responsible for the installation;
  - c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
  - d) Identity of the equipment causing the excess emissions;
  - e) Time and duration of the period of excess emissions;
  - f) Cause of the excess emissions;
  - g) Air pollutants involved;
  - h) Estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
  - i) Measures taken to mitigate the extent and duration of the excess emissions; and
  - j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
- 2) The permittee shall submit the paragraph 1 information to the Director in writing at least ten days prior to any maintenance, start-up or shutdown activity which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, notice shall be given as soon as practicable prior to the activity.
- 3) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the Director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under section 643.080 or 643.151, RSMo.

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

#### **10 CSR 10-6.060 Construction Permits Required**

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

#### **10 CSR 10-6.065 Operating Permits**

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

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

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

#### **10 CSR 10-6.110 Reporting of Emission Data, Emission Fees and Process Information**

- 1) The permittee shall submit a Full Emissions Report either electronically via MoEIS, which requires Form 1.0 signed by an authorized company representative, or on Emission Inventory Questionnaire (EIQ) paper forms on the frequency specified in this rule and in accordance with the requirements outlined in this rule. Alternate methods of reporting the emissions, such as spreadsheet file, can be submitted for approval by the Director.
- 2) Public Availability of Emission Data and Process Information. Any information obtained pursuant to the rule(s) of the Missouri Air Conservation Commission that would not be entitled to confidential treatment under 10 CSR 10-6.210 shall be made available to any member of the public upon request.
- 3) The permittee shall submit full EIQ's per the schedule in the rule. In the interim years the installation may submit a Reduced Reporting Form; however, if the installation's emissions increase or decrease by more than five tons when compared to their last submitted full EIQ, the installation shall submit a full EIQ rather than a Reduced Reporting Form.
- 4) In addition to the EIQ submittal schedule outlined above, any permit issued under 10 CSR 10-6.060 section (5) triggers a requirement that a full EIQ be submitted in the first full calendar year after the permitted equipment initially operates.

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

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

### **10 CSR 10-6.150 Circumvention**

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

### **10 CSR 10-6.165 Restriction of Emission of Odors**

**This is a State Only permit requirement.**

No person may cause, permit or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one volume of odorous air is diluted with seven volumes of odor-free air for two separate trials not less than 15 minutes apart within the period of one hour.

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

#### **Emission Limitation:**

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

#### **Monitoring:**

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

The permittee shall maintain the following monitoring schedule:

- 1) The permittee shall conduct weekly observations for a minimum of eight (8) consecutive weeks after permit issuance.
- 2) Should no violation of this regulation be observed during this period then-
  - a) The permittee may observe once every two (2) weeks for a period of eight (8) weeks.
  - b) If a violation is noted, monitoring reverts to weekly.
  - c) Should no violation of this regulation be observed during this period then-
    - i) The permittee may observe once per month.

- ii) If a violation is noted, monitoring reverts to weekly.
- 3) If the permittee reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner to the initial monitoring frequency.

**Recordkeeping:**

The permittee shall document all readings on Attachment 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 equipment malfunctions contributed to an exceedance.
- 3) Any violations and any corrective actions undertaken to correct the violation.

**10 CSR 10-6.180 Measurement of Emissions of Air Contaminants**

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

**10 CSR 10-6.250 Asbestos Abatement Projects**

**Certification, Accreditation, and Business Exemption Requirements**

**This is a State Only permit requirement.**

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the department to monitor training provided to employees.

**10 CSR 10-6.280 Compliance Monitoring Usage**

- 1) The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
  - a) Monitoring methods outlined in 40 CFR Part 64;
  - b) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
  - c) Any other monitoring methods approved by the Director.

- 2) Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at an installation:
  - a) Monitoring methods outlined in 40 CFR Part 64;
  - b) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
  - c) Compliance test methods specified in the rule cited as the authority for the emission limitations.
- 3) The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
  - a) Applicable monitoring or testing methods, cited in:
    - i) 10 CSR 10-6.030, "Sampling Methods for Air Pollution Sources";
    - ii) 10 CSR 10-6.040, "Reference Methods";
    - iii) 10 CSR 10-6.070, "New Source Performance Standards";
    - iv) 10 CSR 10-6.080, "Emission Standards for Hazardous Air Pollutants"; or
  - b) Other testing, monitoring, or information gathering methods, if approved by the Director, that produce information comparable to that produced by any method listed above.

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

No owner or operator shall operate applicable hand-fired fuel burning equipment unless the owner or operator meets the conditions set forth in 10 CSR 10-5.040. This regulation shall apply to all hand-fired fuel-burning equipment at commercial facilities 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 or to other equipment exempted under 10 CSR 10-5.040. 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**

(Rescinded on February 11, 1979, 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.

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

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

- 2) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B of 40 CFR Part 82:
  - a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices described in 40 CFR §82.156.
  - b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment described in 40 CFR §82.158.
  - c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR §82.161.
  - d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with the record keeping requirements of 40 CFR §82.166. ("MVAC-like" appliance as defined at 40 CFR §82.152).
  - e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to 40 CFR §82.156.
  - f) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR §82.166.
- 3) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
- 4) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements contained in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.
- 5) The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR Part 82.*

## V. General Permit Requirements

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

### Permit Duration

#### 10 CSR 10-6.065, §(4)(C)1, §(5)(C)1.B, §(4)(E)2.C

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed. If a timely and complete application for a permit renewal is submitted, but the Air Pollution Control Program fails to take final action to issue or deny the renewal permit before the end of the term of this permit, this permit shall not expire until the renewal permit is issued or denied.

### General Record Keeping and Reporting Requirements

#### 10 CSR 10-6.065, §(4)(C)1 and §(5)(C)1.C

##### 1) Record Keeping

- a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
- b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made available within a reasonable period of time to any Missouri Department of Natural Resources' personnel upon request.

##### 2) Reporting

- a) All reports shall be submitted to the Air Pollution Control Program, Compliance and Enforcement Section, P. O. Box 176, Jefferson City, MO 65102 or [AirComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov).
- b) The permittee shall submit a report of all required monitoring by:
  - i) April 1st for monitoring which covers the January through December time period.
  - ii) Exception. Monitoring requirements which require reporting more frequently than annually shall report no later than 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, record keeping, reporting, or any other requirements of the permit.



- d) Submit supplemental reports as required or as needed. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
  - i) Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph (5)(C)7 of 10 CSR 10-6.065 (Emergency Provisions) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.
  - ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.
  - iii) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's annual report shall be reported on the schedule specified in this permit.
- 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.

### **Risk Management Plan Under Section 112(r)**

#### **10 CSR 10-6.065 §(4)(C)1 and §(5)(C)1.D**

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

### **General Requirements**

#### **10 CSR 10-6.065(4)(C)1.A**

- 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 under this rule.
- 6) Failure to comply with the limitations and conditions that qualify the installation for an Intermediate permit make the installation subject to the provisions of 10 CSR 10-6.065(5) and enforcement action for operating without a valid part 70 operating permit.

### **Reasonably Anticipated Operating Scenarios**

#### **10 CSR 10-6.065(4)(C)1.C**

There are no reasonably anticipated operating scenarios.

### **Compliance Requirements**

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

- 1) Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
- 2) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
  - a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
  - b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
  - d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
- 3) All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
  - a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
  - b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.

- 4) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to the Air Pollution Control Program, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov. All deviations and exceedances must be included in the compliance certifications. The compliance certification shall include the following:
  - a) The identification of each term or condition of the permit that is the basis of the certification;
  - b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
  - c) Whether compliance was continuous or intermittent;
  - d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and
  - e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

### **Emergency Provisions**

#### **10 CSR 10-6.065, §(4)(C)1 and §(5)(C)7**

- 1) An emergency or upset as defined in 10 CSR 10-6.065(5)(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.

### **Off-Permit Changes**

#### **10 CSR 10-6.065(4)(C)5**

- 1) Except as noted below, the permittee may make any change in its permitted installation's operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Off-permit changes shall be subject to the following requirements and restrictions:
  - a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is a Title I modification; Please Note: Changes at the installation which affect the emission limitation(s) classifying the installation as an intermediate source (add additional equipment to the record keeping requirements, increase the emissions above major source level) do not qualify for off-permit changes.

- b) The permittee must provide contemporaneous written notice of the change to the Air Pollution Control Program, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region 7, 11201 Renner Blvd., Lenexa, KS 66219. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change; and
- c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes.

### **Responsible Official**

#### **10 CSR 10-6.020(2)(R)34**

The application utilized in the preparation of this permit was signed by Daniel Goodman, Facilities Management, Assistant Vice President. If this person terminates employment, or is reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

### **Reopening-Permit for Cause**

#### **10 CSR 10-6.065 §(4)(E)4 and §(5)(E)6.A(III)(a)-(c)**

This permit may be reopened for cause if:

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

### **Statement of Basis**

#### **10 CSR 10-6.065 §(4)(E)1.A and §(5)(E)1.C**

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

## **VI. Attachments**

Attachments follow.



**Attachment B**  
**Method 22 Visible Emissions Observations**

Method 22 Visible Emissions Observations					
Installation Name	Observer Name				
Location	Date				
Sky Conditions	Wind Direction				
Precipitation	Wind Speed				
Time	Emission unit				
Sketch emission unit: indicate observer position relative to emission unit; indicate potential emission points and/or actual emission points.					
Minute	Seconds				Comments
	0	15	30	45	
	Visible Emissions Yes (Y) or No (N)				
0					
1					
2					
3					
4					
5					
6					

If visible emissions are observed, the installation is not required to complete the entire six-minute observation. The installation shall note when the visible emissions were observed and shall conduct a Method 9 opacity observation.

**Attachment C**  
**Method 9 Opacity Observations**

Method 9 Opacity Observations		
Installation Name:	Sketch of the observer's position relative to the emission unit	
Emission Point:		
Emission Unit:		
Observer Name and Affiliation:		
Observer Certification Date:		
Method 9 Observation Date:		
Height of Emission Point:		
Time:	Start of observations	End of observations
Distance of Observer from Emission Point:		
Observer Direction from Emission Point:		
Approximate Wind Direction:		
Estimated Wind Speed:		
Ambient Temperature:		
Description of Sky Conditions (Presence and color of clouds):		
Plume Color:		
Approximate Distance Plume is Visible from Emission Point:		



**Attachment C (continued)  
 Method 9 Opacity Observations**

Minute	Seconds				1-minute Avg. % Opacity <sup>11</sup>	6-minute Avg. % Opacity <sup>12</sup>	Steam Plume (check if applicable)		Comments
	0	15	30	45			Attached	Detached	
	Opacity Readings (% Opacity) <sup>13</sup>								
0						N/A			
1						N/A			
2						N/A			
3						N/A			
4						N/A			
5									
6									
7									
8									
9									
10									
11									
12									
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27									
28									
29									
30									

The emission unit is in compliance if each six-minute average opacity is less than or equal to 20 %.  
 Exception: The emission unit is in compliance if one six-minute average opacity is greater than 20 %, but less than 40 %.

Was the emission unit in compliance at the time of evaluation (yes or no)?

\_\_\_\_\_  
 Signature of Observer

<sup>11</sup> 1-minute avg. % opacity is the average of the four 15 second opacity readings during the minute.

<sup>12</sup> 6-minute avg. % opacity is the average of the six most recent 1-minute avg. % opacities.

<sup>13</sup> Each 15 second opacity reading shall be recorded to the nearest 5% opacity as stated within Method 9.



**Attachment E  
 Installation-Wide NO<sub>x</sub> Compliance Demonstration**

Description	Monthly Usage	NO <sub>x</sub> Emission Factor	Monthly NO <sub>x</sub> Emissions (tons)
Diesel-Fired Emergency Generators <sup>14</sup> ≤600 HP (EP-01)	Mgal	0.617 lb/Mgal	
Diesel-Fired Emergency Generators <sup>15</sup> >600 HP (EP-01)	Mgal	0.448 lb/Mgal	
Natural Gas-Fired Emergency Generator <sup>16</sup> (EP-01)	MMcf	2250 lb/MMcf	
Natural Gas-Fired Indirect Heating Units (EP-02)	MMcf	100 lb/MMcf	
Start-up, Shutdown, and Malfunction Emissions from all Emission Units			
<b>Installation-Wide Monthly NO<sub>x</sub> Emissions (tons):</b>			

Monthly NO<sub>x</sub> Emissions (tons/month) = Monthly Usage x NO<sub>x</sub> Emission Factor x 0.0005 tons/lb  
 Installation-Wide NO<sub>x</sub> Emissions (tons/month) = The sum of the NO<sub>x</sub> Emissions from all emission units (tons/month) and the Start-up, Shut-down, and Malfunction emissions for the current month.

Month/Year	Rolling Consecutive 12-Month NO <sub>x</sub> Emissions (tons/yr)

Month/Year	Rolling Consecutive 12-Month NO <sub>x</sub> Emissions (tons/yr)

Rolling Consecutive 12-Month NO<sub>x</sub> Emissions (tons/yr) = The sum of the last 12 months Installation-Wide NO<sub>x</sub> Emissions (tons/month). Rolling Consecutive 12-Month NO<sub>x</sub> Emissions of less than **100.0 tons/yr** demonstrates compliance.

<sup>14</sup> From AP-42 Table 3.3-1, using a heating value for the fuel of 140 MMBtu per 1000 gallons. Specific generators applicable to this category contingent upon requirements of Permit Condition 002.

<sup>15</sup> From AP-42 Table 3.4-1, using a heating value for the fuel of 140 MMBtu per 1000 gallons. Specific generators applicable to this category contingent upon requirements of Permit Condition 002.

<sup>16</sup> From AP-42 Table 3.2-3 (assumes four-stroke rich-burn), using a heating value for the fuel of 1020 million British Thermal Units per million Cubic Feet (MMBtu/MMcf).

## **VII. Appendix**

Appendices follow.

**Appendix A<sup>17</sup>**  
**Natural Gas-Fired Indirect Heating Units**

<b>Unit</b>	<b>Building</b>	<b>BTU<sup>18</sup> in</b>	<b>Date Installed</b>
Boiler #1	Bio-Medical Engineering	1,805,000	1999
Boiler #2	Bio-Medical Engineering	175,000	1999
Boiler #3	Bio-Medical Engineering	175,000	1999
Boiler #4	Bio-Medical Engineering	175,000	1999
RTU #1	Bio-Medical Engineering	1,300,000	1999
RTU #2	Bio-Medical Engineering	800,000	1999
Hot water heater #1	Bio-Medical Engineering	75,000	1999
Hot water heater #2	Bio-Medical Engineering	75,100	1999
Boiler #1	McDonnell Douglas Hall	3,753,000	1996
Boiler #2	McDonnell Douglas Hall	3,753,000	1996
Boiler	SLUMA	2,310,000	removed
Boiler #1	SLUMA	1,745,000	2001
Boiler #2	SLUMA	1,745,000	2001
Furnace	Oliver Hall	100,000	1999
RTU #1	Oliver Hall	600,000	1999
RTU #2	Oliver Hall	800,000	1999
Boiler (Front House)	Manresa	290,000	DPS tag 10646
Hot water heater	Manresa		40 gal
Hot water heater	Manresa	275,000	1996
Boiler	Manresa	HS 447 ft.^2	DPS Saf. tag 96045
Space heater	Manresa	50,000	1975
Furnace (LL)	Manresa	100,000	1992
Furnace #1(East Chapel)	Manresa	100,000	1992
Furnace #2(East Chapel)	Manresa	100,000	1992
Furnace #1(West Chapel)	Manresa	100,000	1992
Furnace #2(West Chapel)	Manresa	100,000	1992
RTU #1	Manresa	160,000	1992
RTU #2	Manresa	160,000	1992
RTU #3	Manresa	160,000	1992
RTU #4	Manresa	160,000	1992
RTU #5	Manresa	160,000	1992
RTU #6	Manresa	160,000	1992
RTU #7	Manresa	270,000	1992
RTU #8	Manresa	270,000	1992
Boiler	Griesedieck	8,370,000	
Boiler	Griesedieck	1,548,000	Jan-06
Boiler	Griesedieck	1,548,000	Jan-06
Boiler	Griesedieck	1,500,000	Jan-07
Boiler	Griesedieck	1,500,000	Jan-07
Boiler	Griesedieck	3,220,000	2002
Boiler	DuBourg	4,025,000	1998

<sup>17</sup> Per the requirements of Permit Condition 002, this appendix shall be completed within 60 days of this permit's issuance.

<sup>18</sup> BTU relates to British Thermal Unit

**Appendix A (continued)**  
 Natural Gas-Fired Indirect Heating Units

<b>Unit</b>	<b>Building</b>	<b>BTU in</b>	<b>Date Installed</b>
Boiler	DuBourg	4,025,000	1998
Boiler	DuBourg	4,025,000	1998
Boiler	DuBourg	4,025,000	1998
Boiler	DuBourg	4,025,000	1998
Boiler(East)	CGC	5,485,000	2005
Boiler(West)	CGC	5,485,000	2006
Water Heater(Basement)	Des Peres	65,000	2002
Boiler #1	DeMattias	6,275,000	
Boiler #2	DeMattias	6,275,000	
Water Heater	DeMattias	180,000	
Boiler	Brouster	500,000	
RTU	Brouster	90,000	There are three RTUs.
RTU	Brouster	48,000	There are three RTUs.
Furnace	Bannister	500,000	There are three Furnaces.
Furnace(3rd Floor)	Bannister	500,000	1999
Water Heater(Basement)	Bannister	34,000	1999
Water Heater(Basement)	Bannister	199,000	1999
RTU	Adorjan	500,000	1999
			There are two RTUs.
Boiler	Adorjan	1,314,000	1999
Water Heater	Adorjan	40,000	1999
Boiler	Margurite	6,570,000	There are two Boilers.
Boiler	Margurite	1,200,000	
Water Heater	Pruellage	40,000	
Boiler	Pruellage	1,700,000	
Water Heater	Pruellage	500,000	1999
Boiler	O'Brien	350,000	1999
Water Heater	O'Brien	40,000	Nov-07
Boiler	Xaiver Annex	3,630,000	1996
			There are two Boilers.
Water Heater	Xaiver	75,100	1996
Boiler	McGannon	1,200,000	Sep-02
Water Heater	McGannon	120,000	Sep-02
Boiler	Fusz	4,180,000	There are two Boilers.
Boiler	Fusz	1,200,000	Sep-05
Boiler(10th Floor)	Reinert	1,800,000	
Boiler(2nd Floor)	Reinert	1,200,000	
DHW Boiler(10th Floor)	Reinert	750,000	2010
DHW Boiler(10th Floor)	Reinert	750,000	2016
DHW Water Heater(2nd Floor)	Reinert	199,000	2015
DHW Water Heater(2nd Floor)	Reinert	199,000	2015

**Appendix A (continued)**  
 Natural Gas-Fired Indirect Heating Units

<b>Unit</b>	<b>Building</b>	<b>BTU in</b>	<b>Date Installed</b>
Make Up Water Heater(2nd Floor)	Reinert	305,000	1996
Furnace Kitchen	Reinert	100,000	Dec-07
Boiler	Busch	3,170,000	Nov-95
Boiler	Busch	3,170,000	Nov-95
Boiler	Busch	3,170,000	Nov-95
Boiler (DHW)	Busch	630,000	Oct-07
RTU	Earhart	400,000	Jul-07
RTU #2	Earhart	120,000	
RTU #1	Earhart	240,000	
RTU	Earhart	400,000	Jul-07
RTU	Earhart	400,000	Jul-07
RTU	Earhart	400,000	Jul-07
RTU	Earhart	400,000	Jul-07
Water Heater	Earhart	38,000	
Furnace	Earhart	175,000	
Boiler #1	Litteken	695,000	2004
Boiler #2	Litteken	695,000	2004
Water Heater	Litteken	40,000	
Boiler	Fitzgerald	864,000	1964
Boiler	Fitzgerald	864,000	1964
Water Heater	Fitzgerald	50,000	1996
Rooftop	Fitzgerald	135,000	2001
Rooftop	Fitzgerald	135,000	2001
Rooftop	Fitzgerald	135,000	2001
Rooftop	Fitzgerald	120,000	2001
	Tegeler	1,740,000	1995
	Tegeler	1,740,000	1995
Boiler	Ritter	3,170,000	1995
Boiler	Ritter	3,170,000	1995
Boiler	Catier House	187,500	1992
Boiler	Catier House	150,000	1992
Water Heater	Catier House	53,000	1999
Water Heater	Catier House	75,000	2005
Furnace	Catier House	120,000	2013
Rooftop	Wuller	120,000	1995
Rooftop	Wuller	400,000	2016
Rooftop	Wuller	240,000	2015
Rooftop	Wuller	350,000	2005
Heater	Wuller	75,000	1990
Heater	Wuller	25,000	1990
Furnace(1st Floor)	Boileau	140,000	2006





**Appendix A (continued)**  
 Natural Gas-Fired Indirect Heating Units

<b>Unit</b>	<b>Building</b>	<b>BTU in</b>	<b>Date Installed</b>
RTU	Monsanto	200,000	1996
RTU	Monsanto	200,000	1996
Boiler	GreenHouse	299,000	1991
Water Heater	GreenHouse	52,500	1991
Water Heater	GreenHouse	175,000	1992
Boiler	Simon Rec.	4,184,000	1981
Boiler	Simon Rec.	4,184,000	1981
Furnace	Grand Forest(3411-A)	75,000	1999
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3411-B)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3411-C)	75,000	2008
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3411-D)	75,000	2007
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3413-A)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3413-B)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3413-C)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3413-D)	75,000	2007
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3415-A)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3415-B)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3415-C)	75,000	2004
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3415-D)	75,000	1999
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3417-A)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3417-B)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3417-C)	75,000	1999
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3417-D)	75,000	2007
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3419-A)	75,000	2004
Water Heater	Grand Forest	30,000	

**Appendix A (continued)**  
 Natural Gas-Fired Indirect Heating Units

<b>Unit</b>	<b>Building</b>	<b>BTU in</b>	<b>Date Installed</b>
Furnace	Grand Forest(3419-B)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3419-C)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3419-D)	75,000	1980
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3421-A)	75,000	2004
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3421-B)	75,000	1986
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3421-C)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3421-D)	75,000	2007
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3423-A)	75,000	2004
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3423-B)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3423-C)	75,000	2006
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3423-D)	75,000	2007
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3414-A)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3414-B)	75,000	1978
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3414-C)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3414-D)	75,000	2007
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3416-A)	75,000	2004
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3416-B)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3416-C)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3416-D)	75,000	2007
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3418-A)	75,000	2006
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3418-B)	75,000	1986

**Appendix A (continued)**  
 Natural Gas-Fired Indirect Heating Units

<b>Unit</b>	<b>Building</b>	<b>BTU in</b>	<b>Date Installed</b>
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3418-C)	75,000	2005
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3418-D)	75,000	1998
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3420-A)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3420-B)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3420-C)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3420-D)	75,000	2005
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3422-A)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3422-B)	75,000	2006
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3422-C)	75,000	2005
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3422-D)	75,000	2007
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3424-A)	75,000	1994
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3424-B)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3424-C)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3424-D)	75,000	2007
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3426-A)	46,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3426-B)	60,000	1997
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3426-C)	72,000	2002
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3426-D)	75,000	2007
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3428-A)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3428-B)	75,000	2007
Water Heater	Grand Forest	30,000	

**Appendix A (continued)**  
 Natural Gas-Fired Indirect Heating Units

<b>Unit</b>	<b>Building</b>	<b>BTU in</b>	<b>Date Installed</b>
Furnace	Grand Forest(3428-c)	75,000	1999
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3428-D)	75,000	2008
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3430-A)	75,000	2004
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3430-B)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3430-C)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3430-D)	75,000	2005
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3432-A)	75,000	2004
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3432-B)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3432-C)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3432-D)	75,000	2007
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3434-A)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3434-B)	75,000	2005
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3434-C)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3434-D)	75,000	2007
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3436-A)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3436-B)	75,000	2003
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3436-C)	75,000	2003
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3436-D)	75,000	2007
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3438-A)	75,000	2004
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3438-B)	75,000	2004
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3438-C)	75,000	2007

**Appendix A (continued)**  
 Natural Gas-Fired Indirect Heating Units

<b>Unit</b>	<b>Building</b>	<b>BTU in</b>	<b>Date Installed</b>
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3438-D)	75,000	2005
Water Heater	Grand Forest	40,000	
Furnace	Grand Forest(3440-A)	80,000	1986
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3440-B)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3440-C)	75,000	2007
Water Heater	Grand Forest	30,000	
Furnace	Grand Forest(3440-D)	75,000	2005
Water Heater	Grand Forest	40,000	
Boiler #1	Cook(Davis-Shaughnessy)	1,150,000	1999
Boiler #2	Cook(Davis-Shaughnessy)	1,150,000	1999
Boiler	Davis-Shaughnessy	7,840,000	1958
Boiler	Davis-Shaughnessy	4,025,000	
Water Heater	Davis-Shaughnessy	398,000	
Boiler	McGannon	2,100,000	2000
Boiler	Griesedieck	8,370,000	Removed
Boiler	Busch Student Center	8,034,246	1995
Boiler	Adorjan	1,511,000	1996
Boiler	Marguerite	4,180,000	?????
Boiler	Cartier	187,000	1993
Boiler	Ritter	4,308,219	1996
Boiler	Tegeler	2,445,205	1996
RTU	CGC	5,653,000	?????
Furnace	Litteken	540,000	
Water Heater	Adorjan	75,100	?????
Water Heater	Marchetti Towers-East	961,700	
Water Heater	Marguerite	528,000	
RTU	McGannon	250,000	1996
RTU	Oliver	731,000	?????
Water heater	Chaifetz	650	2007
Water heater	Chaifetz	650	2007
Boiler	Chaifetz	1436000	2007
AHU 1	Chaifetz		2007
AHU2	Chaifetz		2007
AHU3	Chaifetz		2007
AHU4	Chaifetz		2007
AHU5	Chaifetz		2007
AHU6	Practice Pavillion		2007
AHU7	Practice Pavillion		2007



# STATEMENT OF BASIS

## Voluntary Limitations

In order to qualify for this Intermediate State Operating Permit, the permittee has accepted voluntary, federally enforceable emission limitations. Per 10 CSR 10-6.065(4)(C)1.A.(VI), if these limitations are exceeded, the installation becomes subject to 10 CSR 10-6.065(5) and enforcement action for operating without a valid part 70 operating permit. It is the permittee’s responsibility to monitor emission levels and apply for a part 70 operating permit far enough in advance to avoid this situation. This may mean applying more than eighteen months in advance of the exceedance, since it can take that long or longer to obtain a part 70 operating permit.

## Installation Description

St. Louis University (SLU) has historically maintained an Intermediate Operating Permit for its North Campus (formerly known as Frost Campus) using facility ID 510-2711, and a Basic Operating Permit for its South Campus (formerly known as Medical School Campus) using facility ID 510-1349. With this permit renewal SLU has decided to combine the two locations into one Intermediate Operating Permit, and has decided to keep facility ID 510-2711 for the combined installation.

The installation is an area source of Hazardous Air Pollutants (HAPs) and a synthetic minor source of Nitrogen Oxides (NO<sub>x</sub>).

## Updated Potential to Emit (PTE) for the Installation and Reported Emissions, tons per year

Pollutants	Unconditioned Potential Emissions <sup>1</sup>	Reported Emissions				
		2018	2017	2016	2015	2014
Particulate Matter ≤ Ten Microns (PM <sub>10</sub> )	8.26	0.636	0.636	0.395	0.687	0.631
Particulate Matter ≤ 2.5 Microns (PM <sub>2.5</sub> )	8.26	0.636	0.636	0.395	0.687	0.631
Sulfur Oxides (SO <sub>x</sub> )	0.651	0.0491	0.0491	0.0305	0.0531	0.0488
Nitrogen Oxides (NO <sub>x</sub> )	109	8.18	8.18	5.09	8.85	8.13
Volatile Organic Compounds (VOC)	5.99	0.448	0.448	0.278	0.484	0.445
Carbon Monoxide (CO)	91.5	6.08	6.08	3.78	6.57	6.05
Combined Hazardous Air Pollutants (HAPs)	2.05	0.00	0.00	0.00	0.00	0.00

## Updated Potential to Emit (PTE) for the Installation and Reported Emissions, tons per year (continued)

<sup>1</sup>Natural gas-fired indirect heating units were evaluated using emission factors from EPA's AP-42 Section 1.4 "Natural Gas Combustion," 260.2 million British Thermal Units per hour (MMBtu/hr), a fuel heating value of 1050 MMBtu/million cubic feet (MMBtu/MMcf), and 8,760 hours of uncontrolled annual operation. The natural gas-fired emergency generator was evaluated using emission factors from AP-42 Section 3.2 "Natural Gas-fired Reciprocating Engines," 0.27 MMBtu/hr, four-stroke rich-burn, and 500 hours of uncontrolled annual operation. Diesel-fired emergency generators less than 600 horsepower (HP) were evaluated using emission factors from AP-42 Section 1.3 "Fuel Oil Combustion," emission factors from AP-42 Section 3.3 "Gasoline and Diesel Industrial Engines," 0.157 MMBtu/hr, 0.0015% fuel sulfur content, and 500 hours of uncontrolled annual operation. Diesel-fired emergency generators greater than 600 horsepower (HP) were evaluated using emission factors from AP-42 Section 3.3 "Gasoline and Diesel Industrial Engines," emission factors from AP-42 Section 3.4 "Large Stationary Diesel and All Stationary Dual-fuel Engines," 0.0569 MMBtu/hr, 0.0015% fuel sulfur content, and 500 hours of uncontrolled annual operation. The chillers and diesel fuel tanks are not considered in the unconditioned PTE.

### Permit Reference Documents

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

- 1) Intermediate Operating Permit Application, received March 30, 2017;
- 2) 2018 EZ Emissions Inventory Questionnaire;
- 3) 2017 Full Emissions Inventory Questionnaire, received March 19, 2018;
- 4) 2016 Full Emissions Inventory Questionnaire, received April 3, 2017;
- 5) 2015 Full Emissions Inventory Questionnaire, received April 25, 2016;
- 6) 2014 Full Emissions Inventory Questionnaire, received April 16, 2015; and
- 7) 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

10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*. The SIP-only (non-amended) version of this regulation applies to the natural gas-fired indirect heating units at this installation and is included in this operating permit as Permit Condition 001.

### Other Air Regulations Determined Not to Apply to the Operating Permit

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

10 CSR 10-5.500, *Control of Emissions From Volatile Organic Liquid Storage*. This regulation does not have any applicable limitations to this installation because all volatile organic liquid storage tanks have capacities smaller than 40,000 gallons. However, there are applicable recordkeeping requirements, therefore, this regulation is included in this permit as Permit Condition 001.

10 CSR 10-5.510, *Control of Emissions of Nitrogen Oxides*. This regulation is not included in this operating permit because the installation has agreed to a 100 ton-per-year emission limit for nitrogen oxides. Therefore, the exemption under §5.510(1)(A) applies.



10 CSR 10-5.570, *Control of Sulfur Emissions From Stationary Boilers*. This rule is not included in this operating permit because each of the natural gas-fired boilers at this installation has a nameplate capacity equal to or less than 50 MMBtu per hour. Therefore, the exemption under §5.570(1)(A) applies.

10 CSR 10-6.100, *Alternate Emission Limits for Ozone Nonattainment Areas*. This rule was a state-only requirement and was rescinded from the Missouri CSR on September 30, 2018.

10 CSR 10-6.260, *Restriction of Emission of Sulfur Compounds*. This rule was rescinded on November 30, 2015 from the Missouri CSR although it still remains in the Missouri SIP. Upon adoption of 10 CSR 10-6.261 into Missouri's SIP, 10 CSR 10-6.260 will be removed from the SIP. No action on the part of the permittee is needed to revise the operating permit.

The installation's natural gas combustion sources are exempt from this regulation under §6.260(1)(A)2. The installation's diesel-fired emergency generators subject to 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* are exempt from this regulation under §6.260(1)(A)1. The installation's diesel-fired emergency generators not subject to 40 CFR Part 60, Subpart IIII are not exempt to §6.260. However, the diesel generators are subject to a federally enforceable fuel sulfur content limit under 10 CSR 10-6.065(4)(C)2. Federally Enforceable Conditions that makes exceedance of limitations per §6.260 highly unlikely. Therefore, compliance with the limitations of §6.260 is not required to be demonstrated for diesel generators not subject to Subpart IIII at this installation.

The emission factor for sulfur oxides from large [ $>600$  horsepower (HP)] stationary diesel-fired ICEs found in EPA's AP-42 Table 3.4-1 is 1.01S pounds per million British Thermal Units (MMBtu) fuel input, where S relates to the percent (%) sulfur in the fuel. Such emission factor assumes that all sulfur content in the fuel is converted to sulfur dioxide. The emission factor for sulfur dioxide from distillate fuel oil-fired external combustion sources  $<100$  MMBtus per hour in EPA's AP-42 Table 1.3-1 [Source Classification Codes (SCCs) 102-005-02/03 and 103-005-02/03] is 142S pounds per 1000 gallons fuel input, which at a fuel heating value of 140 MMBtu/1000 gallon, equates to 1.01S (the same as for large diesel-fired ICEs). The 1.01S emission factor is considered representative of sulfur oxide emissions from the ICEs at the installation that are less than or equal to 600 HP for two reasons: 1) the alternative emission factor from AP-42 Table 3.3-1 is not given as a function of fuel sulfur content, and 2) emission of sulfur oxides is generally not dependent on the type of combustion.

Per the requirements of Permit Condition 005, the permittee is limited to diesel fuel having a maximum fuel sulfur content of 15 ppm, or 0.0015 percent (%). Therefore, at 0.0015% sulfur, the emission factor for sulfur oxides related to all stationary diesel-fired ICEs at this installation is 0.0015 pounds sulfur oxides per MMBtu heat input. Dividing the emission factor for sulfur dioxide by (64.0648/32.066) pounds sulfur dioxide per pound sulfur yields 0.00075 pounds sulfur per MMBtu heat input. Using the emission factor in terms of pounds sulfur per million Btus, the maximum emission factor for sulfur trioxide would be the emission factor in terms of pounds sulfur per million Btus multiplied by (80.0642 pounds sulfur trioxide per 32.066 pounds sulfur), yielding an emission factor for sulfur trioxide of 0.0019 pounds sulfur trioxide per MMBtu heat input. Using the emission factor in terms of pounds sulfur per million Btus, the maximum emission factor for sulfuric acid would be the emission factor in terms of pounds sulfur per million Btus multiplied by (98.0795 pounds sulfuric acid per 32.066 pounds sulfur), yielding an emission factor for sulfuric acid of 0.0023 pounds sulfuric acid per MMBtu heat input.

Conversion of the three emission factors to pounds sulfur dioxide, sulfur trioxide, and/or sulfuric acid per dry standard cubic feet (dscf) of exhaust gases may be achieved via the “F-factors” given in 40 CFR Part 60, Appendix A-7, Table 19.2 (9,190 dscf per MMBtu heat input for crude, residual, or distillate oil determined at standard conditions of 20 degrees Celsius and 29.92 inches mercury). Further conversion to units of milligrams per wet cubic meter (mg/wcm) yields the following exhaust concentrations of each sulfur compound of interest:

Sulfur Compound	Emission Factor (mg/dcm <sup>3</sup> s)
SO <sub>2</sub> (mg/wcm)	2.6
SO <sub>3</sub> (mg/wcm)	3.3
H <sub>2</sub> SO <sub>4</sub> (mg/wcm)	4.0

Further conversion to units of parts per million by volume (ppmv) using the ideal gas law at the same standard atmospheric conditions yields equal exhaust concentrations for each sulfur compound of 0.87 ppmv. Equal results for concentrations in ppmv is consistent with the properties of an ideal gas. One mole of any ideal gas takes up the same volume, and parts per million by volume for an ideal gas is equal to parts per million by mole.

The diesel emergency generators not subject to 40 CFR Part 60, Subpart IIII at this installation are expected to meet all emission limitations required by §6.260(3)(A) with a very large margin. Therefore, the generators are deemed compliant with the requirements of §6.260 in this operating permit.

10 CSR 10-6.390, *Control of NO<sub>x</sub> Emissions From Large Stationary Internal Combustion Engines*. This rule does not apply to the installation because stationary emergency standby internal combustion engines are not subject.

10 CSR 10-6.400, *Restriction of Emission of Particulate Matter From Industrial Processes*. All of the installation’s combustion sources are exempt from this regulation because the definition of process weight does not include gases or liquids used as fuel. All other emission units at this installation are not considered a significant source of particulates.

10 CSR 10-6.405, *Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used For Indirect Heating*. An emission unit that is subject to 10 CSR 10-6.070 and in compliance with applicable provisions; or an emission unit fueled by either natural gas or fuel oils #2 through #6 with less than one and two-tenths percent (1.2%) sulfur are deemed in compliance with 10 CSR 10-6.405. Therefore, this rule does not apply to the installation.

### Construction Permit History

The North Campus holds three (3) City of Saint Louis Source Registration Permits (Permit No(s). SR03.025, SR07.066, and SR08.019) which are not included as part of this operating permit because they are neither state nor federally enforceable.

### New Source Performance Standards (NSPS) Applicability

40 CFR Part 60, Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification*

*Commenced After July 23, 1984.* This regulation does not apply to the installation because none of the volatile organic liquid storage tanks have capacities greater than 75 cubic meters.

Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.* This rule does not apply to the installation because none of the steam generating units have heat input capacities greater than or equal to ten (10) MMBtu/hr.

40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.* This regulation applies to all stationary emergency use generator sets at this installation with compression ignition manufactured after July 11, 2005 and installed after June 12, 2006. It is included in this operating permit as Permit Condition 004.

40 CFR Part 60, Subpart JJJJ, *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.* This regulation does not apply to the natural gas-fired stationary emergency use generator because it was manufactured and installed prior to June 12, 2006.

#### **Maximum Achievable Control Technology (MACT) Applicability**

40 CFR Part 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.* This regulation applies to all stationary emergency use generator sets at this installation manufactured and installed prior to June 12, 2006. It is included in this operating permit as Permit Condition 005.

40 CFR Part 63, Subpart JJJJJ, *National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.* This regulation is not included in this operating permit because the natural gas-fired boilers at this installation are fired by natural gas. Therefore, the exemption under §63.11195(e) applies.

#### **National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

40 CFR Subpart M, *National Emission Standard for Asbestos.* This regulation is applicable to the installation and is included in Section IV of this permit.

#### **Greenhouse Gas Emissions**

The installation's CO<sub>2e</sub> emissions were not included within this permit.

#### **Other Regulatory Determinations**

None.

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

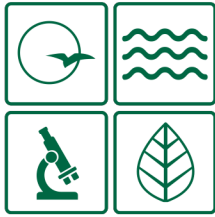
Any regulation which is not specifically listed in either the Operating Permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons.

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

## **Response to Public Comments**

A public notice draft of this operating permit was placed on the Missouri Department of Natural Resources' (MoDNR') website on December 13, 2019 at: <http://dnr.mo.gov/env/apcp/permit-public-notices.htm>. Email notification of the draft permit being placed on public notice was sent to affected states (Illinois) and U.S. EPA's Region VII office in Lenexa, Kansas, on December 26, 2019. Although the 30 calendar day public notice period did not officially begin on December 27, 2019; final preparation of the permit for issuance was delayed to allow consideration of comments received or postmarked by January 26, 2020. No public comments were received either electronically or by mail as of January 30, 2020.



Missouri Department of [dnr.mo.gov](http://dnr.mo.gov)

# NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

May 5, 2020

Daniel Goodman  
Saint Louis University-North Campus  
3545 Lindell Boulevard  
Saint Louis, MO 63103

Re: Intermediate Operating Permit Renewal  
Installation ID: 510-2711, Permit Number: OP2020-004

Dear Daniel Goodman:

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

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

You may appeal this permit to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.078.16 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If you send your appeal by registered or certified mail, we will deem it filed on the date you mailed it. If you send your appeal by a method other than registered or certified mail, we will deem it filed on the date the AHC receives it.

If you have any questions or need additional information regarding this permit, please contact the Air Pollution Control Program (APCP) at (573) 751-4817, or you may write to the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

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

MJS/Isa

Enclosures

c: PAMS File: 2017-03-122

