



Missouri Department of Natural Resources
 Air Pollution Control Program

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: OP2013-054
Expiration Date: DEC 13 2018
Installation ID: 189-0318
Project Number: 2007-04-007

Installation Name and Address

St. Mary's Health Center
 6420 Clayton Road
 Richmond Heights, MO 63117
 St. Louis County

Parent Company's Name and Address

SSM Health Care
 477 North Lindbergh
 St. Louis, MO 63141

Installation Description:

St. Mary's Health Center, located in metro St. Louis, provides a wide variety of patient care, especially in high-risk maternity, cancer, cardiology, fetal surgery, advanced stroke and the latest imaging and outpatient services. Also a teaching hospital, St. Mary's Health Center offers an independent, accredited internal medicine residency program and is the headquarters for St. Louis University School of Medicine's Department of Obstetrics and Gynecology and its Family Practice residency programs.

The health center has boilers, emergency generators, fuel oil storage tanks, parts washer and ethylene oxide sterilizer.

DEC 13 2018

Effective Date

Director or Designee
 Department of Natural Resources

Table of Contents

I. INSTALLATION DESCRIPTION AND EQUIPMENT LISTING	3
INSTALLATION DESCRIPTION	3
EMISSION UNITS WITH LIMITATIONS	4
EMISSION UNITS WITHOUT LIMITATIONS.....	4
II. PLANT WIDE EMISSION LIMITATIONS.....	5
Permit Condition PW001	5
10 CSR 10-6.065 Operating Permits.....	5
10 CSR 10-6.065(2)(C) and 10 CSR 10-6.065(5)(A) Voluntary Limitation(s)	5
Permit Condition PW002	5
10 CSR 10-6.065 Operating Permits.....	5
10 CSR 10-6.065(2)(C) and 10 CSR 10-6.065(5)(A) Voluntary Limitation(s)	5
III. EMISSION UNIT SPECIFIC EMISSION LIMITATIONS	7
EU001 - BOILERS.....	7
Permit Condition EU001-001	7
10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants	7
EU002 - ETHYLENE OXIDE STERILIZER	9
Permit Condition EU002-001	9
40 CFR Part 63, Subpart WWWW National Emission Standards for Hospital Ethylene Oxide Sterilizers	9
§63.10440 General Provisions	9
40 CFR Part 63 Subpart A, General Provisions	9
EU003 – FIVE EMERGENCY GENERATORS	10
Permit Condition EU003-001	10
10 CSR 10-6.260 Restriction of Emissions of Sulfur Compounds	10
EU005 – PARTS WASHER	11
Permit Condition EU005-001	11
10 CSR 10-5.300 Control of Emissions from Solvent Cleaning.....	11
IV. CORE PERMIT REQUIREMENTS	14
V. GENERAL PERMIT REQUIREMENTS.....	24
VI. ATTACHMENTS	28
Attachment A – Plant Wide Emissions Tracking Record	29
Attachment B – Opacity Emission Observations	30
Attachment C – Method 9 Opacity Emissions Observation.....	31
Attachment D - Solvent Containing Waste Transfer Log	32
Attachment E - Inspection/Maintenance/Repair/Malfunction Log	33
Attachment F - Purchase Records for Cold Cleaning Solvent	34
Attachment G - Employee Solvent Metal Cleaning Training Log	35
Attachment H - Inspection/Maintenance/Repair/Malfunction Log.....	36

I. Installation Description and Equipment Listing

INSTALLATION DESCRIPTION

St. Mary's Health Center, located in metro St. Louis, provides a wide variety of patient care, especially in high-risk maternity, cancer, cardiology, fetal surgery, advanced stroke and the latest imaging and outpatient services. Also a teaching hospital, St. Mary's Health Center offers an independent, accredited internal medicine residency program and is the headquarters for St. Louis University School of Medicine's Department of Obstetrics and Gynecology and its Family Practice residency programs.

The health center has three boilers, five emergency generators, three fuel oil storage tanks, parts washer and ethylene oxide sterilizer. St. Mary's Health Center is a potential major source of sulfur oxides (SO_x) and nitrogen oxides (NO_x). The installation has accepted voluntary, federally enforceable emission limitations of SO_x and NO_x to less than major source levels to qualify for this permit.

The reported actual emissions for the past five years for the installation are listed below:

Reported Air Pollutant Emissions, tons per year					
Pollutants	2012	2011	2010	2009	2008
Particulate Matter ≤ Ten Microns (PM ₁₀)	0.48	0.48	0.63	0.63	0.63
Particulate Matter ≤ 2.5 Microns (PM _{2.5})	0.12	0.12	0.16	0.16	0.16
Sulfur Oxides (SO _x)	0.04	0.04	0.06	0.06	0.06
Nitrogen Oxides (NO _x)	6.44	6.43	8.40	8.40	8.40
Volatile Organic Compounds (VOC)	0.39	0.39	0.50	0.50	0.50
Carbon Monoxide (CO)	5.34	5.34	6.93	6.93	6.93
Lead (Pb)	0.00	0.00	0.00	0.00	0.00
Hazardous Air Pollutants (HAPs)	0.04	0.04	0.05	0.05	0.05
Ammonia (NH ₃)	0.03	0.03	0.04	0.04	0.04

EMISSION UNITS WITH LIMITATIONS

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

Emission Unit #	Description of Emission Unit
EU001	Boiler #1
	Boiler #2
	Boiler #3
EU002	Ethylene Oxide Sterilizer
EU003	Emergency Generators
EU005	Parts Washer

EMISSION UNITS WITHOUT LIMITATIONS

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

Emission Unit #	Description of Emission Unit
EU004	Three (3) 10,000 Gallon (each) Fuel Oil Tanks
EU006	Facility Cooling Towers (Chillers)

II. Plant Wide Emission Limitations

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

Permit Condition PW001

10 CSR 10-6.065 Operating Permits
10 CSR 10-6.065(2)(C) and 10 CSR 10-6.065(5)(A) Voluntary Limitation(s)

Emission Limitation:

The permittee shall discharge into the atmosphere from the entire installation less than 100 tons of Sulfur Oxides (SO_x) in any consecutive 12-month period.

Monitoring/Recordkeeping:

The permittee shall maintain an accurate record of emissions of SO_x emitted into the atmosphere from this installation. The permittee shall record the monthly and running 12-month totals of the SO_x emissions from this installation. Example form is attached as Attachment A (Plant-wide Emissions Tracking Record). The permittee may use this form, or forms of its own, so long as the forms used will accurately demonstrate compliance with the SO_x emission limitation (less than 100 tons per consecutive 12-month period of SO_x).

Reporting:

The permittee shall report to the St. Louis County Air Pollution Control Program, 6121 North Hanley Road, Berkeley, MO 63134, and the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than fifteen days after any exceedance or deviation from this permit condition.

Permit Condition PW002

10 CSR 10-6.065 Operating Permits
10 CSR 10-6.065(2)(C) and 10 CSR 10-6.065(5)(A) Voluntary Limitation(s)

Emission Limitation:

The permittee shall discharge into the atmosphere from the entire installation less than 100 tons of Nitrogen Oxides (NO_x) in any consecutive 12-month period.

Monitoring/Recordkeeping:

The permittee shall maintain an accurate record of emissions of NO_x emitted into the atmosphere from this installation. The permittee shall record the monthly and running 12-month totals of the NO_x emissions from this installation. Example form is attached as Attachment A (Plant-wide Emissions Tracking Record). The permittee may use this form, or forms of its own, so long as the forms used will accurately demonstrate compliance with the NO_x emission limitation (less than 100 tons per consecutive 12-month period of NO_x).

Reporting:

The permittee shall report to the St. Louis County Air Pollution Control Program, 6121 North Hanley Road, Berkeley, MO 63134 and the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than fifteen days after any exceedance or deviation from this permit condition.

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.

EU001 - Boilers		
Emission Unit	Description	Manufacturer/ Model #
EU001	Boiler #1 – 66 MMBtu/hr natural gas-fired boiler with distillate fuel oil as a back-up fuel. (Installed – 1987)	Erie City
	Boiler #2 – 47 MMBtu/hr natural gas-fired boiler with distillate fuel oil as a back-up fuel. (Installed – 1970)	
	Boiler #3 – 59 MMBtu/hr natural gas-fired boiler with distillate fuel oil as a back-up fuel. (Installed – 1963)	

<p>Permit Condition EU001-001</p> <p>10 CSR 10-6.220</p> <p>Restriction of Emission of Visible Air Contaminants</p>
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Emission Limitation:

- 1) No owner or other person shall cause or permit emissions to be discharged into the atmosphere from any source in the St. Louis metropolitan area any visible emissions with an opacity greater than 20%.
- 2) Exception:
 - a) Existing sources in the St. Louis metropolitan area that are not incinerators and emit less than twenty-five (25) pounds per hour (lbs/hr) of particulate matter shall be limited to 40% opacity.
 - b) A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 40%..

Monitoring:

- 1) The permittee shall conduct opacity readings on the emission unit(s) using the procedures contained in U.S. EPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit(s) is operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
- 2) The following monitoring schedule must be maintained:
 - a) Observations must be made once per month. If a violation is noted, then
 - b) Weekly observations shall be conducted for a minimum of eight (8) consecutive weeks. Should no violation of this regulation be observed during this period then monitoring reverts to monthly monitoring.

Recordkeeping:

- 1) The permittee shall maintain records of all observation results (see Attachment B), noting:
 - a) Whether any air emissions (except for water vapor) were visible from the emission unit, and
 - b) Whether the visible emissions were normal for the process.
- 2) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (See Attachment C)

Reporting:

- 1) The permittee shall report to the St. Louis County Air Pollution Control Program, 6121 North Hanley Road, Berkeley, MO 63134, and the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit(s) exceeded the opacity limit.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted using the annual compliance certification to the St. Louis County Air Pollution Control Program, 6121 North Hanley Road, Berkeley, MO 63134, and the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by Section V of this permit.

EU002 - Ethylene Oxide Sterilizer	
Emission Unit	Description
EU002	Ethylene Oxide Sterilizer

Permit Condition EU002-001	
40 CFR Part 63, Subpart WWWW National Emission Standards for Hospital Ethylene Oxide Sterilizers §63.10440 General Provisions 40 CFR Part 63 Subpart A, General Provisions	

Management Practice Standard:

You must sterilize full loads of items having a common aeration time, except under medically necessary circumstances, as that term is defined in §63.10448. [§63. 10390]

General Provisions: [§63.10440]

Table 1 to 40 CFR Part 63, Subpart WWWW shows which parts of the General Provisions in 40 CFR 63.1 through 63.16 apply to you.

Monitoring:

Continuous compliance with the management practice requirement: [§63. 10420]

For each sterilization unit not equipped with an air pollution control device, you must demonstrate continuous compliance with the management practice standard in §63.10390 by recording the date and time of each sterilization cycle, whether each sterilization cycle contains a full load of items, and if not, a statement from a hospital central services staff, a hospital administrator, or a physician that it was medically necessary.

Recordkeeping:

- 1) You must keep the records specified below: [§63.10432]
 - a) A copy of the Initial Notification of Compliance Status that you submitted to comply with this subpart. [§63.10432(a)]
 - b) Records required by §63.10420 for each sterilization unit not equipped with an air pollution control device. [§63.10432(b)]
- 2) Your records must be in a form suitable and readily available for expeditious review. [§63.10434(a)]
- 3) You must keep each record for five years following the date of each record. [§63.10434(a)]
- 4) You must keep each record onsite for at least two years after the date of each record. You may keep the records offsite for the remaining three years. [§63.10434(a)]

EU003 – Five Emergency Generators No. 2 diesel fuel oil-fired generators	
Emission Unit	Description
EU003	Generator #1 – SMH #045470, 700 kW, 947 HP, Installed November 29, 2004 Fuel Consumption at full load = 49.7 gallons per hour
	Generator #2 – SMH #E20105, 665 kW, 1,000 HP, Installed February 25, 1981 Fuel Consumption at full load = 45 gallons per hour
	Generator #3 – SMH #040801, 700 kW, 775 HP, Installed March 18, 1998 Fuel Consumption at full load = 50.1 gallons per hour
	Generator #5 – SMH #042377, 150.4 kW, 244 HP, Installed October 29, 2003 Fuel Consumption at full load = 13 gallons per hour
	Generator #7 – SMH #036811, 275 kW, 423 HP, Installed July 1992 Fuel Consumption at full load = 21.2 gallons per hour

<p>Permit Condition EU003-001</p> <p>10 CSR 10-6.260</p> <p>Restriction of Emissions of Sulfur Compounds</p>

Emission Limitation:

Emissions from Emergency Generators operation shall not contain more than five hundred parts per million by volume (500 ppmv) of sulfur dioxide or more than thirty-five milligrams per cubic meter (35 mg/m³) of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour time period.

Operational Limitation:

The emergency generators shall be limited to burning fuel oil with a sulfur content of no more than 0.5% by weight sulfur. The fuel oils known to be less than 0.5% by weight sulfur per Chapter 414 RSMo, Section 414.032, ASTM D396 - Table 1 and ASTM D975 - Table 1, are No. 1 and No. 2 fuel oil and diesel fuel oil Grade Low Sulfur No. 1-D, Grade Low Sulfur No. 2-D. However, the unit is not limited to the known fuel oils listed, above, but limited to fuel oils based solely on having a percent sulfur by weight content of 0.5% or less.

Monitoring/Recordkeeping:

The permittee shall maintain an accurate record of the sulfur content of fuel used. Fuel purchase receipts analyzed samples or certifications that verify the fuel type and sulfur content will be acceptable.

Reporting:

The permittee shall report any deviations/exceedances of this permit condition using the annual compliance certification to the St. Louis County Air Pollution Control Program, 6121 North Hanley Road, Berkeley, MO 63134 and the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by Section V of this permit.

EU005 – Parts Washer	
Emission Unit	Description
EU005	Parts Washer - Miscellaneous Clean-up solvent using petroleum naphtha (mineral spirits)

<p style="text-align: center;">Permit Condition EU005-001 10 CSR 10-5.300 Control of Emissions from Solvent Cleaning</p>

Emission Limitation:

- 1) The permittee shall not use cold cleaning solvent with a vapor pressure greater than 1.0 millimeters of Mercury (mmHg) (0.019 psi) at 20 degrees Celsius (20°C) (68 degrees Fahrenheit (68°F)).
- 2) Exception: The permittee may use an alternative method for reducing cold cleaning emissions if the level of emission control is equivalent to or greater than the requirements listed above. The director and the U.S Environmental Protection Agency (EPA) must approve the alternative method.

Operational Limitation/Equipment Specification:

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

- 8) Each cold cleaner shall be operated as follows:
 - a) Cold cleaner covers shall be closed whenever parts are not being handled in the cleaners or the solvent must drain into an enclosed reservoir except when performing maintenance or collecting solvent samples.
 - b) Cleaned parts shall be drained in the freeboard area for at least 15 seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining, the parts shall be positioned so that the solvent drains directly back to the cold cleaner.
 - c) Whenever a cold cleaner fails to perform within the rule operating requirements, the unit shall be shut down immediately and shall remain shut down until operation is restored to meet the rule operating requirements.
 - d) Solvent leaks shall be repaired immediately or the cleaner shall be shut down until the leaks are repaired.
 - e) Any waste material removed from a cold cleaner shall be disposed of by one of the following methods or an equivalent method approved by the director and EPA:
 - i) Reduction of the waste material to less than 20% VOC solvent by distillation and proper disposal of the still bottom waste; or
 - ii) Stored in closed containers for transfer to a contract reclamation service or disposal facility approved by the director and EPA.
 - f) Waste solvent shall be stored in covered containers only.
- 9) Operators must be trained as follows:
 - a) Only persons trained in at least the operation and equipment requirements specified in this rule for their particular solvent metal cleaning process shall operate this equipment;
 - b) The person who supervises any person who operates solvent cleaning equipment regulated by this rule shall receive equal or greater operational training than the operators; and
 - c) A procedural review shall be given to all solvent metal cleaning equipment operators at least once each 12 months.

Monitoring/Recordkeeping:

- 1) The permittee shall maintain the following records for each purchase of cold cleaner solvent (Attachment F):
 - a) Name and address of the solvent supplier.
 - b) Date of purchase.
 - c) Type of solvent purchased.
 - d) Vapor pressure of solvent in mm Hg at 20°C or 68°F.
- 2) The permittee shall keep records of all types and amounts of solvents containing waste material from cleaning or degreasing operations transferred either to a contract reclamation service or to a disposal facility and all amounts distilled on the premises. (see Attachment D). The record also shall include maintenance and repair logs that occurred on the degreaser (Attachments E). These records shall be kept current and made available for review on a monthly basis. The director may require additional recordkeeping if necessary to adequately demonstrate compliance with this rule.
- 3) The permittee shall keep training records of solvent metal cleaning for each employee on an annual basis (Attachment G).
- 4) All records shall be retained for five years and be available to the director upon request.

Reporting:

The permittee shall report any deviations/exceedances of this permit condition using the annual compliance certification to the St. Louis County Air Pollution Control Program, 6121 North Hanley Road, Berkeley, MO 63134 and the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by Section V of this permit.

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 is only an excerpt from the regulation or code, and is provided for summary purposes only

10 CSR 10-6.045 Open Burning Requirements

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

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

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

- 1) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the St. Louis County Air Pollution Control Program within two business days, in writing, the following information:
 - a) Name and location of installation;
 - b) Name and telephone number of person responsible for the installation;
 - c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
 - d) Identity of the equipment causing the excess emissions;
 - e) Time and duration of the period of excess emissions;
 - f) Cause of the excess emissions;
 - g) Air pollutants involved;

- h) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
 - i) Measures taken to mitigate the extent and duration of the excess emissions; and
 - j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
- 2) The permittee shall submit the paragraph 1 information list to the St. Louis County Air Pollution Control Program in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the St. Louis County Air Pollution Control Program shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.
 - 3) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under Section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under Section 643.080 or 643.151, RSMo.
 - 4) Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under Sections 643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
 - 5) Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

10 CSR 10-6.060 Construction Permits Required

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

10 CSR 10-6.065 Operating Permits

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

10 CSR 10-6.080 Emission Standards for Hazardous Air Pollutants and 40 CFR Part 61

Subpart M National Emission Standard for Asbestos

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

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

10 CSR 10-6.100 Alternate Emission Limits

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

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

- 1) The permittee shall submit full emissions report either electronically via MoEIS, which requires Form 1.0 signed by an authorized company representative, or on Emission Inventory Questionnaire (EIQ) paper forms on the frequency specified in this rule and in accordance with the requirements outlined in this rule. Alternate methods of reporting the emissions, such as spreadsheet file, can be submitted for approval by the director.
- 2) The permittee may be required by the director to file additional reports.
- 3) Public Availability of Emission Data and Process Information. Any information obtained pursuant to the rule(s) of the Missouri Air Conservation Commission that would not be entitled to confidential treatment under 10 CSR 10-6.210 shall be made available to any member of the public upon request.
- 4) The permittee shall submit a full EIQ for the 2011, 2014, 2017, and 2020 reporting years. 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.
- 5) In addition to the EIQ submittal schedule outlined above, any permit issued under 10 CSR 10-6.060 Section (5) or (6) triggers a requirement that a full EIQ be submitted in the first full calendar year after the permitted equipment initially operates.
- 6) The fees shall be payable to the Department of Natural Resources and shall be accompanied by the emissions report.
- 7) The permittee shall complete required reports on state supplied EIQ forms or electronically via MoEIS. Alternate methods of reporting the emissions can be submitted for approval by the director. The reports shall be submitted to the director by April 1 after the end of each reporting year. If the full emissions report is filed electronically via MoEIS, this due date is extended to May 1.
- 8) The reporting period shall end on December 31 of each calendar year. Each report shall contain the required information for each emission unit for the twelve (12)-month period immediately preceding the end of the reporting period.
- 9) The permittee shall collect, record and maintain the information necessary to complete the required forms during each year of operation of the installation.

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

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

10 CSR 10-6.150 Circumvention

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

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

- 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.

10 CSR 10-6.180 Measurement of Emissions of Air Contaminants

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

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

It shall be unlawful to operate any hand-fired fuel-burning equipment in the St. Louis, Missouri metropolitan area. This regulation shall apply to all fuel-burning equipment including, but not limited to, furnaces, heating and cooking stoves and hot water furnaces. It shall not apply to wood-burning fireplaces and wood-burning stoves in dwellings, nor to fires used for recreational purpose, nor to fires

used solely for the preparation of food by barbecuing. Hand-fired fuel-burning equipment is any stove, furnace, or other fuel-burning device in which fuel is manually introduced directly into the combustion chamber.

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

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

10 CSR 10-6.165 Restriction of Emission of Odors

This requirement is not federally enforceable.

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

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

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

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

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

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

Title VI – 40 CFR Part 82 Protection of Stratospheric Ozone

- 1) The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
 - a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
 - b) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
 - c) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
 - d) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
- 2) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:
 - a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
 - b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
 - c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
 - d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with recordkeeping requirements pursuant to §82.166. ("MVAC-like" appliance as defined at §82.152).
 - e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
 - f) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- 3) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.
- 4) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.
- 5) The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR Part 82*

10 CSR 10-6.280 Compliance Monitoring Usage

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

ST. LOUIS COUNTY AIR POLLUTION CONTROL CODE REQUIREMENTS

The following St. Louis County Air Pollution Control Code requirements are non-Federally enforceable and are only enforced by the St. Louis County Air Pollution Control Program.

- **The Section 612.040, Air Quality Standards and Air Pollution Control Regulations**
Saint Louis County Air Pollution Control shall enforce Missouri Code of State Regulations as adopted and promulgate by the Air Conservation Commission of the State of Missouri consisting of Title 10, Division 10, Chapter 5 and 6.
- **The St. Louis County Air Pollution Control Code, Section 612.100, Emergency Abatement of Violation**
By written approval of the County Executive, any facility indirectly or directly discharge any air contaminant in violation of The St. Louis County Air Pollution Control Code where it is the opinion of the Director that the discharge creates an emergency which requires immediate action to protect the public health, shall order the person in writing to discontinue immediately.
- **The St. Louis County Air Pollution Control Code, Section 612.110, Permits Required**
The Permittee shall obtain St. Louis County Department of Health operating permits for its installation. The Permittee shall not commence construction, modification, or major modification of any installation subject to this rule without obtaining a permit from St. Louis County Department of Health.

- **The St. Louis County Air Pollution Control Code, Section 612.120, Permits to be Visibly Affixed or Placed**

The Permittee shall visibly affix St. Louis County Department of Health Permit on or near permitted equipment.

- **The St. Louis County Air Pollution Control Code, Section 612.200, Testing Prior to Granting of Operating Permit**

- (1) Before an authority to construct or permit to operate is granted, the St. Louis County Department of Health may require the applicant to conduct tests to determine the kind or amount of the air contaminant emitted from the equipment or to determine whether the fuel used is as specified on the permit and is suitable for the equipment. The test shall be made at the expense of the applicant.
- (2) Such tests shall be conducted, reviewed and certified by an engineer licensed under Chapter 327 RSMo 1959. The applicant shall notify the St. Louis County Department of Health of the time and place of a test and reasonable facilities shall be made available for the St. Louis County Department of Health to witness the test.

- **The St. Louis County Air Pollution Control Code, Section 612.220, Suspension or Revocation of Permits**

- (1) The St. Louis County Department of Health may suspend or revoke a permit to operate or authority to construct for willful or continued violation of the St. Louis County Air Pollution Control this Code.
- (2) Suspension or revocation of a permit to operate or authority to construct shall become final ten (10) days after service of notice, exclusive of the day of service, on the holder thereof..

- **The St. Louis County Air Pollution Control Code, Section 612.260, Schedules**

The Permittee shall pay St. Louis County Department of Health Construction Permit fees when applicable and annual Operating Permit fees in accordance with the rule.

- **The St. Louis County Air Pollution Control Code, Section 612.280, Testing by Order of the Board**

- (1) If the St. Louis County Department of Health has reasonable cause to believe that any article, machine, equipment or other contrivance is in violation of the St. Louis County Air Pollution Control Code, the St. Louis County Department of Health may file with the Board for its approval an order directing the owner, lessee, or permittee of such equipment to conduct such tests as are necessary in the opinion of the St. Louis County Department of Health and approved by the Board to determine whether the equipment is in violation of the St. Louis County Air Pollution Control Code.
- (2) The entire test results shall be reviewed and certified by an engineer licensed under Chapter 327, RSMo 1959. The engineer shall be selected by such owner, lessee or permittee and approved by the Board. All tests conducted pursuant to this Section shall be at the expenses of the owner, lessee or permittee. The St. Louis County Department of Health shall be given at least seven (7) days' notice prior to the commencement of a test. The notice shall state the time and place of the test. Reasonable facilities shall be made available for the St. Louis County Department of Health or his agent to witness the test.

- **The St. Louis County Air Pollution Control Code, Section 612.290, Right of Entry; Inspections; Samples**

The Permittee shall allow the St. Louis County Department of Health or His agent to enter at all times with reasonable notice, inspect any equipment, control apparatus, fuel, matter or things which affect or may affect the emission of air contaminants, inspect any records relating to the use of any equipment or control apparatus which affect or may affect the emission of air contaminants, and sample any equipment, control apparatus, fuel, matter or things which affect or may affect the emission of air contaminants.

- **The St. Louis County Air Pollution Control Code, Section 612.310, Upset Conditions, Breakdown or Scheduled Maintenance**

The permittee shall report to the Air Pollution Control Section of the St. Louis County Department of Health, 111 South Meramec, Clayton, MO 63105, within 24 hours of occurrence of any unavoidable upset in or breakdown of equipment and in case of shutdown for necessary scheduled maintenance, the intent to be shutdown shall be reported to Air Pollution Control Section 24 hours prior to shutdown.

- **The St. Louis County Air Pollution Control Code, Section 612.340, Air Pollution Nuisances Prohibited**

It is unlawful for the Permittee to cause of such quantities of soot, cinders, noxious acids, fumes and gases or other particulate matter from whatever source in such place or matter as to be detrimental to any person or the public or to endanger the health, comfort and safety of any person or the public, injury or damage to property or business.

- **The St. Louis County Air Pollution Control Code, Section 612.380, Interfering with or Obstructing Division Personnel**

No Person shall hinder, resist, interfere with or obstruct the Director or any Division employee in carrying out any duty for the Director or the Board.

V. General Permit Requirements

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

10 CSR 10-6.065, §(5)(E)2 and §(6)(C)1.B Permit Duration

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

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

1) Recordkeeping

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

2) Reporting

- a) All reports shall be submitted to the Air Pollution Control Program's Enforcement Section, P. O. Box 176, Jefferson City, MO 65102.
- b) The permittee shall submit a report of all required monitoring by:
 - i) April 1st for monitoring which covers the January through December time period.
 - ii) Exception. Monitoring requirements which require reporting more frequently than annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
- c) Each report shall identify any deviations from emission limitations, monitoring, recordkeeping, reporting, or any other requirements of the permit.
- d) Submit supplemental reports as required or as needed. Supplemental reports are required no later than ten days after any exceedance of any applicable rule, regulation or other restriction. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
 - i) Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph (6)(C)7 of 10 CSR 10-6.065 (Emergency Provisions) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.
 - ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.

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

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

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

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

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

- 1) The permittee must comply with all of the terms and conditions of this permit. Any 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(6) and enforcement action for operating without a valid part 70 operating permit.

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

None

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

- 1) Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
- 2) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
 - a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
 - b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
- 3) All progress reports required under an applicable schedule of compliance shall be submitted semi-annually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
 - a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
 - b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
- 4) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as St. Louis County Air Pollution Control Program, 6121 North Hanley Road, Berkeley, MO 63134. All deviations and exceedances must be included in the compliance certifications. The compliance certification shall include the following:
 - a) The identification of each term or condition of the permit that is the basis of the certification;
 - b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
 - c) Whether compliance was continuous or intermittent;
 - d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and
 - e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

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

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

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

- 1) Except as noted below, the permittee may make any change in its permitted installation's operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Off-permit changes shall be subject to the following requirements and restrictions:
 - a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is a Title I modification; Please Note: Changes at the installation which affect the emission limitation(s) classifying the installation as an intermediate source (add additional equipment to the recordkeeping requirements, increase the emissions above major source level) do not qualify for off-permit changes.
 - b) The permittee must provide written notice of the change to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219 and St. Louis County Air Pollution Control Program, 6121 North Hanley Road, Berkeley, MO 63134, no later than the next annual emissions report. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change; and
 - c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes.

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

The application utilized in the preparation of this permit was signed by Richard Ward, Plant Operations Director. On May 7, 2013, the Air Pollution Control Program was informed that Joel Vanhose is now the responsible official. If this person terminates employment, or is reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person

assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

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

This permit may be reopened for cause if:

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

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

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

VI. Attachments

Attachments follow.

Attachment A – Plant Wide Emissions Tracking Record
Plant-Wide Emissions Tracking Record

This is an example of a form that may be used to record data required by Permit Conditions PW001 and PW002.

- In order to demonstrate compliance with the Permit Condition PW001, the permittee must demonstrate the installation emits less than 100 tons of SO_x in any consecutive 12-month period.
- In order to demonstrate compliance with the Permit Condition PW002, the permittee must demonstrate the installation emits less than 100 tons of NO_x in any consecutive 12-month period.

Emission Unit	Month												12 Month Rolling Average
	1	2	3	4	5	6	7	8	9	10	11	12	
Total													

Note: The permittee shall use the following emission factor sources to calculate the NO_x and Sox emissions:

- AP-42, Section 1.4, *Natural Gas Combustion*, for boilers when combusting natural gas.
- AP-42, Section 1.3 & WebFire, for boilers when combusting fuel oil No.2.
- AP-42, Section 3.4, Tables 3.4-1 & 3.4-3, Diesel Industrial Engines greater than 600 HP.
- AP-42, Section 3.3, Tables 3.3-1 & 3.3-2 , Diesel Industrial Engines less than 600 HP.

**Attachment C – Method 9 Opacity Emissions Observation
 10 CSR 10-6.220 Compliance Demonstration**

Method 9 Opacity Emissions Observations	
Company	Observer
Location	Observer Certification Date
Date	Emission Unit
Time	Control Device

Hour	Minute	Seconds				Steam Plume (check if applicable)		Comments
		0	15	30	45	Attached	Detached	
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							

SUMMARY OF AVERAGE OPACITY				
Set Number	Time		Opacity	
	Start	End	Sum	Average

Readings ranged from _____ to _____ % opacity.

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

STATEMENT OF BASIS

Voluntary Limitations

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

Permit Reference Documents

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

- 1) Intermediate Operating Permit Application, received March 28, 2007;
- 2) 2011 Emissions Inventory Questionnaire, received February 23, 2012; and
- 3) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition; and
- 4) St. Louis County Air Pollution Control Program Permit No. 5763 for the operation of three (3) boilers, dated June 1, 1990.

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

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

40 CFR Part 63, Subpart WWWW, *National Emission Standards for Hospital Ethylene Oxide Sterilizers*.

This rule applies to hospitals that are an area source of hazardous air pollutants (HAP) emissions and own or operate an ethylene oxide (EO) sterilization facility. An area source is a facility that has the potential to emit less than ten tons per year (tpy) of individual hazardous air pollutants (HAP) or 25 tpy of combined HAP. "Hospitals" as defined in §63.10448 of this subpart are those facilities that provide medical care and treatment for patients who are acutely or chronically ill on an inpatient basis under supervision of licensed physicians and under 24 hr/day nursing care. Hospitals include diagnostic and major surgery facilities but exclude doctor's offices, clinics, or other facilities whose primary purpose is to provide medical services on an outpatient basis.

St Mary's Health Center is a hospital and an area source of HAP emissions. The installation operates an ethylene oxide sterilizer. The ethylene oxide sterilizer is subject to 40 CFR Part 63, Subpart WWWW. Therefore St. Mary's Health Center will be required to comply with the requirements of 40 CFR Part 63, Subpart WWWW.

Other Air Regulations Determined Not to Apply to the Operating Permit

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

1) 10 CSR 10-6.405, *Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating*

According to 10 CSR 10-6.405(1)(C) and (E), an installation is exempt from this rule if all of the installation's applicable units are fueled only by landfill gas, propane, natural gas, No. 2 through No. 6 fuel oil (with less than one and two-tenths percent (1.2 %) sulfur), or other gases (with hydrogen sulfide levels less than or equal to four (4) parts per million volume as measured using ASTM D4084, or equivalent and mercury concentrations less than forty (40) micrograms per cubic meter as measured using ASTM D5954, or ASTM D6350, or equivalent or any combination of these fuels.

All the indirect heating sources operated at this installation exclusively combust natural gas and No. 2 fuel oil, therefore the installation is not subject to this rule.

2) 10 CSR 10-6.400, *Restriction of Emission of Particulate Matter From Industrial Processes*

This regulation defines process weight to "exclude liquids and gases used solely as fuels and air introduced for purposes of combustion" under 10 CSR 10-6.400(2)(A). For the internal combustion engines (ICEs) and the boilers at this installation, the throughputs only consist of liquid and gaseous fuels and combustion air. Therefore, there are no applicable throughputs for the ICEs/boilers and the other emission sources at this installation have no or insignificant particulate emissions. Therefore, no emission sources at this installation were considered to be subject to this regulation and it was not included in the operating permit.

3) 10 CSR 10-5.510, *Control of Emissions of Nitrogen Oxides.*

Boiler 1A and 1B each emit less than 30 tons of NO_x annually and are exempt from the requirements of this rule under 10 CSR 10-5.510 (1)(B)9 of the rule, which states the following:

Any unit that would otherwise be required to comply with this rule with actual annual NO_x emissions of thirty tons per year or less. This exemption shall cease to apply to a unit if the unit ever exceeds thirty tons per year of actual NO_x emissions for any calendar year.

Additionally the internal combustion engines are exempt per Section (1)(C)4. because they are used for emergency back-up power only and are each operated less than 750 hours per year and less than 400 hours during the ozone season.

4) 10 CSR 10-5.570, *Control of Sulfur Emissions From Stationary Boilers.*

This rule applies to installations located in the counties of Franklin, Jefferson, St. Charles, St. Louis, and St. Louis City that own or operate an industrial, commercial, or institutional boiler or process heater that has a name plate capacity greater than 50 MMBtu/hr. Boilers that exclusively burn natural gas, liquefied petroleum gas (LPG), and/or No. 2 fuel oil with less than 0.5% sulfur are not subject to this rule. Since the boilers at this installation with the heat input capacity of greater than 50 MMBtu/hr burn natural gas as a primary fuel and No. 2 fuel oil with a sulfur content of less than 0.5% as back-up fuel, the boilers are not subject to this rule.

The fuel oils known to be less than 0.5% by weight sulfur per Chapter 414 RSMo, Section 414.032,

ASTM D396 - Table 1 and ASTM D975 - Table 1, are No. 1 and No. 2 fuel oil and diesel fuel oil Grade Low Sulfur No. 1-D, Grade Low Sulfur No. 2-D.

- 5) 10 CSR 10-5.220, *Control of Petroleum Liquid Storage, Loading and Transfer*
10 CSR 10-5.500, *Control of Emissions From Volatile Organic Liquid Storage*
The provisions of these rules apply to petroleum storage tanks of 40,000 gallons storage capacity. The installation has three 10,000 gallon (each) No. 2 fuel oil underground storage tanks (EU004). 10 CSR 10-5.220 and 10 CSR 10-5.500 do not apply to these tanks for their storage capacities are less than 40,000 gallons.

Construction Permit Revisions

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

None

New Source Performance Standards (NSPS) Applicability

- 1) 40 CFR Part 60, Subpart D, *Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971.*
The provisions of this subpart apply to each fossil-fuel-fired steam generating unit of more than 73 megawatts heat input rate (250 million Btu per hour) constructed or modified after August 17, 1971, and not covered under Subpart Da.
None of the boilers are rated at greater than 73 megawatts heat input rate (250 million Btu per hour), therefore this subpart does not apply to this installation.
- 2) 40 CFR Part 60, Subpart Da, *Standards of Performance for Electric Utility Steam Generating Units for Which Construction is commenced After September 18, 1978.*
The provisions of this subpart apply to each electric utility fossil-fuel-(either alone or in combination with any other fuel) fired steam generating unit of more than 73 megawatts heat input rate (250 million Btu per hour) constructed or modified after September 18, 1978.

None of the boilers are electric utility steam generating units as defined in this subpart nor are rated at greater than 73 megawatts heat input rate (250 million Btu per hour), therefore this subpart does not apply to this installation.
- 3) 40 CFR Part 60, Subpart Db, *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.*
The provisions of this subpart apply to each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu per hour).

None of the boilers are rated at greater than 29 megawatts heat input rate (100 million Btu per hour), therefore this subpart does not apply to this installation.

4) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*

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

The installation's boilers with a maximum design heat input capacity less than 100 MMBtu/hr, but greater than 10 MMBtu/hr, are constructed prior to the applicability date of this subpart and therefore are not subject to this subpart.

5) 40 CFR Part 60, Subparts K, *Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction Or Modification Commenced After June 11, 1973, and Prior to May 19, 1978.*

40 CFR Part 60, Subpart Ka, *Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction Or Modification Commenced After May 19, 1978, and Prior to July 23, 1984*

The installation does not have any petroleum storage vessels as defined in these subparts that are subject to this regulation.

6) 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.*

The diesel fuel storage tanks are not large enough for these regulations to apply.

7) 40 CFR 60 Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, is not applicable because the stationary compression ignition engines at the Health Center were installed prior to the applicability date of July 11, 2005.

8) 40 CFR 60 Subpart JJJJ, *Standards of Performance for Spark Ignition Internal Combustion Engines*, is not applicable because the stationary internal combustion engines at the Health Center are compression ignition engines not spark ignition.

Maximum Achievable Control Technology (MACT) Applicability

1) 40 CFR Part 63, Subpart Q, *National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers*

The provisions of this subpart apply to all new and existing industrial process cooling towers that are operated with chromium-based water treatment chemicals on or after September 8, 1994, and are either major sources or are integral parts of facilities that are major sources as defined in 40 CFR 63.401.

The cooling towers located at this facility do not use chromium-based water treatment chemicals, therefore, this rule was not included in the operating permit.

2) 40 CFR Part 63, Subpart T, *National Emission Standards for Halogenated Solvent Cleaning.*

The provisions of this subpart apply to each individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride,

perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride or chloroform, or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent. Wipe cleaning activities, such as using a rag containing halogenated solvent are not covered under the provisions of this subpart.

The cold cleaners at this installation do not use the following solvents: methylene chloride, perchlorethylene, triclorethylene, 1,1,1-trichlorethylene, carbon tetrachloride, or any chloroform. Therefore, this rule was not included in the operating permit.

- 3) 40 CFR Part 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*
St. Mary's Health Center is a medical center with SIC codes 8062 (General Medical and Surgical Hospitals) and NAICS Code 622110. Using the guidance document referenced below, the facility SIC Code/NAICS code is listed as "institutional":

http://www.epa.gov/ttn/atw/rice/guidance_emergency_engine_def.pdf

The following definition in the guidance document defines St. Mary's Health Center's emergency generators:

"Institutional emergency stationary RICE means an emergency stationary *reciprocating internal combustion engine* (RICE) used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations."

According to 40 CFR 63.6585(f)(3), institutional RICE is exempt from the RICE MACT regulations pursuant to 40 CFR Part 63, Subpart ZZZZ. Therefore, based on the updated applicability determination above; St. Mary's Health Center is not subject to the RICE MACT regulations.

- 4) 40 CFR Part 63, Subpart DDDDD, *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*
The Subpart applies to a facility that owns or operates a industrial boilers, institutional boilers, commercial boilers, and process heaters that is a major source, or is located at a major source, or is part of a major source of HAP emissions. A process heater is defined as a unit in which the combustion gases do not directly come into contact with process material or gases in the combustion chamber (e.g., indirect fired). A boiler is defined as an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water.

St. Mary's Health Center is an area source of HAPs and operates boilers. The provisions of 40 CFR Part 63, Subpart DDDDD do not apply to this installation.

5) 40 CFR Part 63, Subpart JJJJJ, *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers - Area Sources*

This regulation applies to boilers at area source facilities that burn coal, oil, biomass, or non-waste materials. Boilers burning natural gas as defined in this regulation would not be affected by the rule.

This regulation does not apply to the boilers in the St. Mary's Health Center because the boilers are natural gas fired boilers with No. 2 fuel oil as back-up. The rule exempts natural gas fired boilers with fuel oil as back-up fuel. According to 40 CFR 63.1123 this rule, gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability

40 CFR Part 61 Subpart M, *National Emission Standard for Asbestos*, §61.145(a), Standard for demolition and renovation, applies to the installation.

This regulation has been included in the operating permit because it applies to any demolition or renovation (as outlined in 40 CFR 61.145) of buildings containing asbestos at the installation.

Greenhouse Gas Emissions

On May 13, 2010, EPA issued the GHG Tailoring Rule which set the major source threshold for CO₂e to be 100,000 tons per year within 40 CFR Part 70. As of July 1, 2011 all Title V operating permits are required to include GHG emissions. Potential emissions of greenhouse gases (CO₂e) for this installation are calculated to be 32,166.40 tons, classifying the installation as a minor source of GHGs. There are no currently issued GHG regulations applicable to this installation. Missouri regulations do not require the installation to report CO₂e emissions in their Missouri Emissions Inventory Questionnaire; therefore, the installation's CO₂e emissions were not included within this permit.

Updated Potential to Emit for the Installation

An updated Potential to Emit (PTE) for the installation is shown in the table below:

Pollutant	Potential to Emit (tons/yr) ¹
CO	7.56
CO ₂ e	32,166.40
HAPs	2.38
NO _x	< 100.00
PM ₁₀	3.82
PM ₂₅	3.47
SO _x	< 100.00
VOC	0.51
NH ₃	0.12

Note: Potential Emissions were calculated based on federally enforceable emission limitations of SO_x and NO_x of Permit Conditions PW001 and PW002. These limits keep the potential to emit below major levels, thus allowing the facility to obtain this Intermediate Operating Permit. Fugitive emission sources (sources listed as emission units without limitations) were not included in the facility total potential to emit.

Other Regulatory Determinations

1) 10 CSR 10-6.260, *Restriction of Emission of Sulfur Compounds*

This rule applies to the boilers and generators.

a) EU001 - Boilers.

According to 10 CSR 10-6.260(3)(B)3., indirect heating sources located in Franklin, Jefferson, St. Louis, St. Charles Counties or City of St. Louis with heat capacities less than 2,000 MMBtu/hr shall not burn or permit the burning of any fuel oil containing 2% sulfur during the months of September, October, November, December, January, February and March. Since the boilers use fuel oil No. 2 with a sulfur content of less than 0.5% as stated in Other Air Regulations Determined Not to Apply to the Operating Permit of the Statement of Basis (10 CSR 10-5.570, *Control of Sulfur Emissions From Stationary Boilers*), this requirement is not included as a permit condition for the boilers.

b) EU003 – No. 2 diesel fuel oil-fired generators

The installation is limited to using fuel oil No. 2 diesel fuel containing up to 0.5% sulfur to comply with the 500 ppmv SO₂ limit of 10 CSR 10-6.260.

The following engineering calculations show that combustion of No. 2 diesel fuel containing up to 0.5% sulfur will always comply with the 500 ppmv SO₂ limit regardless of the engine involved.

Assumptions:

- All constituents of the fuel are burned proportionally.
- Any excess air typical of combustion would tend to dilute the SO₂ concentration in the flue gas, therefore only theoretical air is considered.
- No. 2 diesel fuel is composed of Carbon, Hydrogen, Sulfur, and negligible amounts of Water and ash.
- Ignore the water because the standard is a dry standard and the water will drop out of any calculations.
- Ignore the ash as negligible unless the study predicts an SO₂ concentration greater than 450 ppm.
- Typical #2 diesel fuel is composed of 87% Carbon, 12.5% Hydrogen, and 0.5% Sulfur

Calculations:

Using normal air for combustion (79% N₂ and 21% O₂):

- For each lb-mole of Oxygen in Air, there is 3.76 lb-mole Nitrogen (1 lb-mole O₂) = (0.79/0.21) = 3.76 lb-mole N₂
- The stoichiometric equations are:
$$C + O_2 + 3.76 N_2 = CO_2 + 3.76 N_2$$
$$2H_2 + O_2 + 3.76 N_2 = 2H_2O + 3.76 N_2$$
$$S + O_2 + 3.76 N_2 = SO_2 + 3.76 N_2$$
- To calculate the dry exhaust gases (CO₂, N₂, SO₂) the following equations are used:

$$\begin{aligned} \text{moles CO}_2 &= (\text{lb C}) \times \left(\frac{1 \text{ lb - mole C}}{12.01 \text{ lb C}} \right) \times \left(\frac{1 \text{ lb - mole CO}_2}{\text{lb - mole C}} \right) \\ \text{moles N}_2 &= \left[(\text{lb C}) \times \left(\frac{\text{lb - mole C}}{12.01 \text{ lb C}} \right) \times \left(\frac{3.76 \text{ lb - mole N}_2}{\text{lb - mole C}} \right) \right] \\ &+ \left[(\text{lb H}_2) \times \left(\frac{\text{lb - mole H}_2}{2.016 \text{ lb H}_2} \right) \times \left(\frac{3.76 \text{ lb - mole N}_2}{2 \text{ lb - mole H}_2} \right) \right] \\ &+ \left[(\text{lb S}) \times \left(\frac{\text{lb - mole S}}{32.06 \text{ lb S}} \right) \times \left(\frac{3.76 \text{ lb - mole N}_2}{\text{lb - mole S}} \right) \right] \\ \text{moles SO}_2 &= (\text{lb S}) \times \left(\frac{1 \text{ lb - mole S}}{32.06 \text{ lb S}} \right) \times \left(\frac{1 \text{ lb - mole SO}_2}{\text{lb - mole S}} \right) \end{aligned}$$

Condensing these equations leaves:

$$\begin{aligned} \text{moles CO}_2 &= \frac{\text{lb C}}{12.01} \\ \text{moles N}_2 &= 3.76 \left[\left(\frac{\text{lb C}}{12.01} \right) + \left(\frac{\text{lb H}_2}{4.032} \right) + \left(\frac{\text{lb S}}{32.06} \right) \right] \\ \text{moles SO}_2 &= \frac{\text{lb S}}{32.06} \end{aligned}$$

Then, by Avogadro's Law and the definition of mole:

For gases, volume ratios and mole ratios are equivalent.

$$\begin{aligned} \text{ppmv} &= 10^6 \times \left(\frac{\text{moles}_i}{\text{moles}_{\text{total}}} \right) \\ \text{ppmv SO}_2 &= 10^6 \times \left[\frac{\text{moles SO}_2}{\text{moles CO}_2 + \text{moles N}_2 + \text{moles SO}_2} \right] \end{aligned}$$

- Using 100 pounds of fuel as a basis and examining the following three cases:

Case	Pounds in Fuel		
	Carbon	Hydrogen	Sulfur
1	87	12.5	0.5
2	96	3.5	0.5
3	78	21.5	0.5

Case 1 is the normal case, Case 2 increases carbon by 10 percent and Case 3 decreases carbon by 10 percent.

	Case 1	Case2	Case 3
Moles CO ₂	7.24	7.99	6.49
Moles N ₂	38.94	33.36	44.51
Moles SO ₂	0.0156	0.0156	0.0156
Total Dry Moles	46.196	41.366	51.016
ppmv SO ₂	338	377	306

The above calculations show that No. 2 diesel fuel combusted with air will always comply with the 500 ppmv SO₂ limit. The calculations use the conservative assumptions of complete combustion and no excess air. The real-world includes partial combustion and excess air, both of which would tend to dilute the SO₂ concentration in the exhaust effluent.

2) 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*

This rule does not apply to internal combustion engines operated outside the Kansas City or St. Louis metropolitan areas and stationary internal combustion engines operating in the Kansas City or St. Louis metropolitan areas. However, this rule applies to the boilers.

At the time of issuance of this permit, the installation had already completed its weekly and bi-weekly observations, as required by the initial operating permit conditions. The installation currently conducting monthly observations as required by the previously mentioned permit condition.

As stated in the Region 7 Policy on Periodic Monitoring for Opacity, a Method 22 like observation will consist of a quick survey of the entire plant. In most cases, this “qualitative” assessment should take more than 10-15 minutes, even for complex sources. Detecting visible emissions is an indicator of operating problems and gives the permittee a chance to take corrective actions before exceeding the opacity limit. Conducting Method 9 observations after the observation of visible emissions determines whether the emissions exceed the opacity limit, or confirm that corrective action has restored proper operation. The installation had performed the initial weekly observations and has been performing monthly monitoring; therefore it will be required to continue visible emissions observation on a monthly basis unless a violation occurs. If a violation occurs, the monitoring frequency will revert to a weekly schedule. This tiered monitoring frequency of visible/no visible emissions observations using Method 22 like procedures is considered sufficient.

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

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

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

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

Prepared by:

Berhanu A. Getahun
Environmental Engineer

Mr. Richard Ward
St. Mary's Health Center
6420 Clayton Road
Richmond Heights, MO 63117

Re: St. Mary's Health Center, 189-0318
Permit Number: **OP2013-054**

Dear Mr. Ward:

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.

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 do not hesitate to contact Berhanu Getahun at the St. Louis Regional Office, 7545 S. Lindbergh, Suite 210, St. Louis, MO 63125, or by telephone at (314) 416-2960. You may also contact me with the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

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

MJS/bgk

Enclosures

c: St. Louis County Air Pollution Control Program
St. Louis Regional Office
PAMS File: 2007-04-007

MEMORANDUM

DATE: July 30, 2013

TO: 2007-04-007, St. Mary's Health Center

FROM: Berhanu A. Getahun, Environmental Engineer

SUBJECT: Response to Public Comments

The draft Intermediate Operating Permit for St. Mary's Health Center was public noticed on the Department's web page at: <http://www.dnr.mo.gov/env/apcp/PermitPublicNotices.htm> on June 14, 2013 for a 30-day comment period. The Air Pollution Control Program did not receive any comments from either the public or the applicant during the 30-day comment period.

BAG/kjc