



TITLE V PERMIT TO OPERATE

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

Operating Permits Number: OP2010-070
Installation ID: 189-1205
Expiration Date: JUL 01 2015
Project Number: 2008-07-013

Installation Name and Address

Missouri River Wastewater Treatment Plant
3455 Creve Coeur Mill Road
Maryland Heights, MO 63146

Parent Company's Name and Address


Metropolitan St. Louis Sewer District
2350 Market Street
St. Louis, MO 63103

Installation Description:

This wastewater treatment plant currently has a design flow of 28 MGD, with a peak design flow of 80 MGD. Equipment on-site includes fine screens, grit chambers, pre-aeration basins, primary clarifiers, trickling filters, final clarifiers and anaerobic digesters. Three (3) internal combustion engines and two (2) boilers combust digester gas, with propane as back-up fuel. Excess digester gas is burned in one (1) waste gas flare. There is a parts washer on-site.

JUL - 2 2010

Effective Date



Director or Designee
Department of Natural Resources

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I. Installation Description and Equipment Listing

INSTALLATION DESCRIPTION

This wastewater treatment plant currently has a design flow of 28 MGD, with a peak design flow of 80 MGD. Equipment on-site includes fine screens, grit chambers, pre-aeration basins, primary clarifiers, trickling filters, final clarifiers and anaerobic digesters. Three (3) internal combustion engines and two (2) boilers combust digester gas, with propane as back-up fuel. Excess digester gas is burned in one (1) waste gas flare. There is a parts washer on-site.

Reported Air Pollutant Emissions (Tons per Year)								
Year	Volatile Organic Compounds (VOC)	Hazardous Air Pollutants (HAPs)	Sulfur Oxides (SO _x)	Nitrogen Oxides (NO _x)	Carbon Monoxide (CO)	Lead (Pb)	Particulate Matter ≤ 10 Microns (PM-10)	Particulate Matter 2.5-10 Microns (PM-2.5)
2004	11.57	5.04	1.25	84.08	6.82	0.00	0.27	0.00
2005	10.70	4.85	1.70	74.72	6.26	0.00	0.22	0.22
2006	10.87	4.39	2.80	84.22	7.78	0.00	0.26	0.26
2007	10.29	4.24	2.68	83.61	6.50	0.00	0.25	0.25
2008	11.15	4.83	1.41	91.27	7.10	0.00	0.27	0.27

EMISSION UNITS WITH LIMITATIONS

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

Emission Unit #	Description of Emission Unit
EU0010	Three (3) Internal Combustion Engines
EU0030	Two (2) Boilers
EU0040	One (1) Emergency Flare
EU0050	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
EU0020	Wastewater Treatment Plant
None	Six (6) 1,000-Gallon Liquid Propane Storage Tanks
None	Three (3) Portable, Kerosene-Fired, Heaters (2 - 170,000 BTU and 1 - 155,000 BTU)

DOCUMENTS INCORPORATED BY REFERENCE

These documents have been incorporated by reference into this permit.

None

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.

None.

III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements.

EU0010—Internal Combustion Engines

General Description:	Three (3) - 5.712 mmBtu/hr Internal Combustion Engines fired by digester gas w/ propane backup
Manufacturer/Model #:	Waukesha Model L5108G, 1988 model
EIQ Reference # (2008):	EP001
STLCO Operating Permit #:	N/A

Permit Conditions EU0010-001

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

Emission Limitation:

- 1) Emissions from any new source operation shall not contain more than five hundred parts per million by volume (500 ppmv) of SO₂ or more than thirty-five milligrams per cubic meter (35 mg/cubic meter) of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour time period.
- 2) No person shall cause or permit the emission of sulfur compounds from any source that causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality Standards.
- 3) The emission unit shall be limited to either burning digester gas with a hydrogen sulfide content of no more than 3,600 ppmv (correlates with 500 ppmv of sulfur dioxide, based on a direct relationship between the amount of hydrogen sulfide burned and the amount of sulfur present in the exhaust gas) or burning propane.

Monitoring:

The hydrogen sulfide concentration of the digester gas shall be analyzed and recorded on the following schedule when this emission unit is in operation:

- a) Monthly analyses shall be conducted. If an exceedance is noted then-
- b) Weekly analyses shall be conducted for a minimum of four (4) consecutive weeks after exceedance occurs. Should no exceedance of the sulfide limit be detected during this period then-
- c) Analyses shall be made once every two (2) weeks for eight (8) consecutive weeks. If an exceedance is noted, monitoring reverts to weekly. Should no exceedance of this limit be detected during this period then monthly monitoring shall be resumed.

Record Keeping:

- 1) Maintain an accurate record of the sulfur dioxide concentration in the exhaust gas based on the monitored hydrogen sulfide concentrations (and the direct relationship of hydrogen sulfide in the digester gas to the amount of sulfur dioxide present in the exhaust gas).
- 2) Records shall be completed and available for review by the 10th day following the end of each month.
- 3) Retain records for the previous sixty (60) month period and make them available to the STLCO APCP, or its designated agent, at any reasonable time.

Reporting:

Report to the Saint Louis County Air Pollution Control Program (STLCO APCP) at 74 Clarkson Wilson Ctr., Chesterfield, MO 63017 and the Missouri Department of Natural Resources Air Pollution Control Program (MDNR APCP), P.O. Box 176, Jefferson City, MO 65102-0176, no later than 10 days after any exceedance of 10 CSR 10-6.260.

EU0030—Boilers

General Description:	Two (2) - 2.343 mmBtu/hr Boilers fired by digester gas, w/ propane backup, installed 1988
Manufacturer/Model #:	Cleaver-Brooks Model NCR700-70-60 HW
EIQ Reference # (2008):	EP003
STLCO Operating Permit #:	N/A

Permit Condition EU0030-001

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

Emission Limitations:

- 1) The permittee shall not discharge into the ambient air from any single source of emission whatsoever any air contaminant of opacity greater than 20% unless it is an existing source (existing prior to March 24, 1967), which emits less than 25 lbs/hr PM.
- 2) If it is an existing source, which emits less than 25 lbs/hr PM, then the permittee shall not discharge into the ambient air any air contaminant of an opacity greater than 40%.
- 3) A source with a 20% limit may emit air contaminants with an opacity over 20%, but not greater than 40% for an aggregate length of time not to exceed six (6) minutes in any 60 minutes.
- 4) Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements, the requirements shall not apply.

Monitoring:

- 1) Conduct visual emission observations of all subject emission units using the procedures contained in USEPA Test Method 22. Readings are only required when the emission unit is operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations are required. For emission units where visible emissions are observed, the source representative shall 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-
 - c) Observations must be made once every two weeks for a period of eight (8) weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then monthly observations shall be resumed.

Record Keeping:

- 1) Maintain records of all observation results noting whether any air emissions (except for water vapor) were visible from the emission units (Attachment A).
- 2) Maintain records any Method 9 test performed in accordance with this permit condition (Attachment B).
- 3) Maintain records of any equipment malfunctions.
- 4) Records shall be completed and available for review by the 10th day following the end of each month.
- 5) Retain records for the previous sixty (60) month period and make them available to the STLCO ACP, or its designated agent, at any reasonable time.

Reporting:

Report to the STLCO ACP, 74 Clarkson Wilson Ctr., Chesterfield MO 63017 and the MDNR ACP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102-0176, no later than ten (10) days after the discovery of an exceedance of the opacity limit.

Permit Conditions EU0030-002

10 CSR 10-5.030, *Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating*

Emission Limitation:

Particulate matter shall not be emitted in excess of 0.40 pounds per million BTU of heat input.

Monitoring/Record Keeping:

- 1) Maintain documentation of a one-time calculation that demonstrates compliance with the standard (Calculation Section of Statement of Basis).
- 2) Retain records for the previous sixty (60) month period and make them available to the STLCO ACP, or its designated agent, at any reasonable time.

Reporting:

Report to the STLCO ACP, 74 Clarkson Wilson Ctr., Chesterfield, MO 63017, and the MDNR ACP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after any exceedance of 10 CSR 10-5.030.

Permit Conditions EU0030-003

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

Emission Limitations:

- 1) No person shall cause or permit the emission of sulfur compounds from any source that causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality Standards.
- 2) The emission unit shall be limited to either burning digester gas with a hydrogen sulfide content of no more than 3,600 ppmv (correlates with 500 ppmv of sulfur dioxide, based on a direct relationship between the amount of hydrogen sulfide burned and the amount of sulfur present in the exhaust gas) or burning propane.

Monitoring:

The hydrogen sulfide concentration of the digester gas shall be analyzed and recorded on the following schedule when this emission unit is in operation:

- a) Monthly analyses shall be conducted. If an exceedance is noted then-
- b) Weekly analyses shall be conducted for a minimum of four (4) consecutive weeks after exceedance occurs. Should no exceedance of the sulfide limit be detected during this period then-

- c) Analyses shall be made once every two (2) weeks for eight (8) consecutive weeks. If an exceedance is noted, monitoring reverts to weekly. Should no exceedance of this limit be detected during this period then monthly monitoring shall be resumed.

Record Keeping:

- 1) Maintain an accurate record of the sulfur dioxide concentration in the exhaust gas based on the monitored hydrogen sulfide concentrations (and the direct relationship of hydrogen sulfide in the digester gas to the amount of sulfur dioxide present in the exhaust gas).
- 2) Records shall be completed and available for review by the 10th day following the end of each month.
- 3) Retain records for the previous sixty (60) month period and make them available to the STLCO ACP, or its designated agent, at any reasonable time.

Reporting:

Report to the STLCO ACP, 74 Clarkson Wilson Ctr., Chesterfield MO 63017 and the MDNR ACP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102-0176, no later than 10 days after any exceedance of 10 CSR 10-6.260.

EU0040—Emergency Flare

General Description:	One (1) Emergency Flare, 22,500 cubic feet/hr, fired by excess digester gas, installed October 2003
Manufacturer/Model #:	Varec Division, Emerson Electric, Model #244W
EIQ Reference # (2008):	EP004
STLCO Operating Permit #:	N/A

Permit Condition EU0040-001

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

Emission Limitations:

- 1) The permittee shall not discharge into the ambient air from any single source of emission whatsoever any air contaminant of opacity greater than 20% unless it is an existing source (existing prior to March 24, 1967), which emits less than 25 lbs/hr PM.
- 2) If it is an existing source, which emits less than 25 lbs/hr PM, then the permittee shall not discharge into the ambient air any air contaminant of an opacity greater than 40%.
- 3) A source with a 20% limit may emit air contaminants with an opacity over 20%, but not greater than 40% for an aggregate length of time not to exceed six (6) minutes in any 60 minutes.
- 4) Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements, the requirements shall not apply.

Monitoring:

- 1) Conduct visual emission observations of all subject emission units using the procedures contained in USEPA Test Method 22. Readings are only required when the emission unit is operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations are required. For emission units where visible emissions are observed, the source representative shall 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-

- c) Observations must be made once every two weeks for a period of eight (8) weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then monthly observations shall be resumed.

Record Keeping:

- 1) Maintain records of all observation results noting whether any air emissions (except for water vapor) were visible from the emission units (Attachment A).
- 2) Maintain records any Method 9 test performed in accordance with this permit condition (Attachment B).
- 3) Maintain records of any equipment malfunctions.
- 4) Records shall be completed and available for review by the 10th day following the end of each month.
- 5) Retain records for the previous sixty (60) month period and make them available to the STLCO ACP, or its designated agent, at any reasonable time.

Reporting:

Report to the STLCO ACP, 74 Clarkson Wilson Ctr., Chesterfield MO 63017 and the MDNR ACP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102-0176, no later than ten (10) days after the discovery of an exceedance of the opacity limit.

Permit Conditions EU0040-002

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

Emission Limitation:

- 1) Emissions from any new source operation shall not contain more than five hundred parts per million by volume (500 ppmv) of SO₂ or more than thirty-five milligrams per cubic meter (35 mg/cubic meter) of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour time period.
- 2) No person shall cause or permit the emission of sulfur compounds from any source that causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality Standards.
- 3) The emission unit shall be limited to either burning digester gas with a hydrogen sulfide content of no more than 3,600 ppmv (correlates with 500 ppmv of sulfur dioxide, based on a direct relationship between the amount of hydrogen sulfide burned and the amount of sulfur present in the exhaust gas) or burning propane.

Monitoring:

The hydrogen sulfide concentration of the digester gas shall be analyzed and recorded on the following schedule when this emission unit is in operation.

- a) Monthly analyses shall be conducted. If an exceedance is noted then-
- b) Weekly analyses shall be conducted for a minimum of four (4) consecutive weeks after exceedance occurs. Should no exceedance of the sulfide limit be detected during this period then-
- c) Analyses shall be made once every two (2) weeks for eight (8) consecutive weeks. If an exceedance is noted, monitoring reverts to weekly. Should no exceedance of this limit be detected during this period then monthly monitoring shall be resumed.

Record Keeping:

- 1) Maintain an accurate record of the sulfur dioxide concentration in the exhaust gas based on the monitored hydrogen sulfide concentrations (and the direct relationship of hydrogen sulfide in the digester gas to the amount of sulfur dioxide present in the exhaust gas).
- 2) Records shall be completed and available for review by the 10th day following the end of each month.
- 3) Retain records for the previous sixty (60) month period and make them available to the STLCO ACP, or its designated agent, at any reasonable time.

Reporting:

Report to the STLCO APCP, 74 Clarkson Wilson Ctr., Chesterfield MO 63017 and the MDNR APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102-0176, no later than 10 days after any exceedance of 10 CSR 10-6.260.

EU0050—Parts Washer

General Description:	(1) Cold cleaner (maintenance)
Manufacturer/Model #:	Graymills Handi-Kleen Corporation
EIQ Reference # (2008):	N/A
STLCO Operating Permit #:	7196

Permit Conditions EU0050-001

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

Emission Limitation:

- 1) Equipment specifications (section (3)(A)1 Cold Cleaners):
 - a) The cold cleaning solvent vapor pressure shall not exceed 1.0 millimeters of Mercury (mmHg) at twenty degrees Celsius (20°C) (sixty-eight degrees Fahrenheit (68°F)). [Per 10 CSR 10-5.300(1)(D)2.B., cold cleaners using solvents regulated under any federal NESHAP shall be exempt from the solvent vapor pressure requirement].
 - b) Each cold cleaner will have a cover, which will prevent the escape of solvent vapors while in the closed position, or enclosed reservoir, which will limit the escape of solvent vapors whenever parts are not being processed in the cleaner.
 - c) Exemptions under (1)(D) of the regulation may apply.
 - d) Alternate methods for reducing cold cleaning emissions may be used if the permittee shows the emission control is at least equivalent to the control in (a) above and is approved by the director.
 - e) When one (1) or more of the following conditions exist the design of the cover shall be such that it can easily be operated with one (1) hand and without disturbing the solvent vapors in the tank. (For covers larger than ten (10) square feet, this shall be accomplished by either mechanical assistance or by a power system).
 - i) The solvent volatility is greater than 0.3 psi at one hundred degrees Fahrenheit (100°F)
 - ii) The solvent is agitated.
 - iii) The solvent is heated.
 - f) A drainage facility allowing parts to drain while the cover is closed is required.
 - g) If an internal drainage facility as in (f) cannot fit into the cleaning system and the solvent volatility is less than 0.6 psi at one hundred degrees Fahrenheit (100°F), then the cold cleaner shall have an external drainage facility which provides for the solvent to drain back into the solvent bath.
 - h) Solvent sprays shall be a solid fluid stream and at a pressure which does not cause splashing above or beyond the freeboard.
 - i) 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.
 - j) Any cold cleaner which uses a solvent that has a solvent volatility greater than 0.6 psi at one hundred degrees Fahrenheit (100°F) or heated above one hundred twenty degrees Fahrenheit (120°F) must have one (1) of the following control devices:
 - i) A freeboard ratio of at least 0.75
 - ii) Water cover (solvent must be insoluble in and heavier than water)

- iii) Another control system that has a mass balance demonstrated emission reduction efficiency of at least sixty-five percent (65%) and is approved by the director prior to use.
- 2) Operating procedures (section (3)(B)1 Cold Cleaners):
 - a) Covers shall be closed whenever parts are not being handled in the cleaners, or solvent must drain into an enclosed reservoir.
 - b) Cleaned parts shall be drained in the free board area for fifteen (15) seconds, or until dripping stops, whichever is longer.
 - c) Whenever a cold cleaner fails to perform within the operating parameters established by this rule, the unit shall be shut down and secured until trained service personnel are able to restore operation within the established parameters.
 - d) Solvent leaks shall be repaired immediately, or the degreaser shall be shut down and the leaks secured until they can be more permanently repaired.
 - e) Waste material removed from a cold cleaner shall be disposed of by one of the methods listed in the rule or equivalent (after the director's approval) and in accordance with 10 CSR 25, as applicable.
 - f) Waste solvent shall be stored in closed containers only.
- 3) Operator and Supervisor Training (section (3)(C)):
 - a) Persons who operate a cold cleaner shall be trained in the operational and equipment requirements specified in this rule.
 - b) The supervisor of any person who operates a cold cleaner shall receive equal or greater operational training than the operator.
 - c) Persons who operate a cold cleaner shall receive a procedural review at least once each twelve (12) months.

Monitoring/ Record Keeping:

- 1) Quarterly records of the following shall be maintained:
 - a) Types and amounts of solvent containing waste material from cleaning or degreasing operations:
 - i) Transferred to a contract reclamation service or disposal facility
 - ii) Distilled on the premises
 - b) Maintenance and repair logs for the cold cleaner and any associated control equipment.
- 2) For cold cleaners subject to (3)(A)1 (a) or (b) the following records for each purchase of cold cleaning solvent shall be maintained:
 - a) The name and address of the solvent supplier;
 - b) The date of purchase;
 - c) The type of solvent; and
 - d) The vapor pressure of the solvent in mmHg at 20°C (68°F)
- 3) Keep a record of the cold cleaner training for each employee.
- 4) Records shall be completed and available for review by the 10th day following the end of each quarter.
- 5) Retain records for the previous sixty (60) month period and make them available to the STLCO ACP, or its designated agent, at any reasonable time.

Reporting:

Report to the STLCO ACP, 74 Clarkson Wilson Ctr., Chesterfield MO 63017 and the MDNR ACP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102-0176, no later than ten (10) days after the discovery of any exceedance of the cold cleaner requirements established in 10 CSR 10-5.300.

IV. Core Permit Requirements

This section lists excerpts from applicable regulations. The installation is responsible for complying with the full regulations as found in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR). All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

10 CSR 10-6.045 Open Burning Restrictions

No person may conduct, cause, permit, or allow the disposal of tires, petroleum-based products, trade waste, construction or demolition waste, salvage operation waste, or asbestos containing materials by open burning, except as permitted by this regulation.

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

- 1) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the director within two business days, in writing, the following information:
 - a) Name and location of installation;
 - b) Name and telephone number of person responsible for the installation;
 - c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
 - d) Identity of the equipment causing the excess emissions;
 - e) Time and duration of the period of excess emissions;
 - f) Cause of the excess emissions;
 - g) Air pollutants involved;
 - h) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
 - i) Measures taken to mitigate the extent and duration of the excess emissions; and
 - j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
- 2) The permittee shall submit the paragraph 1 information list to the director in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.
- 3) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under section 643.080 or 643.151, RSMo.
- 4) Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under sections 643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
- 5) Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.
- 6) Reports required by this rule are not required to be signed or certified by the Responsible Official.

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. Exemptions under 10 CSR 10-6.061 may apply.

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. [(6)(B)1.A(V)] The permittee shall retain the most current operating permit issued to this installation on-site. [§(6)(C)1.C(II)] The permittee shall immediately make such permit available to any STLCO APCP or MDNR personnel upon request. [§(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 complete and submit an Emission Inventory Questionnaire (EIQ) in accordance with the requirements outlined in this rule.
- 2) The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079.
- 3) The fees shall be due on the date specified by 10 CSR 10-6.110(3)(D)F each year for emissions produced during the previous calendar year. The fees shall be payable to the Department of Natural Resources and shall be accompanied by the Emissions Inventory Questionnaire (EIQ) form or equivalent approved by the director.

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 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 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. Qualified personnel shall perform all tests.
- 2) The director may conduct tests of emissions of air contaminants from any source. Upon request of the director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.
- 3) The director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

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

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the MDNR APCP. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the MDNR APCP. 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.

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.

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 Saint 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 10-5.160 Control of Odors in the Ambient Air

No person shall emit odorous matter as to cause an objectionable odor on or adjacent to:

- a) Residential, recreational, institutional, retail sales, hotel or educational premises.
- b) Industrial premises when air containing odorous matter is diluted with twenty (20) or more volumes of odor-free air; or
- c) Premises other than those in paragraphs (1)A.1. and 2. of the rule when air containing odorous matter is diluted with four (4) or more volumes of odor-free air.

The previously mentioned requirement shall apply only to objectionable odors. An odor will be deemed objectionable when thirty percent (30%) or more of a sample of the people exposed to it believe it to be objectionable in usual places of occupancy; the sample size to be at least twenty (20) people or seventy-five percent (75%) of those exposed if fewer than twenty (20) people are exposed.

10 CSR 10-5.450 Control of VOC Emissions from Traffic Coatings

- 1) No person shall supply, sell, offer for sale, apply, or solicit the application of any traffic coating, which at the time of sale or manufacture contains more than 1.26 pounds VOC per gallon, excluding water, exempt compounds, and any colorant added to tint bases, or manufacture, blend, or repackage such a coating for use within the Saint Louis metropolitan area without the approval of the staff director.
- 2) All VOC-containing materials shall be stored in closed containers when not in use. In use includes, but is not limited to, being accessed, filled, emptied, or repaired.

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 record keeping 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*

V. Saint Louis County Air Pollution Control Code Requirements

The following ordinances are not federally enforceable and are enforced only by the Saint Louis County Air Pollution Control Program. The installation is responsible for complying with the full ordinances as found in the Saint Louis County Air Pollution Control Code.

Section 612.040, Air Quality Standards and Air Pollution Control Regulations

Saint Louis County APCP may enforce Missouri Code of State Regulations as adopted and promulgated by the Air Conservation Commission of the State of Missouri consisting of Title 10, Division 10, Chapter 5 and 6.

Section 612.100, Emergency Abatement of Violation

By written approval of the County Executive, any facility indirectly or directly discharging any air contaminant in violation of the Saint 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.

Section 612.110, Permits Required

The permittee shall obtain STLCO APCP 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 STLCO APCP.

Section 612.120, Permits to be Visibly Affixed or Placed

The permittee shall visibly affix STLCO APCP Permit on or near permitted equipment.

Section 612.200, Testing Prior to Granting of Operating Permit

Before an authority to construct or permit to operate is granted, the Director may require the applicant to conduct tests to determine the kind or amount of the air contaminant emitted from the equipment. Such tests shall be conducted, reviewed and certified by a licensed engineer under Chapter 327 R.S.Mo. 1959. The permittee shall notify the STLCO APCP of the time and place of testing for the purpose of witnessing the test.

Section 612.220, Suspension or Revocation of Permits

The Director may suspend or revoke a permit to operate or authority to construct for willful or continued violation of the Saint Louis County Air Pollution Control Code.

Section 612.250 Fees, When Payable, Exceptions

Fees for authority to construct and operating permits in the amounts provided in Section 612.260 shall be paid to the Director except as provided in subsections 3 and 4 of this rule.

Section 612.260, Schedules

The permittee shall pay STLCO APCP Construction and Operating Permit fees when applicable and annual Emission and Inspection fees in accordance with the rule.

Section 612.280, Testing by Order of the Board

If any article, machine, equipment or other contrivance is in violation of the Saint Louis County Air Pollution Code, the Director may file with the Board for its approval an order directing the permittee of such equipment to conduct such tests as are necessary in the opinion of the Director and approved by the Board to determine whether the equipment is in violation of this Code. The entire test results shall be reviewed and certified by an engineer licensed under Chapter 327, R.S.Mo 1959. The engineer shall be selected by the permittee and

approved by the Board. The permittee shall give at least seven (7) days notice prior to the commencement of the test. The permittee shall submit test results to the STLCO ACP.

Section 612.290, Right of Entry; Inspections; Samples

The permittee shall allow the Director 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.

Section 612.310, Upset Conditions, Breakdown or Scheduled Maintenance

Emissions exceeding any of the limits established by the St. Louis County Air Pollution Control Code as a direct result of unavoidable upset conditions in the nature of the process or unavoidable and unforeseeable breakdown of any air pollution equipment or related operating equipment or as a direct result of shutdown of such equipment for necessary scheduled maintenance, shall not be deemed in violation of this Code provided the following are met:

- a) Such occurrence in the case of unavoidable upset in or breakdown of equipment shall have been reported to the Director within twenty-four (24) hours after the occurrence.
- b) In the case of shutdown for necessary scheduled maintenance, the intent to shut down shall be reported to the Director at least twenty-four (24) hours prior to the shut down and the exception provided by this Section shall only apply in those cases where maximum reasonable effort, including off-shift labor where required, has been made to accomplish such maintenance during periods of non-operation of any related source operation and that it would be unreasonable or impossible to shut down the source operation during the maintenance period.
- c) The person, firm or corporation responsible for such emission shall submit to the Director a full report of such occurrence including a statement of all known causes and of the scheduling and nature of the actions to be taken to minimize or eliminate future occurrences including but not limited to action to correct the conditions causing such emission to exceed said limits, to reduce the frequency of occurrence of such conditions, to minimize the amount by which said limits are exceeded and to reduce the length of time for which said limits are exceeded.

Section 612.340, Air Pollution Nuisances Prohibited

- 1) It is unlawful for the permittee to cause the escape 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.
- 2) No person shall cause or permit the engine of a motor vehicle, other than an emergency vehicle, to idle for longer than three (3) consecutive minutes while parking, standing or stopped as defined in the St. Louis County Traffic Code, unless the engine is being used to operate a loading, unloading or processing device.

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.

**Section 612.530, Saint Louis County ACP Asbestos Abatement Rules and Regulations—
Registration, Notification and Performance Requirements**

The permittee shall conduct all asbestos abatement projects within the procedures and requirements established in 612.530.

VI. General Permit Requirements

This section lists excerpts from applicable regulations. The installation is responsible for complying with the cited portions of the regulations as found in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR). All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

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

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

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

- 1) Record Keeping
 - a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
 - b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any STLCO APCP or MDNR personnel upon request.
- 2) Reporting
 - a) Semi-annual Monitoring Reports
 - i) The permittee shall submit a semi-annual report of all required monitoring by:
 1. October 1st for monitoring which covers January through June time period, and
 2. April 1st for monitoring which covers July through December time period.
 3. Exception. Monitoring requirements which require reporting more frequently than semi-annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
 - ii) Each semi-annual monitoring report must identify any deviations from permit requirements since the previous report that have been monitored by the monitoring systems required under the permit, and any deviation from the monitoring, record keeping and reporting requirements of the permit.
 - iii) These reports shall be submitted to the STLCO APCP, 74 Clarkson Wilson Ctr., Chesterfield, MO 63017 (or current address) and the MDNR APCP, P.O. Box 176, Jefferson City, MO 65102 (or current address).
 - b) Supplemental Reports
 - i) 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, unless otherwise specified in the permit. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
 - ii) 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 (2) 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.

- iii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.
- iv) 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.
- c) Every report submitted shall be certified by the responsible official (unless otherwise specified in this permit), unless otherwise specified in the permit. 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.
- d) The permittee may request confidential treatment of information submitted in any report of deviation.

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

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

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

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

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

10 CSR 10-6.065, §(6)(C)3.B, 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 permitting agency to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the permitting authority under this subsection):
 - 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, R.S.Mo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
- 3) All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
- a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
 - b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
- 4) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted to the STLCO APCP, 74 Clarkson Wilson Ctr., Chesterfield, MO 63017 (or current address), MDNR APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 (or current address), and EPA Region 7 Missouri Air Compliance Coordinator, 901 N. 5th Street, Kansas City, KS 66101 (or current address) annually by April 1st, unless the applicable requirement specifies more frequent submission. 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 determining the compliance status of this installation.

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

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

10 CSR 10-6.065, §(6)(E)6.A Reopening-Permit for Cause

This permit may be reopened for cause if:

- 1) The Saint Louis County APCP, 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) Saint Louis County APCP, MDNR or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

10 CSR 10-6.065, §(6)(C)6. Permit Shield

Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date of permit issuance, provided that—

1. The applicable requirements are included and specifically identified in the permit; or
2. The permitting authority, in acting on the permit revision or permit application, determines in writing that other requirements, as specifically identified in the permit, are not applicable to the installation and the permit expressly includes that determination or a concise summary of it. The Statement of Basis constitutes the referenced determination of applicability.

The permit shield does not affect the following:

1. The provisions of section 303 of the Act or section 643.090, RSMo concerning emergency orders;
2. Liability for any violation of an applicable requirement which occurred prior to, or was existing at, the time of permit issuance;
3. The applicable requirements of the acid rain program;
4. The authority of the Environmental Protection Agency and the Air Pollution Control Program of the Missouri Department of Natural Resources to obtain information; or
5. Any other permit or extra-permit provisions, terms or conditions expressly excluded from the permit shield provisions of 10 CSR 10-6.065.

10 CSR 10-6.065, §(6)(C)8. Operational Flexibility

Operational flexibility (installation changes not requiring permit revisions). This installation is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described below if the changes are not Title I modifications and the changes do not cause emissions to exceed emissions allowable under the permit, and the changes do not result in the emission of any air contaminant not previously emitted. The installation shall notify the STLCO APCP and MDNR APCP, Enforcement Section, at least seven (7) days in advance of these changes, except as allowed for emergency or upset conditions. Emissions allowable under the permit means a federally-enforceable permit term or condition determined at issuance to be required by an applicable requirement that establishes an emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.

A. Section 502(b)(10) changes. Changes that, under section 502(b)(10) of the Act, contravene an express permit term may be made without a permit revision, except for changes that would violate applicable requirements of the Act or contravene federally enforceable monitoring (including test methods), record keeping, reporting or compliance requirements of the permit.

- (I) Before making a change under this provision, the permittee shall provide advance written notice to the STLCO APCP and MDNR APCP Enforcement Section, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall maintain a copy of the notice with the permit, and the permitting authority shall place a copy with the permit in the public file. Written notice shall be provided to the administrator and the permitting authority at least seven (7) days before the change is to be made. If less than seven (7) days' notice is provided because of a need to respond more quickly to these unanticipated conditions, the permittee shall provide notice to the administrator and the permitting authority as soon as possible after learning of the need to make the change.
- (II) The permit shield shall not apply to these changes.

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

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:

- 1) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is a Title I modification; Please Note: Changes at the installation which affect the emission limitation(s) classifying the installation as an intermediate source (add additional equipment to the record keeping requirements, increase the emissions above major source level) do not qualify for off-permit changes.
- 2) The permittee must provide written notice of the change to the STLCO APCP, 74 Clarkson Wilson Ctr., Chesterfield, MO 63017 (or current address), as well as EPA Region VII, 901 North 5th Street, Kansas City, Kansas 66101 (or current address), 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
- 3) 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)11 Responsible Official

Ken Gambaro, Plant Manager, was established as the responsible official for Missouri River Wastewater Treatment Plant in the Title V renewal application, dated April 12, 2005. 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 STLCO APCP of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

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

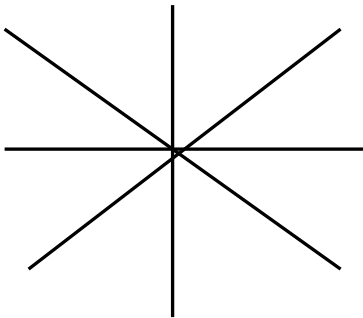
This permit is accompanied by a statement setting forth the legal and factual basis for the draft permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

ATTACHMENT B: Visible Emission Method 9 Observation Form

This worksheet may be used to meet the record keeping requirements for 10 CSR 10-6.220.

Source Name _____
 Address _____
 Observation _____
 Point _____
 Stack Identification _____
 Stack: Distance from _____ Height _____
 Temp _____ %RH _____
 Sky _____
 Condition _____
 Color of Emission _____

Quadrant: Draw symbols below in appropriate place to mark wind direction and speed, observer's location and sun location.



(Stack is at center)

Observer _____
 Observer's Signature _____
 Date _____ Certification Date _____
 Observer Began _____ Ended _____

COMMENTS:

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STATEMENT OF BASIS

Permit Reference Documents

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

- 1) Part 70 Operating Permit Renewal Application, received April 18, 2005;
- 2) 2004-2008 Emissions Inventory Questionnaires;
- 3) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition;
- 4) STLCO APCP Construction/Operating Permit #5928;
- 5) STLCO APCP Construction/Operating Permit #7196;

Applicable Requirements Included in the Operating Permit but Not in the Application

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.

10 CSR 10-5.030, *Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating*

This rule was marked as not applicable in the application; however, it applies to the boilers (EU0030) at this facility since they are indirect heating sources.

Other Air Regulations Determined Not to Apply to the Operating Permit

The following requirements are not applicable to this installation at this time for the reasons stated.

10 CSR 10-5.090, *Restriction of Emission of Visible Air Contaminants*

The regulation is not applicable to this facility as it was rescinded on May 30, 2000.

10 CSR 10-5.180, *Emission of Visible Air Contaminants from Internal Combustion Engines*

The regulation is not applicable to this facility as it was rescinded on November 30, 2002.

10 CSR 10-5.250, *Time Schedule for Compliance*

The regulation is not applicable to this facility as it was rescinded on December 30, 2008.

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

This rule does not apply to the internal combustion engines (EU0010) since 10 CSR 10-6.220(1)(A) exempts stationary internal combustion engines operated in the St. Louis metropolitan area.

Construction Permit Revisions

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

None.

NSPS Applicability

No 40 CFR Part 60 standards apply to this installation.

Subpart Dc, *Standards of Performance for Small Industrial/Commercial/Institutional Steam Generating Units*

This regulation does not apply to the boilers at this installation, EU-0030, because they are less than 10 mmBtu each and were installed in 1988, which is prior to the NSPS date of 6/09/89.

Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction or Modification Commenced After July 23, 1984.*

This subpart is not applicable to any tanks on site. All tanks on site fall below the applicability threshold of 19,812.75 gallons.

MACT Applicability

No 40 CFR Part 63 standards apply to this installation.

40 CFR Part 63, Subpart VVV, *National Emission Standards for Hazardous Air Pollutants: Publicly Owned Treatment Works,*

This subpart does not apply to this facility because they are not a major source of HAPs, nor are they an industrial POTW as is required for applicability.

NESHAP Applicability

40 CFR Part 61, Subpart M, *National Emission Standard for Asbestos,* applies to the installation because of the renovation and demolition sections of the subpart, which makes the subpart applicable to all sources. It is included as a core permit requirement.

Other Regulatory Determinations

10 CSR 10-6.260, *Restriction of Emissions of Sulfur Compounds*

Section (3)(A)2. applies to EU0010, the internal combustion engines, and EU0040, the emergency flare because these are sources of sulfur compounds, but are not sources of indirect heating. Section (3)(C)3.B. applies to EU0020, the boilers, because they are sources of indirect heating with a capacity of less than 2,000 mmBtu/hr. Section (3)(B) applies to each source of sulfur emissions without exception.

Calculations

10 CSR 10-6.260, *Restriction of Emissions of Sulfur Compounds*

EU0010 and EU0030

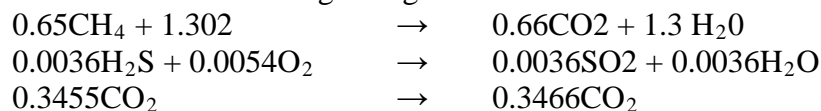
Limit from Section (3)(A)2. = 500 ppmv SO₂

The following calculation is for the theoretical exhaust SO₂ concentration based on stoichiometric combustion of digester gas at MSD Missouri River. Based on the calculation below, both EU0010 and EU0030 will have SO₂ concentrations at or below 499 ppmv provided the digester gas has H₂S concentrations of 3600 ppmv or less as demonstrated by monthly testing.

Digester gas composition: 65% CH₄, 0.36% H₂S, 34.64% CO₂

Given the stoichiometric assumption, no O₂ is expected to remain following combustion.

Combustion reaction for 1 scf of digester gas:



The stoichiometric amount of O₂ needed for combustion is 1.3054 scf, which is calculated by adding all of the O₂ on the reactant side. Since the composition of air is 79% N₂ and 21% O₂ by volume, the required amount of combustion air necessary for stoichiometric combustion is 1.3054/0.21 = 6.2148 scf. The amount of nitrogen present in the combustion air is 6.2148 x 0.79 = 4.9097 scf N₂. Since combustion is stoichiometric, all available O₂ will react with the CH₄ and H₂S. Nitrogen does not react.

Adding the volumes for the products gives the estimated volume of exhaust gas from combustion of 1 scf digester gas:

N ₂	4.9097	=	4.9097 scf
CO ₂	0.65 + 0.3466	=	0.9966 scf
H ₂ O	1.3 + 0.0036	=	1.3036 scf
SO ₂	0.0036	=	<u>0.0036 scf</u>
			7.2135 scf

Then the SO₂ concentration in the exhaust gas in ppmv:

$$0.0036 \text{ scf H}_2\text{S} / 7.2146 \text{ scf exhaust gas} = 449 \text{ ppmv}$$

Note: H₂S in digester gas is controlled with a ferrous chloride addition of 100-1000 ppm, depending on the amount of rainfall. Therefore, the exhaust gas from the engines would never be expected to be out of compliance with the rule.

This facility has demonstrated compliance with the Ambient Air Quality Standards specified in 10 CSR 10-6.010 by conducting modeling using the ISCST3 model. The results are shown in the tables below:

Missouri River Wastewater Treatment Plant
Baxter Farms South Receptor

	Total Concentration		SO ₂ Standard
	µg/m ³	ppm	ppm
SO ₂ Conc. 3 hr average	136.4	0.05	0.5
SO ₂ Conc. 24 hr average	28.3	0.01	0.14
SO ₂ Conc. 1 year average	2.34	0.001	0.03

Missouri River Wastewater Treatment Plant
Baxter Farms North Receptor

	Total Concentration		SO ₂ Standard
	µg/m ³	ppm	ppm
SO ₂ Conc. 3 hr average	428.3	0.16	0.5
SO ₂ Conc. 24 hr average	91.3	0.03	0.14
SO ₂ Conc. 1 year average	6.05	0.002	0.03

Worst Odor Concentrations at Missouri River

10-sec Average Conc. odor units/m ³ *	Receptor Average Conc. 30-min average		H ₂ S Standard
	odor units/m ³	ppm	ppm
Baxter Farms average			
17.64	6.26	0.003	0.03
Fenceline Receptor			
70.03	24.83	0.01	0.03
58.14	20.62	0.01	0.03
114.22	40.50	0.02	0.03
42.36	15.02	0.01	0.03
26.49	9.39	0.005	0.03

*The odor units represent a sum of pollutant concentrations including H₂S, carbonyl sulfide, methyl mercaptan, etc. As the sum of pollutants is less than the standard, then the H₂S concentration is compliant.

10 CSR 10-5.030, Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating

The applicable emission limit for the boilers (EU0030-001) is 0.40 pounds particulate matter per million BTUs of heat input per 10 CSR 10-5.030(3)(B) for new sources with a heat input rate of less than ten (10) mmBtu per hour. The total heat input of the boilers at this facility is 4.686 mmBtu/hr.

Digester Gas:

Emission Factor (EPA FIRE SCC 50100423) = 8.2 lb/ 10⁶ scf CH₄ gas; digester gas = 65% CH₄
Heat Content Digester Gas = 600 Btu/scf (AP-42 Table 3.1-7);

$$\text{Digester Gas Emissions} = (8.2 \text{ lb PM/MMscf CH}_4 \times 0.65) / (600 \text{ mmBtu/MMscf})$$

$$= 0.009 \text{ lb PM/mmBtu} > 0.40 \text{ lb PM/mmBtu heat input}$$

Based the current emission factor for propane in AP-42 Section 1.5, .7 lb/10³ gal, PM emissions for propane are well below the amount allowed by rule as demonstrated below:

Propane:

$$4.686 \text{ mmBtu/hr} \times (1,000 \text{ gal}/91.5 \text{ mmBtu}) \times (.7 \text{ lbs PM}/1,000 \text{ gal}) = .036 \text{ lbs PM/hr} / 4.686$$

$$= .008 \text{ lbs PM/mmBtu heat input} > 0.40 \text{ lb PM/mmBtu heat input}$$

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 (1) 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 (1) 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 STLCO ACP and MDNR ACP'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 STLCO ACP and MDNR ACP a schedule for achieving compliance for that regulation(s).

Drafted by Jennifer Phillips, Air Emission Specialist
Saint Louis County Air Pollution Control Program

Reviewed by:

Jason Dickneite
Environmental Engineer